FAO/GLOBAL ENVIRONMENT FACILITY
PROJECT DOCUMENT

PROJECT TITLE: Land rehabilitation and rangelands management in smallholders agro-pastoral production systems in south western Angola **PROJECT SYMBOL: GCP /ANG/048/GFF**	
Recipient Country/ies: Angola	
Resource Partner: Global Environmental Facility (GEF)	
FAO project ID: 615423	**GEF/LDCF/SCCF Project ID: 4720**
Executing Partner(s): Ministério Do Ambiente (MA), Ministério Da Agricultura E Do Desenvolvimento Rural E Das Pescas (Minander), Governo Provincial Do Namibe, Governo Provincial Do Huila, Governo Provincial De Benguela	
Expected EOD (starting date): 1 March 2013	
Expected NTE (end date): 28 February 2018	
Contribution to FAO's Strategic Framework[1]	**a. Strategic objective/Organizational Result: SO-2: OO1, OO2, OO4** **b. Regional Result/Priority Area: Priority 2 for Africa** **c. Country Programming Framework Outcome: Priority 2, Outcome 2.1 and 2.2**
GEF Focal Area/LDCF/SCCF: Land Degradation (LD)	
GEF/LDCF/SCCF Strategic Objectives: **LD-1 - Agriculture and Rangeland Systems: Maintain or improve flow of agro-ecosystem services sustaining the livelihoods of local communities** **LD-3 - Integrated Landscapes: reduce pressure on natural resources from competing land uses in the wider landscape**	
Environmental Impact Assessment Category (insert √): A B C √	

Financing Plan:		
	GEF/LDCF/SCCF allocation:	**USD 3 013 636**
	Co-financing:	
	FAO	USD 550 000
	Ministry of Environment	USD 300 000
	Ministry of Agriculture, Rural Development, and Fisheries	USD 9 641 000
	Ministry of Commerce	USD 5 000 000
	Province of Namibe	USD 1 800 000
	Subtotal Co-financing:	**USD 17 291 000**
	Total Budget:	**USD 20 304 636**

[1] For projects operated by country offices, it is necessary to link projects in FPMIS at OR level. For all other projects, linkage at product/service level is necessary

EXECUTIVE SUMMARY

The Republic of Angola has a total land area of about 1 247 million km^2 of which 43 percent is under permanent meadows and pastures. As the nation rebuilds from civil war, the livelihood conditions remain extremely difficult with high food insecurity despite the enormous natural resource (NR) pool and although the war ended in 2002. The ecosystems' capacity to provide valuable services is under great pressure due to the unsustainable use of natural resources (particularly soil and water), as well as from the effects of climate change (CC), causing soil degradation and desertification. In 2006, MINANDER estimated a total soil loss (due to erosion) of about 20 million tonnes per year, equivalent to a loss of the capacity to feed 50 000 people annually. Soil erosion causes impacts such as soil sedimentation in streams and rivers, decreasing soil depth and fertility, alteration of soil structure and decreasing soil organic matter, thereby reducing the water holding capacity with consequent leaching of nutrients. In particular, the area of intervention, the country's southwest with its predominately dry climate conditions has a soil coverage that is susceptible to the risk of erosion. Other land degradation types include declining biomass productivity, degradation of soil properties (chemical, physical, and biological), and loss of top-ground carbon and vegetative cover due to forest clearing for agriculture and pasture conversion, and fires. The loss of biodiversity is leading to a loss of species and a decrease in species' diversity. According to the baseline studies conducted as part of the present GEF project preparation process, the Net Primary Production (NPP) in the project area decreases by 0.3 KgC/ha per year.

The main causes (pressure) of land degradation (LD) in the area are; unsustainable agricultural management, deforestation and overgrazing in rangeland areas. The results thereof are the disappearance of grasses and fodder shrubs, as well as the increase of less palatable species. As a consequence, augmented cattle numbers in the region are concentrated at fewer selected locations, increasing the pressure on land, forest and water resources. The shrinking of fertile land accompanied by a growing population is a main cause for disputes, especially between peasant and commercial farmers, traditional herders, commercial cattle rangers and returning refugees reclaiming their land-use rights.

The proposed project: "Land rehabilitation and rangelands management in smallholders' agro-pastoral production systems in southwestern Angola" is a joint effort by the Ministério do Ambiente (MA), Ministério da Agricultura e do Desenvolvimento Rural e das Pescas (MINANDER), Governo Provincial do Namibe, Governo Provincial do Huila, and Governo Provincial de Benguela, together with FAO and GEF. In line with the GEF-5 Land Degradation strategy, the project's goal is to create an enhanced enabling environment in the agricultural sector and a sustained flow of agro-ecosystem services. The project's specific objectives are to: (i) pursue land degradation neutrality by enhancing 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 Sustainable Land Management (SLM) technologies into agro-pastoral and agricultural development initiatives (environmental objective) and, (ii) to simultaneously improve the livelihoods of targeted communities by introducing locally adapted SLM approaches and by strengthening and diversifying livestock and non-livestock based value chains (development objective).

To achieve the objectives of the project, activities have been organized into four technical components:

Component 1: Rangeland management planning which will include the creation of capacity at a government and local level, to assess the extent of land degradation, and to put in place SLM systems. By taking the Land Degradation Assessment in Drylands (LADA)

method into consideration, CBOs and local decision makers will be reinforced and strengthened in order to introduce community planning and transhumance scale conflict management.

Component 2: Rangeland rehabilitation through best range and herd management practices for smallholder agro-pastoralists will include Agro-Pastoral Field Schools (APFS) activities and community planning, focusing on ecosystem based pilot rehabilitation, water point rehabilitation, community based improvement of fodder and natural grasses and shrubs, and the establishment of *mise en défense* areas. The strengthening of local and environmentally friendly non-livestock production systems, and improvement of livestock health and value chains will be implemented to reduce livestock pressure on already degraded areas.

Component 3: Mainstreaming SLM into agricultural and environmental sector policies and programs will consist of strengthening the existing policies, designing new ones and introducing investment schemes for SLM in transhumance areas. For that purpose strategic government structures such as the Multisectoral Commission for the Environment (CMA) will be supported by the project to allow a cross-sectoral dialogue facilitating the integration of SLM into existing regulatory and legal frameworks.

Component 4: Knowledge management, monitoring and evaluation will introduce monitoring through the GEF LD-PMAT and the dissemination of lessons learned.

By using traditional conflict resolution strategies such as the *Jango Pastoril* and a network of FFS/APFS the project will enable effective participatory planning to take place at local and transhumance route scale. The approach will be complemented by enhancing cross-sectoral collaboration and coordination to address LD related matters in a harmonious manner at national, provincial and local levels.

The key global benefits to be generated by the project include an increase in land area under SLM, which is expected to reach 13 500 ha by the end of the project, including 600 ha of rehabilitated grassland and shrub land and 900 ha of *mise en défense* areas. The sustainably managed areas will lead to an increase of 5 percent in vegetation cover (NPP) against the baseline, benefiting 2 800 people (20 000 indirect beneficiaries) of which at least 30 percent are women.

The project will take place over a duration of 4 years. The total project budget is USD 20 304 636 of which USD 3 013 636 is in GEF resources and USD 17 291 000 in co-financing provided by the Government of Angola.

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GLOSSARY OF ACRONYMS

ADECO	Action for the Development and the Community Education, Angolan NGO, Namibe
ADRA	Action for Rural Development and Environment, Angolan NGO
ASEAN	Association of Southeast Asian Nations
APFS	Agro-Pastoral Field Schools
AWP/B	Annual Work Plan and Budget
BaU	Business as usual
BDA	Banco Desenvolvimento de Angola (Development Bank of Angola)
BH	Budget holder
CBOs	Community Based Organisations, with the participation of stakeholders in local development
CAC	Councils of Hearing and Social Concertation, *Conselhos de Ascultação e Concertação Social*
CBD	Convention on Biological Diversity
CC	Climate Change
CCGSA	Southern Angola's Herders Cooperative, *Cooperativa dos Criadores de Gado do Sul de Angola CCGSA*
CETAC	Centre of Tropical Ecology and Climate Change
CMA	Multisectoral Commission for the Environment, *Comissão Multisectorial para o Ambiente*
CPF	FAO Country Programme Framework
COSPE	Cooperation for Development of Emerging Countries, Italian NGO
CTA	Chief Technical Advisor
DNAPF	Executive Services/Policy Directorates for Agriculture, Livestock and Forestry
DNDR	National Directorate for Rural Development
DNHAER	Agricultural Hydraulics and Rural Engineering/ National Directorate of Agrarian Hydraulics and rural Engineering
DRP	Participatory rural diagnostic
ECP	Strategy for Fighting against Poverty
ECONET	Ecosystem Observation and Monitoring Network (GEO Econet), FAO project
EDA	Agriculture Development Station
EGRP	Economic Governance Reform Programme/Global Strategy for Poverty Reduction
ELISA	Energy and Livelihoods Solutions Angola– SLM capacity building and combating deforestation project (UNDP GEF project)
ENSAN	National Food Security and Nutrition Strategy
FAO	Food and Agriculture Organization of the United Nations
FAS	Fundo de Apoio - Social Support Fund
FE	Final Evaluation
FFS/ECAPs	Farmer Field Schools
FMNR	Farmer Managed Natural Regeneration
FPMIS	FAO Field Programme Management Information System (project database)
FUPEP	Support Fund for Small Projects managed by ADRA NGO
GAPHA	Irrigation and Rural Development Units
GAS	Water and Sanitation Group, is a CBO that manages water infrastructure (tchimpakas, probes, mini dams / reservoirs...)
GEB	Global Environmental Benefit
GEF	Global Environment Facility
GEPE/MINANDER	Cabinet of Planning and Statistics of the Ministry of Agriculture

GFA	German Consulting Group
GHC	Greenhouse Gas
GIEWS	Global Information and Early Warning System
GIS	Geographic Information System
GLIPHA	Global Livestock Production and Health Atlas
GoA	Government of Angola
GPS	Global Positioning System
HDI	Human Development Index
HoA	Horn of Africa
IDA	Agriculture Development Institute
IDAF	*Center for the Applied Investigation for the environmental development*
IDF	Institute for Forestry Development
IGETI	Improving Gender Equality in Territorial Issues
IIA	Agricultural Research Unit
IIV	Veterinary Research Institute
INCA	National Coffee Institute
INCER	National Cereals Institute
IPM	Integrated Pest Management
ISV	Institute of Veterinary Services
JP	*Jango Pastoril*
KALAPASO	Karamoja Livelihood Agro-Pastoralist Opportunities (FAO East Africa Project)
Koi	Traditional way to pay with oxen adultery of a woman
LADA	Land Degradation Assessment in Drylands
LD/DS	Land Degradation
LM/GT	Land Management
LPSC	Local Programme Steering Committee
LOA	Letter of Agreement
LTO	Lead Technical Officers
LTU	Lead Technical Unit
MA	Ministry of Environment
MAE	National Direction of Environment
MIAA	Mission of Agricultural Surveys of Angola
MINANDER	Agriculture and Rural Development Ministry
MOSAP	Market Oriented Smallholder Agriculture Project
NBSAP	National Biodiversity Strategy and Action Plan
NDP	National Desertification Programme
NDPA	National Adaptation Programme of Action
NEMP	National Environmental Management Plan
NGO	Non-Governmental Organization
NPC	National Project Coordinator
NPP	Net Primary Production
NR	Natural Resources
NRM	Natural Resources Management
NTFP	Non-Timber Forest Product
PAPEFSA	Programme to support the livestock sector family from southern Angola
PDMPSA	National Medium-term Development Plan for the Agricultural sector
PEDR	*Programa Nacional de Extensão e Desenvolvimento Rural*, National Programme for Extension and Rural Development
PIR	Project Implementation Review
PIPDEFA	*Programa integrado de protecção e desenvolvimento das florestas costeiras angolanas,* EU funded COSPE NGO project
PMIDRCP	Integrated Municipal Programme for Rural Development and Combat Against Poverty
PNTD	Participatory Negotiated Territorial Development

PROAPEN	*Programa de Apoio ao Pequeno Negócio*, Support Programme for Small Business
PRODEC	Livestock sector development project implemented by the Bank of Angola in the Virei Municipality, Namibe province
PSC	Project Steering Committee
PT	Project Technicians
RF	Result Framework
RBM	Results-Based-Management
OIKOS	Co-operation and Development Portuguese NGO
SANGA	Strengthening of Livestock Services in Angola
SEAGA	Socio-Economic and Gender Analysis
SENSE	National Seeds Service
SINFIC	Industrial Information Systems and Consulting
SLM/GST	Sustainable Land Management
SPFS	Special Programme for Food Security
SV	Veterinary Service
TCI	Investment Centre Division
TCP	FAO Technical Cooperation Programme
TOR	Terms of Reference
UNACA	*National Peasant Union of Angola*
UNCCD	United Nations Convention to Combat Desertification
UNDAF	United Development Assistance Framework/ United Nations Assistance Framework for Angola
VRF	Veterinary Revolving Fund
WAE	When Actually Employed (part time consultant contract)
WOCAT	World Overview of Conservation Approaches and Technologies

SECTION 1 – RELEVANCE (strategic fit and results orientation)

1.1 GENERAL CONTEXT

a) General development context related to the project

The Republic of Angola is the third largest country in sub–Saharan Africa with an area of 1 246 700 km^2. Angola is located in the southern part of the African continent between latitudes 4º 20 ' and 18º S and longitudes 12º 41 ' and 24º 05 ' E, and is bordered in the north and east by the Republic of Congo and the Democratic Republic of Congo, in the east by the Republic of Zambia, in the South by the Republic of Namibia and in the west by the Atlantic Ocean. The administrative division comprises of 18 provinces, as follows: Cabinda, Zaire, Uíge, Malange, Lunda Norte, Lunda Sul, Kwanza Norte, Kwanza Sul, Bengo, Luanda, Benguela, Bíe, Moxico, Huambo, Huíla, Kuando Kubango, Cunene and Namibe.

Figure 1. Administrative map and location of Angola in Africa

The current population is estimated at between 16-18 million (no census has been undertaken since 1970), of which 60 percent is rural. The annual population growth rate was 7.1 percent over the period 2007–2011. Since the end of the conflict, Angola has experienced an extraordinary social and economic recovery which has resulted in the rehabilitation and construction of schools, hospitals, health centres and clinics, roads and bridges, a gradual increase of agricultural, livestock and fisheries production, not to mention the construction sector itself, which is considered the most dynamic of them all. In more than ten years of stability Angola has achieved a thriving economy and one of the fastest rates of growth, with an average growth rate in real GDP of 11.6 percent. However, according to the Human Development Report (2012), out of 187 countries, Angola occupies the position 148 in the ranking of the Human Development Index (HDI). Much of its continuously growing population is living below the poverty threshold of USD 1.25 per day, with an average life

expectancy of not more than 51.1 years. Angola was until 1975 self-sufficient in all key food crops except wheat. Agricultural exports accounted for nearly 60 percent of total exports and were composed of coffee (48 percent), sisal (5 percent), maize (2 percent), and a number of other agricultural products including bananas, tobacco, cotton, beans, sugar, palm oil and rice. Today the country heavily relies on food imports (80 percent) to meet the population's needs.

At present, only 5.7 percent of Angola's 575 900 km² of agricultural land (46.3 percent of total land) is exploited. Agricultural production is predominantly a family-labour activity for millions of smallholder self-subsistence farmers, planting an average of 1.4 ha per family on two or more parcels of land. The area planted increases slightly every year. Agricultural production is based on a rainy season, the main growing season which spans from September to December in most of the country. Currently, agriculture, livestock and forestry contribute about 12 percent to GDP and 42 percent of total employment, with women providing 70 percent of labour. The contribution to exports from agricultural products is non-existent. As far as the field of meat and milk production is concerned and the livestock sector in general, Angola has an even bigger challenge. Efforts to improve the production have been limited and national production systems are still very incomplete. The production is still largely based on own-consumption, especially within the nomadic populations in the south. Despite this, each year the improvement and strengthening of the sector is making remarkable progress. According to data published by the Cabinet of Planning and Statistics of the Ministry of Agriculture (GEPE/MINANDER), in the year 2010/2011, the sector saw a growth in relation to the previous year of; 2.2 percent in the cattle populations, 2.7 percent more of small ruminants, 10.4 percent more swine and 16.7 percent more poultry (data based on estimates).

The project provinces

The present project will intervene in the southwestern part of the country focusing in the Namibe province and including part of the provinces of Huila and Benguela to embrace the selected transhumance subroutes. It stretches over approximately 700 km and has a population of about 340 000 inhabitants of which 40 percent are classified as poor.

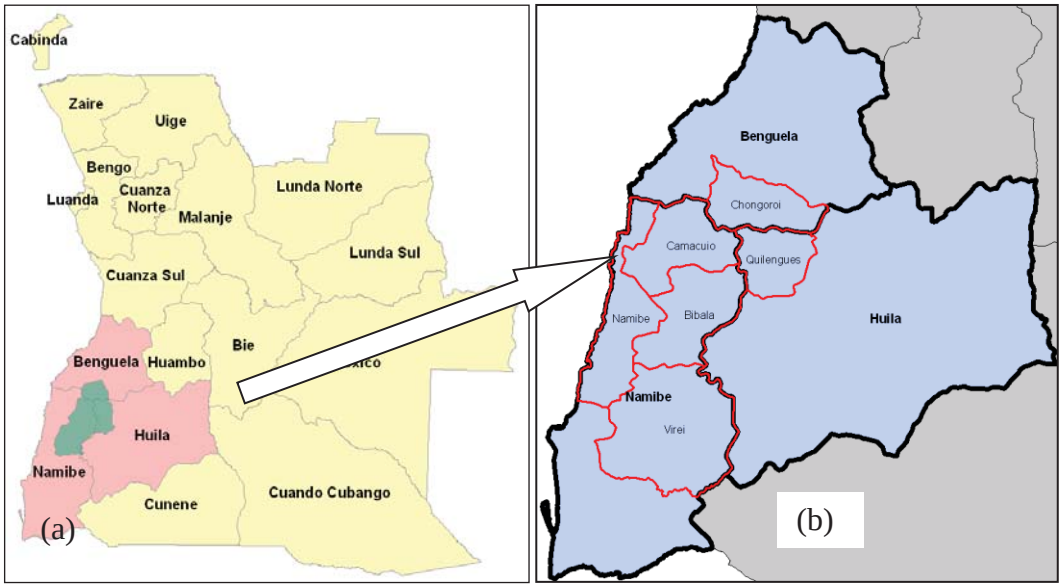


Figure 2. (a) Administrative map depicting the Bibala transhumance route as defined by the PAPEFSA project and the 3 involved provinces, (b) Administrative map depicting the municipalities of the 3 selected provinces. The project will work in the municipalities of Chongoroi, Quilengues, Bibala, Camacuio, Namibe, and Virei.

The southern agro-ecological zone is characterized by a dry climate, varying from desert conditions (such as the entire Namibe province and particularly the Virei municipality) to drylands (Benguela), while the Huila province climate presents a variation from dry in the south to humid forested in the north. Climatically the territory is part of the tropical humid region ranging from the rainy north up to the semi-arid south and southwest Angola with hot and dry conditions in the coastal strip where, despite the dryness, the relative humidity remains elevated throughout the year. In the most interior part of the region, near to the plateau (subupland), annual average relative humidity of the air is around 70 percent - 80 percent. The northern part of the project area is characterized by a rainy season of about five months (November to March) considering October and April as transition months (October and November are typically the hottest months of the year). The values of average annual rainfall range from 1 200 mm in the north to 400 mm in the southern end while February and March are the rainiest months. The average annual temperature varies between 20 ^{o}C and 24 ^{o}C. The southern part of the project area is much drier with average annual rainfall of 300 mm that causes herds to move further north in search of good pasture. The distribution of rainfall is quite variable from year to year, month to month, and especially with regard to early rainfall and late season rainfall.

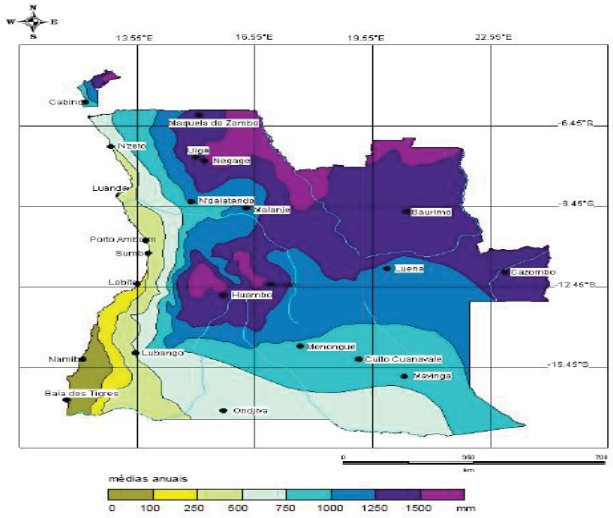


Figure 3. Mean annual rainfall average of Angola (draft version of the National Programme for Desertification).

The main economic activities in the area include pastoralism and subsistence agriculture (maize and sorghum mainly, and to a lesser extent millet, manioc, and cowpea). Agriculture business in the area has relevance due to their intense use of marginal lands along the main rivers. Those exploitations are mainly based on tobacco, maize, sunflower, and also cotton at some location. The extensive shrub and grassland areas are dominated by transhumant livestock moving with rainfall patterns. Before the war, the area was characterized by an intensive (given the ecological conditions) livestock system with continual contact between humans and cattle through the interrelationship of cattle raising, milk utilization, and farming. The 2011 cattle head count was 135 154 in Benguela, 1 656 845 in Namibe, and 691 043 in Huila provinces (FAO Countrystat, 2012). Nowadays livestock is managed through transhumance moving along rainfall patterns and pasture/grass availability. Herders' communities leave their residence in the months of May-June and return in the months of October-November, when the raining season starts. The ownership of cattle is seen as a social status symbol therefore not being sold on a regular basis. Demand for land is affected by

conflict between peasants and commercial farmers, returning refugees reclaiming their land-use rights, low soil fertility, limited areas of agricultural/grassland areas with adequate rainfall. As the population and poverty increases, traditional cattle raisers require more land to sustain augmented cattle numbers, but the carrying capacity is reduced due to continuous decreases in productivity. Furthermore, commercial cattle ranchers encroach upon traditional grazing lands and cattle corridors are being closed. Finally, perceived expansion of the desert to normally marginally suitable agricultural production areas is resulting in less edible pasture, especially in the driest part of the area.

Part of the area selected for the project intervention, the transit part of the transhumance area of Bibala, was studied by a recent project, the PAPEFSA managed by the EU and by various studies which were conducted during the Project Preparation Grant (PPG) period. The transhumance route area (that will be part of the present project area of intervention) includes Bibala, Camucuio and nearby villages (Namibe province) and goes to Chongoroi (Benguela Province) and Quilengues and nearby villages (Huila Province). A map of the cattle movement in the transhumance area is presented in Figure 4. Also, starting transhumance points in Virei Municipality and Cainde village will be included. With approximately 100 000 inhabitants, the Virei Municipality has one of the largest concentration of population in the project area. A description of main soil types, botanical composition and map of grazing land and existing grazing species which was prepared during the project preparation period is presented in Annex 7. A map showing the project intervention areas, as defined with the government is available in Figure 5.

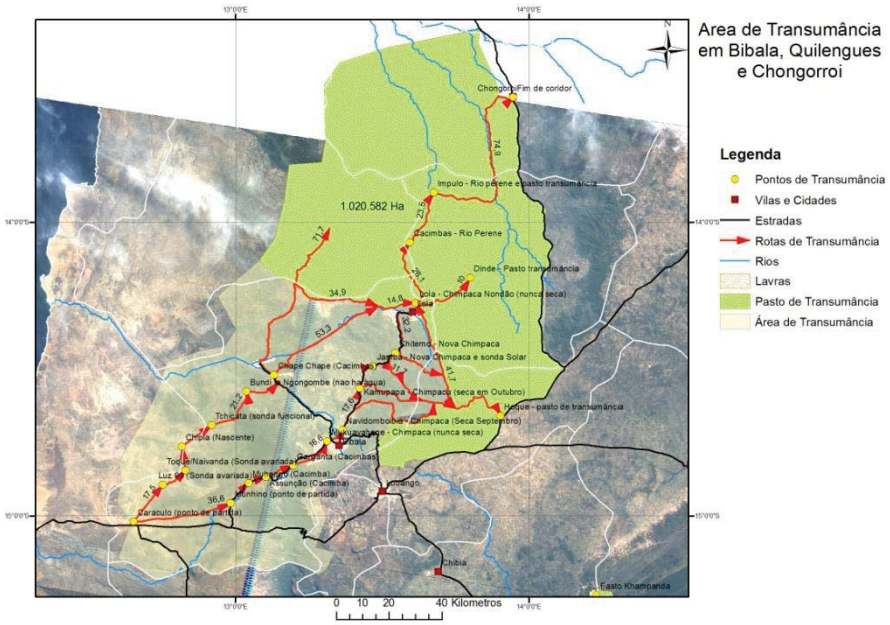


Figure 4. Map of the transhumance area of Bibala, covering parts of the project intervention, as produced by PAPEFSA project (2011), with indication of departing and end points, and transhumance routes

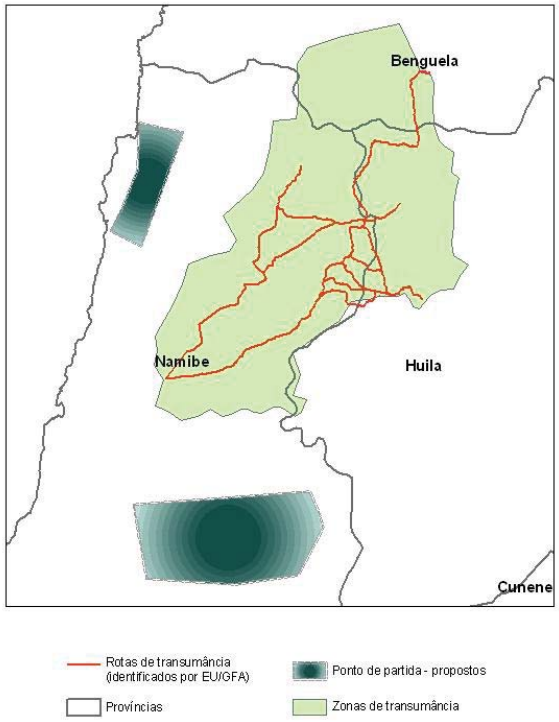


Figure 5. Map of project areas. The project area will include transhumance starting points in the coastal areas and in the Virei municipality. Exact project location of the starting point will be refined during project start up.

b) *Threats and causes of land degradation in the project area*

The project area is prone to land degradation and desertification that causes; loss in vegetation cover and reduction of agricultural production, therefore deteriorating the livelihoods of the local communities. Based on the Land Degradation and Assessment/Global Land Degradation Information System (LADA/GLADIS) methodology, 47 percent of Angola can be considered to have a degraded status and having ongoing land degradation processes (degraded and degrading) due to poor soil health, scarce water availability and declining biodiversity. About 53 of the grassland and shrubland areas are degraded and degrading, both in terms of vegetation and soil degradation.

Based on the community dialogues undertaken by the NGO Cooperation for Development of Emerging Countries (COSPE) to prepare the GEF Land Degradation Project Monitoring and Assessment Tool (PMAT) using the Land Degradation and Assessment/World Overview of Conservation Approaches and Technologies (LADA/WOCAT) methodology, the *main land degradation types* in the project areas are soil erosion, declining biomass productivity, degradation of soil properties (chemical, physical, and biological), and loss of top-ground carbon and vegetative cover due to forest clearing for agriculture and pasture conversion, and fires. The loss of biodiversity is leading to a loss of species and a decrease in species' diversity. According to the baseline studies conducted as part of the present GEF project preparation process using LADA/GLADA data, the NPP in the project area decreases by 0.3 KgC/ha/y.

Direct causes of land degradation

Even though livestock density remains low in comparison to similar environments (i.e. 4.3 livestock unit per hectare in 2001, based on FAO GLIPHA data) ***overgrazing and unsustainable grazing management*** is the main threat to land resources conservation. Given the existing management system, the scarce soil fertility, and the effect of desertification, there is an unsustainable number of livestock causing significant degradation. The zone of the so called "sweet pastures" (comprising the provinces of Namibe, Huila and Cunene) is a typical transhumance region where reoccurring droughts are reducing grazing potential and increasing pressures on soils, water, and forests. Soil degradation is the result of excessive trampling (in particularly around water points and along transhumance routes), soil compaction, and water and wind erosion. Soil erosion might cause river siltation, gully and canyon creation, and reduce infrastructure functionality, and therefore decrease water availability. The PAPEFSA project funded by the EU detected a perceived decrease in grassland quality/availability in transhumance routes of the southwest caused by: increased livestock numbers, increased length of dry periods, NR exploitation (e.g. mining activities), farmland encroachment and lack of traditional entities managing pasture access and transhumance routes. The project has mapped the most vulnerable areas for overgrazing in the southern part of the transhumance route (Appendix 7, Figure 2). FAO used the Ecosystem Observation and Monitoring Network (ECONET) method under the present project PPG phase to prepare a first draft for a classification system for the grazing land cover classes of the area (Appendix 7, Figure 3). The temporary results will be improved during the present project and will form a basis for a more detailed assessment of land degradation and causes by using the LADA method.

Deforestation caused by unsustainable use of forest products, as well as overexploitation of fuelwood production/consumption are regarded as additional direct causes for LD. FAO's 2011 State of the World's Forests report estimates a deforestation rate of 0.2 percent from 2000 to 2010. A study in the Huambo province (neighbouring the project area) revealed that war displacement was one of the major reasons for deforestation (Cabral et al. 2010); although there was a short period of reforestation period during the war it was followed by accelerated forest clearing thereafter for agriculture and grazing. Based on the PPG COSPE report, plant biodiversity degradation in the project area presently seems to be mainly due to the uncontrolled cutting of *mopane* trees for the production of handmade coal resulting in the loss of natural habitat for coexisting species.

Another cause of land degradation is ***unsustainable agricultural management***. Although agriculture covers just a small portion of the project area, it contributes to land degradation due to its intense use of marginal lands along the main rivers and water points. Demand for agricultural land is also affected by conflict between subsistence and commercial farming, returning refugees reclaiming their land-use rights, low soil fertility, and limited areas suitable for small-scale irrigation.

It is becoming evident that a key contributor to land degradation and impoverished livelihoods is ***climate change***. Data from the *National Adaptation Programme of Action* (NDPA) – based on climatic information from the UNDP country profile - predicts a mean annual temperature increase of 1.2-3.2 ^{o}C by the year 2060 and of 1.7-5.1 ^{o}C by 2090. The proportion of total rainfall during rainy seasons is projected to increase while drawing out lengths of dry seasons. Rainfall variability and inappropriate land management practices increase flood risks, such as the 2011 heavy rains that affected 65 000 people in southern provinces with a strong impact on agricultural areas, causing soil erosion and cattle mortality (FAO Global Information and Early Warning System - GIEWS) and damaging of the Cacanda Zootechnical station in the project area. Moreover, CC is strongly increasing the process of desertification in the starting point of the transhumance areas (such as the Virei

municipality and the coastal areas of the Namibe province), by decreasing water availability for grasslands to grow and shortening or abruptly varying the vegetative period. These variations result in increased transhumance, overuse of land and deepen overgrazing issues in transhumance lands. Overgrazing is further aggravated in more transhumance terminal land, the areas of arrival of the annual animal movement at the research of green vegetation and water. Those areas more suitable for continuous cropping and grazing have been encroached on by commercial farming.

Indirect causes of land degradation (socio-economic pressures)

Another contributor to land degradation relates to ***inadequate capacity of the government*** systems to address the adverse effects of land degradation**.** Local officials and land management decision makers have limited knowledge of SLM techniques, few incentives for adopting improved practices and almost no extension services to support their efforts. Further, government authorities who are responsible for planning have limited capacity for cross-sectoral coordination, and inadequate capacity to provide technical and economic incentives for creating and sustaining a SLM knowledge basis. Lessons learned from the UNDP-GEF experience for the National Desertification Programme (NDP) preparation show that various government initiatives have been advanced to address desertification and land degradation, but a clear coordination effort towards the conclusion of NDP does not seem to exist. The Multisectoral Commission for the Environment (CMA) which was set up in 2010 to address the general environmental policy coordination issues at the level of institutional arrangement still lacks practical application experience. One of the consequences of the inadequate governmental capacity is the lack of research and awareness of information regarding SLM and best grazing practices in the Namibe area. For example, the majority of native tree species in the area have not scientifically been recognized. There are two herbaria projects by GFA and the University of Wageningen and by the NGO COSPE and the University of Florence. Both herbaria were carried out in the mopane open forest ecosystem of Bibala, but further data is fragmented in different institutions and mechanisms for sharing data are very limited. This includes a lack of information regarding the best grazing species and adapted varieties, the scarce presence of seed banks, the insufficient ecological and vegetation cycle information (especially in the context of CC) which negatively impacts any attempts to rehabilitate the area.

The ***lack of strong and functional customary institutions*** that are able to bring the communities together for collective decision making and collective actions might also represent a barrier to address LD effectively. During the field missions in Namibe conducted during the PPG, customary institutes led by the Soba were studied, including conflict between customary and modern rights. Results that are presented in Appendix 3 show a lack of a working culture and active participation of the transhumant communities that could present a potential threat. However there is no indication that communities refuse to work when approached in practical terms.

A further constraint to address LD effectively is the ***conflict between farmers and herders*** due to the relocation of farmers, CC, and lack of water in the terminal part of the transhumance routes that converts fertile land into a scarce resource. Conflict along the transhumant route between the farmers and the transhumant pastoralists may curb the mobility system. Based on the NDP (under preparation), this might be linked to the proliferation of commercial farms that further contribute to generating conflict due to enclosure and exclosure of land for communal and grazing use, increases the livestock presence in lands that are already depleted, compacted, and overused.

A technical and socio-economic barrier is represented by the ***lack of awareness among communities regarding sustainable land management practices paired with high poverty and low education levels***. Although indigenous people have vast knowledge of their land, socio-economic pressures and poverty largely contribute to an increase of unsustainable land management activities. Based on the Inquérito sobre o Bem Estar da População (INE 2008 – 2009), poverty in the south of Angola affects 40 percent of the population (poor population is defined to be the population with expenditures below 4 793 Kwanzas per month). Namibe is recognised as being one of the provinces with fewer students enrolled in the official school system. Based on data from the Plano Directorio of the Namibe Province (2013-2017) only 109 802 students are enrolled above a potential student population of 393 499 students. Rural poverty results from a lack of small and community based infrastructure rehabilitation and improvements, deficient markets and economic cycles, lack of small investments and enhancement of the productive activities, poor diversification of economic activities, and poor ecosystem services production. The main barriers to local market empowerment are the unavailability of transport and poor road conditions. The reduction in revenue and food insecurity in turn belies the need for the expansion of land and territorial use, which increases conflicts between stakeholders. Lessons learned from GEF UNDP *Sustainable Land Management Capacity Building for Angola* highlight critical land management problems at a smaller scale, such as deforestation for charcoal production, and extensive forest fires. Even though these problems are directly caused by poverty and lack of access to information and innovative technologies, also resulting in a lack of understanding about the negative consequences of these practices. UNDP states that in some instances in Huambo, such as the case of forest fires, degradation is derived from cultural habits, which have to be addressed using adequate strategies.

The lack of appropriate ***soil protection infrastructure*** is also a major threat. Soil erosion and runoff control measures are completely lacking, and no measure is taken to reduce soil compaction and infiltration capability, which is linked to crop-livestock use and the exacerbation of soil erosion. At a stakeholder scale, no mulching or soil agronomical protection measures are in use, and soils are exposed during the rainy season, depleting soil nutrient content and decreasing fertility.

c) Institutional and policy framework

The main central government institutions related to LD in Angola include the Ministry of Agriculture and Rural Development (MINANDER) and the National Direction of Environment (MA).

MINANDER is responsible for agricultural, rural development and the forestry sector. A series of institutes are associated with MINANDER, such as (a) Agricultural Research Unit (IIA), (b) Veterinary Research Unit (IIV), (c) Institute of Agricultural Development (IDA); (d) Institute of Forestry Development (IDF); and (e) Veterinary Services (SV). The Ministry is responsible for the management of a part of the Angolan Public Investment Programme (PPFCD) through which it aims to preserve the forests and combat desertification in the coastal area and in Cunene. The PPFCD which was launched in 2008 is based on the successful experience of the Programme to Reinforce Capacities of the Programme to Combat Desertification in Tombwa. The Programme which is equipped with several million USD for infrastructural development has numerous subprogrammes and projects which form part of the project's baseline (Chapter 1.1.1).

The relation between FAO and MINANDER is long and well established, through the development of a series of projects, programmes, strategies, and collaboration activities. At the moment, a FAO TCP project is under preparation to reinforce general MINANDER technical staff capacities as well as to reinforce the capability of local staff to prepare and implement work plans.

The MA was created in 2008 and is responsible for the coordination, development, implementation, and monitoring of environmental policies, particularly in the areas of biodiversity, environmental technologies and prevention and impact assessment, as well as environmental education. Between the others, the MA objective is to promote and encourage the use of environmentally suitable technologies in all economic sectors and to reduce the pressure on natural resources so that human health and welfare are preserved. In 2010 the MA established a Support Advisory Body *Comissão Multisectorial para o Ambiente* (Multisectoral Commission for the Environment - CMA) to coordinate and streamline activities that are targeting the protection and sustainable use of natural resources in the country. The 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 MA, was recently created to harmonize programmes and policies for the implementation of the National Strategy on Climate Change and Biodiversity preservation; to create the necessary conditions for the implementation of the National Plan against climate changes, to create a National Plan for investments integrating issues related to climate change, and to create centres of excellence in order to carry out research on natural disasters and provide a systematic observation and investigation on climate. The collaboration with those two recently established entities and the mainstreaming of lessons learned and main results will be key for the success of the present project and extremely relevant for the long term sustainability of proposed interventions. FAO has recently started supporting the MA in developing a mainstreaming strategy to enhance the ministry's capacity to design and implement policy approaches.

With regards to the regulatory framework and policies, the Land Law and the Law of Territorial and Urban Management can be regarded as most important in the context of this project. The Land Law which was approved in 2004 entails the recognition of the traditional collective rights of rural communities (Decree 58/07 of 13 June 2007). The Law No. 3/04 on land, territorial and urban planning (25 June 2004) rules on: land and territorial planning, land classification, and registration procedures. Moreover, the Law outlines the competent authorities and their related functions. The Land Law establishes that the occupation and use of land is subject to the rules on environmental protection, particularly those relating to the protection of landscapes, flora, and fauna, the preservation of the ecological balance and the right of citizens to a healthy and unpolluted environment. The use should therefore not to compromise the regenerative capacity of arable land and the maintenance of its productive potential. In addition, the Law rules on: property rights, rural community rights, natural resources use and protection measures, land expropriation, land concession, territorial planning, land classification, and registration procedures. Finally, the Law regulates the procedural provisions. The recently approved decree 216/11, although not yet implemented, drives the country toward the important innovation of designing a cadastre of community land.

d) Problems the project will address

The project will address the current lack of capacities on the national, provincial and local level to prevent and reverse land degradation in the targeted transhumance areas. By using participatory approaches anchored in FFS and APFS models, the project will enable stakeholders to identify and rehabilitate degraded areas and simultaneously improve local livelihoods through the sustained flow of secured multiple ecosystem services. The conflicts between farmers and herders will be addressed through traditional conflict resolution approaches (*Jango Pastoril*[1]) to enable a joint landscape level planning. The existing legal, regulatory and institutional framework will be strengthened and if necessary extended to meet SLM requirements. The project will also contribute to a sector wide collaboration and SLM information sharing, and to secure needed investments to sustain and extend SLM efforts in the country.

1.1.1 Rationale

a) *Baseline projects and investments for the next 3-5 years addressing the identified Global Environmental Benefits threats and causes and development of the Climate Change vulnerable sector (main co-financing sources of the project)*

The baseline scenario for this proposed project is characterized by the emergence of an increasingly coherent programme structure in Angola's rural development and NR framework. Several projects which consider LD, environmental protection, biodiversity conservation, and rural development are being addressed in a more coherent manner as reflected in the *National Food Security and Nutrition Strategy* (ENSAN) and *Strategy for Fighting against Poverty* (ECP). With respect to rural development the *Long Term Development Strategy 2025 of the GoA* emphasizes agricultural development as a key component with a short and medium term priority of ensuring food security and a medium to long term concern of developing commercial agriculture.

In order to enable better coordination and visibility of the investments that are focused on sustainable rural development and food security, the GoA has recently merged several development strategies (such as *ENSAN* and *ECP)* into one sole programme called *Integrated Municipal Programme for Rural Development and Combat Poverty (Programa Municipal Integrados de Desenvolvimento Rural y Combate à Pobreza, PMIDRCP).* The major objective of the *PMIDRCP* is to permit the country to overcome the economic dependence on the oil and mining sectors by developing the agricultural sector including agricultural intensification. For that purpose the *PMIDRCP* aims in particular at improving nutritional and food security of smallholders as well as improvements of rural markets through the realization of a series of municipal level activities. The programme is coordinated and implemented by the National Committee against Poverty (Comissão Nacional de Luta Contra a Pobreza) and is funded by the Programme of Public Investment including the nationwide "Productive community organization programme". The fund has allocated a budget of USD 52 million per year to the area of the project to cover the following activities: (i) the rehabilitation of the

[1] Jango is a traditional meeting, where people discuss community matters, share purposes, troubles and find appropriate solutions. The Jango strategy is used at any civic level; there are dwelling Jangos, rural community Jangos, village Jangos and municipality Jangos. Theoretically, the Jango is a forum for discussion and resolution of common problems and to discuss creatively and participatory concepts that can and should be part of this traditional Jango. Representatives can include breeders, farmers, local administration, veterinary services, provincial government and other representatives of civil society involved in the resolution and analysis of management issues of water and pastures, theft of cattle and access to veterinary services, among other issues. The time lapse of meetings depends on stakeholders and should be decided progressively as during project implementation.

zootechnical stations of Cacanda, Caraculo, and Lungo, (ii) the building of three dairies and stables in Namibe, Bibala, and Camacuio, (iii) building of three greenhouses, (iv) study for the road infrastructure improvements to support pastoral production, (v) implementation of a statistical database for the pastoral sector, (vi) Programme for the Agriculture Incentive in Lola (Bibala), and (vii) the desilting of 15 dams.

The Province of Namibe has direct access to the fund and will implement the following activities during the course of the project in order to increase the availability of water in the targeted areas: (i) building nine new dams, (ii) rehabilitating 12 dams, and (iii) conduct two studies to improve the Chingo dam and to build the Mucungo dam.

Under the Long Term Development Strategy 2025 MINANDER is implementing the Project to Combat Desertification in the coastal area and in Cunene (PPFCD). The project which is funded through the Public Investment Programme comprises of the subproject "Contract of technological partnership" which has a budget allocation of USD 9 641 000. As part of the baseline the following activities will be supported in the project area.: (i) building infrastructures, including a centre and residences for trainers, (ii) mapping of the programme intervention areas, (iii) preparation and implementation of an economic provincial plan, iv) production and provision of plants for reforestation and agricultural use, (v) provision and installation of four water pumps, (vi) implementation of a micro-irrigation system, (vii) provision of transport and agriculture equipment, (viii) preparation of a Master plan to combat desertification including the following: irrigation water capture and storage planning; forecast of infrastructures required to stop desertification; agriculture support; and capacity building.

In recognition for the need of a more coherent approach, the MA established the Support Advisory Body *Comissão Multisectorial para o Ambiente* (Multisectoral Commission for the Environment - CMA) in 2010 to coordinate and streamline activities that are targeting the protection and sustainable use of natural resources in the country. The CMA provides a platform for discussion and sharing of information hence intending to promote the dialogue between the various sectors and actors in this field. Besides departments of government, academic and scientific research groups, the Body also invites the civil society and as a result to ensure public participation in environmental management.

It is estimated that these baseline programmes will provide a total amount of USD 16.7 million to the project mainly toward the construction of infrastructure for land rehabilitation.

In addition, these GoA- financed baseline programmes are supported by the following FAO activities:

1) The FAO project *Appui au redressement des capacités de production agricole et des moyens d'existence des populations affectées par les inondations dans la Province de Namibe* [TCP/ANG/3402 (11/IV/ANG/222)], 2012-2014, targets the areas of the Namibe Province affected by floods during the month of June 2011 with a budget envelope of approximately USD 300 000. The project introduced diversification and adaptation of agricultural production, introduction of improved SLM production technologies, and agroforestry. This project, implemented by MA is focusing on vulnerable Namibe stakeholders affected by land degradation and an intensive training on agroforestry practices is foreseen to have 3 200 beneficiary families.
2) The EU/FAO project *Strengthening of Livestock Services in Angola* (SANGA project), (GCP /ANG/037/EC) (2008-2014), has a budget of USD 4.5 million and works in the area of intervention of the proposed GEF project. The project has the goal to increase livestock productivity and to control important diseases, as well as raise financial

returns for livestock keepers. This includes the opportunities for community based private sector livestock service providers to achieve increasing levels of income generation, reducing poverty and improving food security.

3) In conjunction with the previous SANGA initiative, the GoA has financed a small activity to provide technical assistance to livestock services, the project OSRO/ANG/101/ANG. The OSRO project goes in parallel with the SANGA project until the middle of 2014 and has a budget of USD 87 000 to support capacity building of MINANDER veterinary personnel.

4) FFS in Angola are being scaled-up through the *Market Oriented Smallholder Agriculture Project (*MOSAP), (TF/UTF/21/211/(TCSRD) (2012-2014 soon to be extended until 2016). The objective of MOSAP to increase agricultural production through the provision of better services and investment support to rural smallholder farmers in selected communes and municipalities in the targeted Provinces of Bie, Huambo and Malanje. The total cost of the project is USD 49.35 million, financed by a credit from the International Development Association, a Loan from IFAD, and a Grant from Japan Policy and Human Resources Development (PHRD).

5) The project "Increasing environmental and traditional community resilience in the south of Angola" with a budget of USD 2 million, is being financed by the US Foreign Disaster Assistance, and will commence in 2014. The project will focus on improving breeders' capacities, rehabilitating water points, improving territorial management, grassland management and grassland reserve structure.

b) Remaining barriers to address threats on GEB vulnerabilities

Despite growing investment in rural development (highlighted in the baseline programmes) weaknesses in implementing and up-scaling a systematic approach for a wider SLM technology adoption process include:

1. Low institutional capacities to assess land degradation and to incorporate LD matters in territorial land management planning at national, provincial and local (municipal and community) level.

The national and provincial government does not have sufficient capacity to systematically identify, locate and assess land degradation, and the effects thereof. Existing baseline maps and studies on land degradation aspects have so far only been produced by NGOs (PAPEFSA and COSPE). The government needs to prepare land management plans that are evidence-based and scientifically supported in order to identify LD hot spots and to engage in prevention and reversion actions. Without such plans the introduction of infrastructure (such as water points) to the project area in order to improve living conditions of the poor could even have a negative impact on the community by unintentionally increasing the degradation process. At the same time the local community's capacity of contributing to the participatory development of land management plans is very low. Conflicts between farmers and herders due to land rights and the lack of awareness of community rights largely prevent participatory planning opportunities.

2. **Lack and/or weak institutional framework and limited awareness/knowledge by communities on existing regulatory framework.**

Although authorities have embraced the concept of right to "rural community land" and related laws were introduced (Land Law, 2004) to strengthen it, most of the land in Angola is held under customary title and people are unaware of the existing legislative framework entitling them to the land.
The Law distinguishes Rural Land as "the lands occupied by families of local rural communities for their housing, for their activity or for other purposes recognized by custom or by this Law and its regulations" (article 22). Rural Community Land "is the land used by a rural community based on the customary use of land, including, as appropriate, areas for temporary cultivation, the transhumance corridors for cattle access to water sources and pasture corridors, whether or not subject to access rights used to access the water or as roads "(article 23). The inability of securing land tenure and resource rights largely prevents communities from effectively engaging in income generating activities, e.g. trading of beef and non-forest products. This again has negatively affected the government's efforts of supporting the establishment of a value chain for beef and dairy products.

3. **Lack of inter-sectoral coordination and tailored investments to reduce and prevent LD in rangeland areas.**

At a governmental and international development level, there is insufficient coordination between actors to address LD in a harmonized and therefore more effective manner. Although the MA is coordinating all interventions related to land management, the absence of a discussion forum regarding the management of transhumance areas causes poor awareness of the overgrazing issues and a scarce harmonization of technologies and approaches that are applied. An important role will be held by the MA CMA. Rules published by the CMA provide the versatility to not only be represented by departments of government, academic and scientific research groups, but also civil society and as a result, ensures public participation in environmental management. However the problem of land degradation has received little attention throughout the existence of the CMA. For the CMA to play the required role in the context of sustainable land management it needs to be reinforced with advocacy and awareness at the level of decision makers on the importance of the approach to the required depth with land issues.
Finally, the lack of coordination causes scarcity of investments. Although the PMIDRCP programme introduced an integrated institutional programmatic strategy, this integrated institutional approach needs to be further enhanced at a decentralized local scale and investment systems need to be improved and expanded to incorporate LD.

4. **Traditional agriculture/livestock practices and the lack of adapted soil and water conservation measures, reduce agro-ecosystem services, soil quality and land productivity, and worsen land degradation**

The low capacity of stakeholders to adapt to the changing environment is a significant barrier for environmental conservation and for development, and is linked to overgrazing and unsustainable grazing management. The SANGA project and various NGO activities have been focusing on these matters (Chapter 1.1.4), but there is a lack of an integrated capacity building system supporting on-the-job testing and validation of local scale technologies and suitable practices. The FAO has introduced FFS in order to improve practices in agricultural areas but this approach has so far been limited to farmers and does not meet the special

requirements for a participatory rangeland management. For example: the knowledge on the sustainable management of water points in order to maintain and sustainably use the introduced infrastructure by agro-pastoralists is missing, hence jeopardizing current and future government investment. This situation is aggravated by local communities' lack of knowledge and awareness of existing laws and regulations, especially in view of land tenure and customary rights highlighted under barrier 2.

c) Incremental/additional reasoning (added value of the GEF/LDCF/SCCF)

With the incremental financing from GEF, the proposed intervention will expand the scope of activities carried out in the country in relation to rural investment by focusing on the FFS and APFS approach. In particular, the project will represent an innovative step towards an ecosystem-wide landscape approach to reduce LD processes and contribute to increased collaboration and linkages between the ongoing programmes and approaches, and to decrease in the vulnerability of smallholder farmers and pastoralists. The incremental reasoning for each component is as follows (for detailed component descriptions please see section 2.4):

Component 1: Rangeland management planning

This component will address barrier #1 by ensuring the appropriate inclusion of land degradation aspects into current and future national and local land planning. This will be achieved by building the capacity of stakeholders on the national, provincial and local level. Selected government officials will be trained in the application of the globally recognized LADA methodology to identify, locate and assess the negative effects of land degradation and hence support a better definition of LD hotspot and bright spots. At the local level, strengthened civil society organizations will create awareness among communities on land policies and the best use of SLM practices and hence effectively address barrier #1 and #2. The application of PNTD and *Jango Pastoral* methods will allow for the establishment of integrated rangeland management agreements between farmers and herders, joining the two sectors in common planning and action processes.

Over the next four years the GoA will provide co-financing through the Public Investment Programme which includes MINADER activities to support local and national level investment planning related to irrigation water capture; water storage planning; forecasting of the infrastructure required to stop desertification; agriculture support planning; and capacity building in rural area planning for a total of USD 2 840 000.

The additional financing of USD 500 000 from the GEF LD TF will, through Component 1, enhance knowledge and strengthen the technical capacity of key stakeholders through: (i) training MA, MINANDER and provincial government staff on-the-job on the implementation of LADA methodology assessment and LD knowledge generation (including local degradation processes and causes) in order to support informed decision making, (ii) introduce and enhance the capacity at grass root level in participatory land-use planning methods, (iii) mitigate conflicts between different stakeholders in order to allow effective and integrated planning. The component will increase the value of the MINANDER and FAO/TCI intervention by assuring that LD aspects will be included in future planning by building the needed capacity for developing integrated rangeland management agreements through a bottom up approach.

Component 2: Rangeland rehabilitation through best range and herd management practices for small scale agro-pastoralists

This component will address barrier # 4 by improving herd management and sustaining agro-pastoral productive services in selected rangeland ecosystems. This will be achieved by enhancing FFS and by introducing an APFS model for smallholder's capacity building. APFS will be instrumental in introducing ecosystem based rehabilitation practices that will improve land cover and primary productivity by introducing improved and locally selected grassland and shrubland systems, improving water system management, and establishing *mise en défense* areas. Also, the component will improve household's livelihoods through scaling-up livestock production and value chains, strengthening ethno veterinary services and supporting non-livestock production systems.

Over the next four years the GoA will provide co-financing through the MINANDER Public Investment Programme which includes infrastructure building, the provision of agricultural equipment and provision of reforestation plant material for a total of USD 4 000 000. The Ministry of Commerce will provide support through PMIDRCP for infrastructure building and for a local programme or rural incentives for a total of USD 4 900 000. The Province of Namibe will provide support through PMIDRCP for infrastructure building, studies and for a local programme or rural incentives for a total of USD 1 700 000.

The additional and incremental financing of USD 1 792 000 from the GEF LD TF will, through Component 2, ensure the identification and appropriate introduction of adaptive SLM methods and approaches in the project area by: (i) training of a core group of programme managers, master trainers and extension service staff as FFS/APFS facilitators, (ii) establishment of a network of FFS/APFS in the project area, (iii) seeding activities in degraded areas and the establishment of guardian systems, (iv) introduction of community based seed production systems, (v) establishment of *mise en défense* areas, and (vi) the rehabilitation and sustainable management of water resources. This component will be incremental to the activities of FAO and MINANDER, as well as those of the Ministry of Commerce and the Province of Namibe which will be financed through the PMIDRCP. It will assure that baseline infrastructure construction; provision of agricultural equipment, i.e. water pump will take soil and sustainable land management aspects into consideration, and by strengthening community participation in the infrastructure management.

Component 3: Mainstreaming SLM into agricultural and environmental sector policies and programmes

This Component will address barrier # 2 and barrier # 3 by supporting the integration of soil and land management aspects into policies and programmes and by integrating LD and SLM at existing and newly established forum and discussion panels. Hence the Component will support and enhance cross-sectoral collaboration and coordination efforts between national and international governmental and civil society entities. Finally, this Component will increase investments through specific budgetary provisions made by MA, MINANDER, and decentralized administrations for up-scaling SLM in agro-pastoral systems.

Over the next four years the GoA will provide co-financing through the Public Investment Programme through MINANDER activities including the preparation and implementation of an economic provincial plan with a budget of USD 2 501 000. MA will provide co-financing which includes staff time, local travel, support to policy proposal preparation and implementation, organization of a national forum and contribute to the management of a SLM investment plan for a total of USD 200 000.

The additional and incremental financing of USD 400 000 from the GEF LD TF, Component 3 will support the GoA to mainstream SLM aspects into existing and new policies and in the establishment of investments for its application by: (i) drafting and proposing a policy that reinforces SLM applications in pastoral areas, (ii) creating awareness on and supporting the application of the Land Law in pastoral areas, (iii) integrating SLM into CMA projects and programmes, (iv) creating a working platform to implement Decree 216/11 for rural communities, (v) introducing a sector wide discussion forum on LD related matters, (vi) drafting a possible investment plan in conjunction with existing policies. The Component will increase the value of MA interventions by supporting LD policy establishment and implementation. Also, the Component will be incremental to MINANDER investment planning that is not yet focused in grassland rehabilitation and FAO intervention related to grassland local level policy implementation in grassland areas.

Component 4. Knowledge management, monitoring and evaluation

This Component will support project implementation based on results based management and will reinforce the application of project lessons learned in future operations by the executing partners, MA and MINANDER. In particular the Component will increase the value of; i) monitoring activities undertaken by the MA in the territory, ii) MINANDER intervention planning by providing best practices and options for land rehabilitation, and iii) Ministry of Comment and Province of Namibe infrastructure building plans by inserting the measures into an appropriate and integrated SLM best practices framework.

Over the next four years the GoA will provide co-financing through the Public Investment Programme through MINANDER activities including the preparation of best practices for improving economic development and planning at a provincial level for a total of USD 250 000. MA will provide co-financing which includes staff time and local travel to support M&E and independent evaluation for a total of USD 50 000. The Ministry of Commerce will provide support through PMIDRCP dissemination of lessons learned for a total of USD 50 000. The Province of Namibe will provide support through PMIDRCP for a total of USD 50 000 for external evaluations.

The additional and incremental financing of USD 400 000 will focus on: i) the design and operation of the project's M&E system based on results-based management (see details in Section 4), providing systematic information on progress in meeting project outcome and output targets; ii) the conduction of mid-term review and final project evaluation, including the adjustment of project implementation and sustainability strategies to recommendations; and iii) the systematization and dissemination of five specific best practices and lessons learned, and the related publications.

1.1.2 FAO's comparative advantages

The Food and Agriculture Organization (FAO) is the lead United Nations (UN) agency for agriculture, fisheries, forestry and rural development. Its mandate is to offer member states the technical and policy capability to raise their levels of nutrition, improve agricultural productivity, better the lives of rural populations and contributes to the growth of the world economy while safeguarding natural resources.

The proposed project is aligned with the FAO's comparative advantage in the area of capacity building, providing technical analysis and assessments in relevant areas such as LD, sustainable crop and animal production, and land/range management, policy support, and

agrobiodiversity conservation. The FAO has considerable technical experience and many field projects in a number of areas covered under this project (LD, agriculture production and food security, CC, agrobiodiversity, capacity building, development of community based capabilities and rural development, forage production and grassland management). FAO has a comparative advantage on FFS/APFS approaches which have been endorsed by various governments in the region. The FFS/APFS approaches will be used for all capacity building activities and will be further expanded in the Angolan ecoregions. The FAO has been supporting Angola's efforts both to develop a National Food and Nutritional Security Strategy and to improve livestock management and land planning. The FAO's Department of Agriculture and Consumer Protection has recently completed a global review of 20 years of FFS experience (available at https://dgroups.org/fao/ffs-eforum2) that will be published in 2014. The Global review will lead to the elaboration of a FFS-efficiency monitoring system and facilitate the access to additional funding for FFS/APFS-based activities under a results-based framework. The FAO currently has a significant project portfolio in Angola with a major focus on food security and sustainable production systems including important projects in livestock management in the nearby project area.

FAO has adopted a new strategic framework (2013-2017), and the project addresses the priorities established under SO-2 Sustainable Agricultural Production Systems. In addition, FAO has developed a Country Programme Framework (CPF) for Angola which harmonizes the country's priorities and those of FAO. The CPF will be implemented in partnership with stakeholders, including the lead institution, the Ministry of Agriculture, donor working groups, private sector, civil society, UNDAF members and relevant national and international organizations. FAO and the Government ofAngola have established its priority areas for the period 2013-2017 comprising of:

1. Strengthening smallholder farming productivity and competiveness to reduce Food Insecurity
2. Sustainable Management of natural resources for mitigation and adaptation of climate change impacts.
3. Institutional Capacity Building.

In agreement with the GoA, the present GEF LD project is captured under Outcome 2.1 of the CPF (promotes and develops sustainable land management).

FAO's comparative advantages is its inhouse technical expertise in virtually every discipline related to rural development and its capacity to respond to the needs of member countries. These areas include, among others, policies and strategies, crop and livestock development, agriculture and food security information systems, early warning systems, agribusiness and enterprises, sustainable land management and planning, forestry, climate change adaptation, and livestock and fisheries systems. The FAO has promoted and facilitated the coordination between different governmental institutions and relevant stakeholders, all involved in rural development. This advantage and role enhances even more the comparatives advantages of the FAO in Angola.

1.1.3 Participants and other stakeholders

The project will work closely with a wide range of stakeholders including national, provincial and local government agencies, civil society organizations, universities and local communities living in the project area. The Participatory Negotiated Territorial Development (PNTD) method that was developed in 2005 by the Terra Project (see Chapter 1.1.4) was used to

define; i) actors that might support the project activities, ii) actors that must be supported, iii) actors with likely little impact on the project (for example government institution that are not present in the areas), and iv) actors that could hamper the project. A matrix on the importance and influence of actors was developed under the PPG phase and was used to support the decision making regarding key project stakeholders. Results are presented in detail in Appendix 8.

At the national and provincial level, the MA and the MINANDER will be the main co-partners for project execution, supported at the local level by the *Governo provincial do Namibe*, the *Governo provincial do Huila*, and the *Governo provincial de Benguela*. The project will be fully integrated into the framework of the *PMIDRCP*. Moreover the proposed project will be part of the general framework of the national FAO activities and will strongly be based on EU information and PAPEFSA's project structures.

Regarding local institutions, selected village administrations will be involved in the establishment of ecosystem based rehabilitation areas and biodiversity monitoring, allowing an increase in NPP production along the selected transhumance routes. The Cacanda Zootechnical Station which is located near Bibala cultivates alfalfa hay (M. sativa), fruit trees, and plant breeding, as well as an important set of grassland species that can be used for the project. The Cacanda station, staffed with ten technicians and workers, functions with a limited capacity, but it continues to produce fodder and testing the palatability of foreign plants. The station will be rehabilitated through the PMIDRCP and will be formally involved in the project activities. The Caraculo station, working in shrub and grass selection and sheep multiplication, will also be involved in the project activities.

With regards to partnerships with civil society organizations, a strong collaboration will be developed with a number of NGOs which will contribute to the project's Components: The international NGO, COSPE which has 15 years of experience in the Namibe Province, is a key partner in the area. The NGO has been working in agriculture and forestry production and is already a partner with FAO on the emergency project and has collaborated in the preparation of the present PPG. Furthermore the NGO, *Centro de investigaciones aplicadas al desarrolo ambiental* (IDAF), a spinoff de la universidad de Cordoba (Spain), will be a partner. The NGO is involved in agricultural programmes supporting several international stakeholders including the FAO. The IDAF has a lot of experience in agrometeorological models and has a long established working experience in Angola, including partnerships with the FAO Terra Project.
Local NGOs with which the project will collaborate will be ADECO, who is already collaborating with the EU projects and COSPE. The Namibe's "Cooperativa AGRO-PECUARIA" will collaborate with the project, as well as the Southern Angola's herders Cooperative (*Cooperativa dos Criadores de Gado do Sul de Angola CCGSA).* Further collaboration will be established with Uniao nacional de camponeses de Angola (UNACA).

The project will also focus on having as much collaborations as possible with the university and research sector, taking advantage of the existing structures. Local institutions to be involved will include the University of Mandume, the Veterinary Investigation Institute, and the Veterinary services.Those institutions will be reinforced in the use and conservation of native species and can be boosted by focussing on existing seed banks to increase farmers' resilience. They will be involved both at a provincial and central level. For seed preservation, key partners will include research institutes in nearby provinces such as the Universidad Jose Eduardo dos Santos (Facultade de Ciencias Agrarias, Facultade de Veterinaria), Huambo, and the IIA, Huambo, the seed banks of the IDF and SV, and the Agostinho Neto University in Luanda.

Other partners and stakeholders for project implementation and coordination will be UNEP, UNDP, AfDB, World Bank, and bilateral cooperation partners.

The project will ensure the participation of local ethnic groups particularly agro-pastoralists which have been identified and consulted during the preparation phase of the project. Appendix 8 presents an overview of ethnic groups involved and a detailed description of land-use rights in the area of the project. Information available from the PAPEFSA project will be used to ensure that women are involved right from the project start.

A multi-stakeholder inception workshop will be held during the launch of the project to provide all relevant stakeholders with updated information and to discuss the respective roles in the project's overall implementation. Further consultation between stakeholders and the project coordination will be ensured by the establishment of stakeholder committees (see Section 4).

1.1.4 Lessons learned from past and related work, including evaluations

Lessons learned from a broad array of related activities and experiences have been considered during the project preparation phase and are reflected in the project design. The most important elements are presented below.

Pastoral field School and Farmer Field School network

At an international level, a strong collaboration has been established building upon the extensive experience gained in APFS in other African countries such as Kenya, Ethiopia and Uganda with the FAO projects: *Using Farmer Field School Approaches to Overcome Land Degradation in Agro-Pastoral Areas of eastern Kenya* funded by GEF, *Karamoja Livelihood Agro-Pastoralist Opportunities (KALAPASO)* in Uganda funded by Belgium, and *Improved food security, livelihoods and resilience of vulnerable pastoral communities in the Greater Horn of Africa through the Pastoral Field School approach,* funded by Switzerland. A strict collaboration and the direct involvement of the team from the Ethiopia, Kenya, and Uganda project in the preparation of the present project allowed FAO to make significant use of a vast number of lessons learned both from the point of view of the technologies used and from approaches employed that are listed in Table 1.

Table 1: Recommendations from APFS network in Ethiopia

Constraints	**Recommendations**
Integration of land and water management aspects in short-term, commodity-driven strategies	Integrate short-term strategies with long-term natural resources management strategies
Limited knowledge by local leaders of the importance of land and water management issues and their implications on livelihoods	Encourage local leaders to incorporate land and water management in district action plans with an appropriate budget
Lack of supportive ordinances and by-laws to enforce sustainable land and water management	Develop enabling legislation and promote practical ordinances and by-laws
Lack of incentives for long-term investment in land and water management	Identify type and provide incentives for farmers for long-term investments in land and water management
Building farmer field schools' sustainability	Promote farmer field schools as an initiative to; i) empower farmers: ii) Link to policy at local, district and national level institutions, private

	sector, iii) preach practical messages continuously at all levels, iv) strengthen links among partners, v) seek ways to reduce the cost of farm power and inputs for farmers, vi) implement strategies targeted at different types of farmers (hand power, animal power, and motorized), vii) integrate conservation agriculture, and viii) conduct impact assessments to generate evidence needed to convince donors and policymakers
Quality assurance of farmer field schools	Ensure quality control of farmer field schools is maintained when scaling up
Implementation and enforcement of policies (on land, land use and soils), and harmonization with other polices (forestry, wetlands, water)	Establish mechanisms for training, implementing, enforcing and harmonizing policies
Limited knowledge and information about the farmer field school approach and its application among NGOs and private sector service providers	Encourage NGOs and private service providers to use the farmer field school approach in their community development interventions
Farmer group formation and sustainability	Facilitate group formation and sustainability through business links to appropriate microfinance institutions and markets

The project also draws on lessons learned tools from a number of FAO supported projects and initiatives in Angola related to FFS including; (i) the technical capacities and growing experience of the FAO in the FFS approach started in Angola in 2005 by the *FAO SPFS* and continued within the project *Appui au développement de la Filière «Manioc» en Angola*. The FFS's experience in the SPFS is fully recognized by MINANDER through the IDA as a suitable and valid approach to providing extension services in rural areas. Scaling up the FFS's approaches is followed by different actors including the WB funded *Market Oriented Smallholder Agriculture Project (*MOSAP) which has recently started, with the FAO to scale-up the FFS network to 500 FFSs, training 13 000 farmers, effectively reaching some 40 000 smallholders with a total financing of approximately USD 4.1 million in the area of the central plateau. The main lessons learned are listed in Table 2.

Table 2: Recommendations from the Angola FFS network

Constraints	**Recommendations**
Building Farmer field school sustainability	FFSs have demonstrated their ability to improve living conditions and households, by strengthening the social environment, increasing income, and creating better resilience to food risks
Appropriate timeframe is needed depending on local conditions	The introduction of a new technical approach requires time and must necessarily take place over several steps until the full introduction regarding the complexity of the technique and approaches. This applies in particular contexts to Angola (post-conflict situation).
Planning is needed to maximize efficiencies and improve effectiveness	Proper planning and detailed monitoring is used as a management tool
Coordination is essential to ensure complementarities and synergy creation of various	Conceptual technical approaches should be clearly coordinated between projects / programmes (including FAO projects)

projects / programmes.	
Conditions might vary and the project needs to be adapted	Flexibility and complementarity of the whole implementation and monitoring systems is needed especially among farmers, tools, local partners of the project in the framework of an appropriate institutional ownership, financial management and long term sustainability of the project. This complementarity should lead to operational partnerships registering in time

FAO's land degradation assessment methodology and other GEF activities

The FAO and UNEP developed a LD assessment method within the LADA project (*Land degradation assessment in drylands*) funded by GEF. LADA developed methodologies for local and national LD and SLM assessments. The method includes the use of the WOCAT approach *(World Overview of Conservation Approaches and Technologies).* Based on the LADA method, a new global intervention has recently been approved by the GEF, the project "Decision Support for Mainstreaming and Scaling up of Sustainable Land Management" to improve the capability and decision making of Countries and Regions engaged in the Mainstreaming and Scaling Up of Sustainable Land Management (SLM) to Combat Land Degradation, as well as to enhance food security, mitigation and adaptation to climate change, and preservation of biodiversity. The present project will use lessons learned and tools from the LADA method, and will collaborate with the new project.

The FAO Terra project

The project "*Apoyo a las instituciones gubernamentales para la mejora de la gestión de la tenencia y administración de la tierra y los recursos naturales, en las provincias de Huambo y Bié*" (GCP/ANG/045/SPA) is the latest phase of the Terra Programme that will end by mid-2014 and has reinforced the institutional and operational framework for the LM and NRM.
The Terra based Participatory Negotiated Territorial Development (PNTD) approach developed in 2005 offers concrete solutions to the challenge of having numerous stakeholders competing for shrinking natural resources, in terms of access and management and the need to improve trust, strengthening social cohesion, and promoting systemic negotiations to induce socially-legitimized agreements. The approach fosters bottom-up participatory decision-making processes, enhances consensus building, addresses asymmetries of power and encourages social dialogue and partnerships among a wide range of actors within a territory that promotes gender equality in land access and territorial development. Based on the PNTD, the Terra project developed the IGETI (Improving Gender Equality in Territorial Issues) tool that allows a gender sensitive stakeholder priorities' analysis. The analysis is used within the PNTD for plan negotiations and implementation. The analysis is based on a Socio-Economic and Gender Analysis (SEAGA) approach that places great emphasis on the importance of linkages between economic, environmental, social and institutional patterns that influence the context in which development activities are undertaken. Further to that, the Terra project contributed to strengthening land tenure capacities by supporting primarily local actors, including indigenous people, and to improve the institutional framework developed for the community delimitation approach: The state recognizes the existence of local rights and confers the land right to the community, resulting in a full title document. This document provides strong proof and protection, it is officially recorded in the cadastral database and on official maps, and is far less expensive than a private sector cadastral title (as the state cover the cost) or a concession title. Finally the project executed lobby action at national and provincial institutional levels to improve rules and details of the Land Law. Through the project, the Land Law application was reinforced and implementation mechanisms were put

in place. The lessons learned from Land Law improvements will be a strong baseline of the present project. Continuous collaboration with the Terra project team has been established during the PPG phase. The Terra team will collaborate with activities in Components 1 and 3.

Lessons learned at a local level (PAPEFSA EU project, FAO, COSPE, and other actors)

The results of the PAPEFSA project proved the usefulness of adequate local planning through the use of DRP (participatory rural diagnostic) and participative maps that have also demonstrated their validity on small intervention planning and to define and implement community projects. Also, the project highlighted that the empowerment related to the "water point communitarian management (GAS)" has proven to be very effective, but that it should take the inclusion of infrastructure for family water consumption into consideration. The PAPEFSA project was inspired by the results from the DRP and by the implementation of small community projects to set up a community decision making method to manage and improve the chimpacas. The community discussion method, based on the Jango was successful. The lessons learned gave the idea that the traditional Jango could be extended to a specific typology of Jango that would include territorial discussion on pastoral areas, named *Jango Pastoril*. Cahama served as a pilot village to test the idea and interest on the part of its partners. Results were presented in the form of maps and animations. Part of the recommendations came to the conclusion that more meetings could be scheduled of this type. For purposes of greater consultation the most crucial local problems could be addressed at a Municipal Forum and/or a Provincial Pastoral Jango. In the case of the present project, the Jango will be used in conjunction with the APFS approach and can propose solutions to an inter-municipal (or transhumance path scale) commission for conflict resolution. For that purpose the project is promoting the inclusion of specific budgetary provision.

Further, the PAPEFSA project successfully tested the ethno-botanical studies to introduce and use local species to increase local plant value, especially for NTFP (No Timber Forest Products). Technologies tested and introduced by the PAPEFSA project included the reforestation of chimpacas' borders and the Farmer Managed Natural Regeneration (FMNR) which included the systematic regeneration of trees from living tree stumps, roots and seeds.

It was proven by the COSPE project "Programa Integrado de Protecção e Desenvolvimento das Florestas Costeiras de Angola" (Integrated Programme for Protection and Development of Coastal Forest) that the existence of mechanisms to improve support service initiatives in the livestock communities, based on the promotion of other revenue building activities, have a very positive impact on their livelihood. For example, Mukubais practiced agriculture including the exploitation of honey, production of handicrafts, ecotourism, etc. Also, the project strategically invested in adequate services to the traditional livestock keeping system (forage in the dry season, grants, etc.). The important lesson learned is that the traditional livestock and vegetation value chains, including the production of non-livestock product for commerce, are a key to improving food security and preserve the environment. COSPE analysed various non-forestry products within the framework of the project: Programa integrado de protecção e desenvolvimento das florestas costeiras angolanas (PIPDEFA) including cosmetic/medicinal plants. The NGO has further tested the commercialization for the most eligible products including mumpeke cosmetic oil, the food plants mukua, and mutuate (Annex 9). Lessons learned from COSPE PIPDEFA project will be utilized in the present activity. Regarding the valorisation of the beef value chain, the best practices suggested by COSPE include the promotion of meat inspection at formal/traditional slaughterhouses, advantages of the reproducer selection, beef trade planning in the early dry season to achieve better incomes and less animal pressure over the land, improvement of the feeding phase at the finishing area.

Furthermore, the collaboration between the Italian civil society and Angola produced some scientific interest especially at the University of Florence, with a relevant PhD thesis on the morphological and genetic characterization of mucubal and humbe beef races, in southern Angola. Also, a forest inventory in the Miombo ecosystem has been realised and can be useful as baseline for forest interventions regarding the improvement of palatable bushes.

1.1.5 Links to national development goals, strategies, plans, policy and legislation, GEF/LDCF/SCCF and FAO's Strategic Objectives

a) Alignment national development goals and policies

The Government of the Republic of Angola's (GoA) Long-Term Strategy Vision entitled *Angola Visão 2025* entails the objective of balanced growth and development alongside natural resource protection. In order to ensure better coordination and visibility of the investments focused on food security, the GoA has recently decided to integrate the *National Strategy for Food and Nutritional Security (ENSAN),* formulated in 2009 with the FAO's assistance, and the *Strategy to Combat Poverty (ECP)* and other strategies and programmes, formulated at the beginning of 2010 in one sole programme called *Integrated Municipal Program for Rural Development and Combat Poverty (Programa Municipal Integrado de Desenvolvimento Rural y Combate à Pobreza, PMIDRCP)*. The major objective of the *PMIDRCP* is to permit the country to overcome the economic dependence on the oil and mining sectors by developing the agricultural sector including agricultural intensification. Both the ENSAN and the ECP strategies are bases for the present project; i) the ENSAN has the main objectives of restructuring agricultural and pastoral production, and ii) the ECP Strategy includes LD as one of the keys constraints to food security.

Furthermore, coordination with the following programmes and strategies will be sought:
- FAS – Fundo de Apoio Social: a government agency, with legal personality and financial and administrative autonomy to coordinate with other programmes to fight poverty, contributing to the promotion of sustainable development and poverty reduction. FAS has contributed to the realization of previous PAPEFSA activities related to water management in the areas.
- The National Programme Water for All and National Strategy for Water 2013/2017 promoting sustainable resources management for surface and underground water including promotion of agriculture
- The National Programme for Extension and development (Programa Nacional de Extensão e Desenvolvimento Rural, PEDR) focuses on family farming and aims at organizing production in rural communities, increasing productivity on small scale farms, and improving livelihoods.

Regarding territorial management, the present project will be in line with the Land Law and the Law of Territorial and Urban Management provision entailing the recognition of the traditional collective rights of rural communities. The Land Law establishes that the occupation and use of land are subject to the rules on environmental protection, particularly those relating to the protection of landscapes, flora, and fauna, the preservation of the ecological balance and the right of citizens to a healthy and unpolluted environment. The use should therefore not compromise the regenerative capacity of arable land and the maintenance of its productive potential. In addition, the Law rules on: property rights, rural community rights, natural resources' use and protection measures, land expropriation, land concession,

territorial planning, land classification, and registration procedures. Moreover, the Law indicates the competent authorities and their related functions. Finally, the Law regulates the procedural provisions. The Project approach will also include support for customary collective rights based on the principles of the Land Law (Law No. 9/04 of 9 November 2004). The collaboration with the Terra project will allow for the best application of existing regulation.

b) Alignment with NDPA, NDPs, NBSAP, NIPs, NAMA

Angola ratified the UN Convention to Combat Desertification (UNCCD) in 1997 and a system of national reporting on the implementation of the UNCCD is in place (National Reports on the Implementation of the UNCCD have been prepared for 2004 and 2005). The 'land-degradation neutral world' target discussed in Rio+20 and agreed upon by world leaders has emphasized LD in the political agenda. UNCCD is strongly supporting the Degradation neutrality concept and is proposing the main pathways to zero net LD. The following UNCCD recommended pathways are included in the present project: i) arresting further degradation and restoring and rehabilitating degraded land, ii) sustainable land management, iii) avoiding the degradation of non-degraded lands, and iv) community-based and traditional approaches.

The ***National Desertification Programme*** **(NDP)** is under finalization in the framework of the GEF project "*Sustainable Land Management Capacity Building in Angola*" implemented by UNDP. A validation workshop was recently held in 2011 with FAO presence, and the project proposal is in line with the draft NDP which identifies natural resources management and soil management as key national priorities.

The NDP has three main thematic axes including:

- Poverty reduction (provision of basic services, education, health, water supply, rural trade, reconstruction and rehabilitation of road infrastructure, creating new jobs and reducing food insecurity);
- Conservation, preservation and sustainable management of natural resources, increasing productive capacity of drylands and areas prone to desertification, improving environmental management of natural resource base including soil, forests, wildlife and conservation areas, water)
- Increasing institutional capacity (including the capacitation and training of personnel, production of laws and regulations to strengthen environmental management, institution building or strengthening management capabilities, introduction of system for tracking / monitoring and systematic observation of natural phenomena

The NDP focuses on the sustainable management of natural resource of drylands or of desertifying zones. In particular, the NDP mentions the "miombo" forest in the Bie, Huila and Malanje highlands, and the "*mutiati*" area (*Colophospermum mopane*) (mentioned in Annex 7) are present in the project intervention zone. The NDP mentions that this type of vegetation is less intensive and not used in a sustainable manner. The NDP proposes the following actions to address SLM, in line with present project interventions:

(i) Rehabilitating and improving infrastructure, revitalizing of the rural economy and restoring economic and commercial circuits;

(ii) Increasing the flow of investments and strengthening of productive activities;

(iii) Increasing and diversifying of ecosystem goods and services production to reduce hunger and poverty.

Angola ratified various international environmental agreements such as the UN Convention on Biological Diversity (CBD) in 1998. Angola prepared a National Biodiversity Strategy and Action Plan – NBSAP – in 2006. The present project takes into consideration the following NBSAP strategic areas: B - *Education for Sustainable Development*, D *Sustainable Use of Biodiversity Components*, and E - *Role of Communities in Biodiversity Management*. The latest point of the strategy will be key for the present project that includes participatory monitoring of technologies and approaches by evaluating grassland biodiversity through the FFS/APFS.

The UN Framework Convention on Climate Change (UNFCCC) was ratified in 2000. The NDPA was presented to UNCCD in December 2012. The present project is in line also with main NDPA priorities, including some that can relate to grassland management and land rehabilitation such as: Promoting SLM for increased agricultural yields, Diversifying crops to less climate sensitive cultures, Using locally adapted varieties, Studying implications of changes in disease patterns (animal) and availability of water for livestock, Increasing water availability through village-level wells and boreholes

c) Alignment with GEF focal area and/or LDCF/SCCF strategies

The project is consistent with the GEF Land Degradation focal area strategy and will contribute to the objectives of LD-1 and LD-3 of the LD result framework. In particular, the project will contribute to the achievement of Outcome 1.1: "Enhanced enabling environment within the agricultural sector", Output 1.1: "National policies that guarantee smallholder and community tenure security", through the project activities of Component 3 (project Outcome 3.1 and 3.2) by; i) designing a new SLM policy for pastoral areas, ii) enhancing the Land Law application through the improvement of land tenure security in 50 communities, iii) designing and setting in place a working platform for the implementation of Decree 216/11, and iv) including SLM in at least one CMA programme.

The project will also contribute to Outcome 1.3: "Sustained flow of services in agro-ecosystems" and Output 1.3: "Suitable SLM interventions to increase vegetative cover in agro-ecosystems", through the project activities of Component 2 by using APFS to support community validation and the adoption of the following approaches; ecosystem based rehabilitation improving pasture management, *Mise en défense* areas, rehabilitation of degraded pasture (through seeding of highly palatable species), production of fodder to reduce pressure on pastures, verification and experimentation systems for grass adaptability and palatability, a guardian system for new seedlings financed by community generated revenue using electricity system, and rehabilitated and management of water points.

The project will further contribute to the Outcome 1.4: "Increased investments in SLM", Output 1.4: "Appropriate actions to diversify the financial resource base" through the project activities of Component 3 (project Outcome 3.3), by designing a draft investment plan in collaboration with at least two partners' policy schemes and/or governmental programmes with increased investments of USD 5 million by the end of the project.

Finally, the project will support Outcome 3.1: "Enhanced cross-sectoral enabling environment for integrated landscape management", Output 3.1: "Integrated land management plans developed and implemented" through project Component 1 by supporting the preparation of

eight land management plans using PNTD and *Jango Pastoril*. The Outcome 3.2: "Integrated Land management practices adopted by local communities", Output 3.2: "INRM tools and methodologies developed and tested" will be contributed through the introduction of socially accepted and adapted INRM methodologies by the network of APFS.

d) Alignment with FAO Strategic Framework and Objectives

The project is aligned with FAO's new 2014 – 2017 Strategic Objective 2 *(SO2): Increase and improve provision of goods and services from agriculture, forestry and fisheries in a sustainable manner*.

The project is also aligned with the Support Area 4 of the United Nations Assistance Framework for Angola - 2009-2013 (UNDAF): Sustainable Economic Development: Strengthened pro-poor economic growth and accountable macroeconomic management, integrated rural development, management of NR and energy to promote environmental protection, energy efficiency and adaptation to CC. FAO, WFP, and IFAD base their plan of action on this Framework. In the new Country Programme Framework, which incorporates government priorities with those of the different donors and other stakeholders, FAO-Angola has identified priority areas of intervention for the next five years. These priorities are: Strengthening smallholder farming productivity and competiveness to reduce Food Insecurity, Sustainable Management of Natural Resources for mitigation and adaptation of climate change impacts, and Institutional Capacity Building. In agreement with the GoA, the present GEF LD project is captured the Outcome 2.1 of the CPF (promote and develop sustainable land management).

SECTION 2 – PROJECT FRAMEWORK AND EXPECTED RESULTS

2.1 PROJECT STRATEGY

The project aims at enhancing the capacity of southwestern Angola's agro-pastoral sectors to mitigate the impact of LD processes and to rehabilitate degraded lands by mainstreaming SLM technologies into agro-pastoral and agricultural development initiatives. The project will address the need for a more integrated approach to LD, which takes into account the complex interactions between agricultural and pastoral production in the targeted area. This will be achieved by focusing on key productive landscapes such as the areas commonly shared by agriculturalists, agro-pastoralists and transhumant herders in a context of increasing interruptions in the traditional herd migrations patterns, routes, transhumance dates and arrangements. The project approach will be mainly based on participation of indigenous communities and their knowledge and local best practices to reverse LD processes. The method will be fully integrated in the APFS system, so that the project approach will reinforce participation at a community and transhumance route scale.

In detail, the following activities will deeply involve the local indigenous farmers and herders and their knowledge and practices:

- The *Jango Pastoril* agreement system and integrated land management plans will allow for strengthening agreements between farmers and herders. This will sustain improved use of ecosystems which in turn will reverse degradation processes by granting appropriate access to local resources. Long term sustainability of such systems is demonstrated by past projects such as PAPEFSA (see further details below under sustainability of project outcomes point 4).
- Indigenous requirements will be inserted into integrated management plans, rangeland management agreements and local policies.
- FFS and AFPS will build "grass-roots labs" based on indigenous knowledge in which smallholder farmers and pastoralists generate and expand their knowledge and develop their own management system. FFS improve local capacities for adoption of knowledge demanding SLM practices and technologies and support community building.
- Participatory monitoring and adaptive management of land resources will increase local indigenous leadership and strengthening farmer-herders relations.

In order to maximize impact, avoid dispersion, and ensure the generation of positive effects both in environmental and socioeconomic terms, activities will be centred in the Namibe province focusing at a specific network of transhumance routes as recommended by reports of the EU PAPEFSA project. Nonetheless, given the length and extent of transhumance routes, a part of activities will also involve the provinces of Huila, and Benguela. The localization of the project intervention will help to strengthen the capacity of decentralized programmes (such as PMIDRCP) to integrate a longer term LD reversion strategy in its rural development and poverty reduction investment schemes, as well as helping national strategies in linking with provincial and municipal level interventions. The proposed project will hence generate experiences in the key province of Namibe (together with part of Huila and Benguela), boost the adoption of sound SLM technologies and practices, expand the scope of the FFS/APFS approaches, increase capacity building, and support coordinated policies and programmes to

shift from a reactive (rehabilitating) response towards a proactive (mitigating/preventing) approach to LD processes.
The Project approach will also include support to customary collective rights and appropriate use of legal packages based on the principles of the Land Law approved in 2004 and in the application of the Decree 216/11 (see chapter 1.1.c). In southwest Angola, long range seasonal pastoralism areas are the basis of local livelihoods and a critical part of the communities' livelihoods. Since the Land Law has been conceived essentially for sedentary communities, the critical point will be to identify communal pastoral areas and transhumance corridors (whose location and width might change every year due to drought/rainy considerations). Additional considerations that need to be made in relation to land access restriction include: i) overcrowding and degradation of resources, ii) social and economic processes such as rangeland fence off by outsiders putting a risk on well adapted rotation-based cropping / grazing production systems or cutting off traditional livestock paths; iii) climate change and natural disasters; iv) and land conflicts.

2.2 PROJECT OBJECTIVES

The goal of the proposed project is 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.

The project's environmental objective is to pursue land degradation neutrality by enhancing 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.

The development objective is to increase local livelihoods by introducing locally adapted SLM approaches and by strengthening and diversifying livestock and non-livestock based value chains.

To achieve the objectives of the project, activities have been organized in four Components; (i) rangeland management planning, (ii) rangeland rehabilitation through best range and herd management practices for smallholder agro-pastoralists, (iii) mainstreaming SLM into agricultural and environmental sector policies and programmes, and (iv) project monitoring and dissemination of lessons learned. The specific objectives, methodologies, activities and key outputs of each Component are described in detail below.

2.3 EXPECTED PROJECT OUTCOMES

The key outcomes and impact indicators include:

Outcome 1.1: By the end of the project, the capacity is created and knowledge is available for participatory integrated land management planning at national, provincial and local (community) level. Outcome 1.1 will be monitored through the LD-PMAT tracking tool as follows, with targeted project values being:

- Indicator LD-3. i): The capacity of 40 government officers from two ministries (MA and MINANDER) and 20 local PNTD trainees is developed to independently conduct LD assessments and apply the knowledge to inter-sectoral land-use planning activities. (Baseline score 1: no capacity build, target score 3: cross-sectoral training courses addressing cross-sectoral issues are conducted).
- Indicator LD-3. i): Eight integrated territorial land management plans introduced covering 3 000 ha (baseline: 0 territorial land management plans in place, target: 8 plans).

Outcome 2.1: By the end of the project integrated APFS-herd management practices lead to an increase in agro-pastoral production with a total of 2 800 herders (30 percent women) benefiting there from. Outcome 2.1 will be monitored through the LD-PMAT tracking tool as follows with targeted project values being:

- Indicator LD-1. ii): Increase in livestock productivity by 5 percent. (Baseline score: 2, livestock productivity is low but stable; live weight gain of 35 kg per cow per year, target score: 5, livestock productivity with increases that are sustained over the long-term).
- Indicator LD-3. iii): One methodology of INRM applied in the broader landscape in the project area. (Baseline: 0 methodologies of INRM applied in the broader landscape, target: 1 INRM method, *rotational grazing including crop residues use* applied in the broader landscape).

Outcome 2.2: By the end of the project, ecosystem based restoration is undertaken in over 13 500 ha of which 600 ha are rehabilitated and 900 ha set as *mise en défense* leading to an improvement in vegetation cover. Outcome 2.2 will be monitored through the LD-PMAT tracking tool as follows with targeted project values being:

- Indicator LD-1. iii): 13 500 ha of land area with increased vegetation cover (NPP increase by 5 percent). Baseline: G-LADA climate adjusted NDVI correlated to NPP: -0.03 Kg C/ha in an average year).

Outcome 2.3: By the end of the project, the livelihood of households in at least 70 communities have improved through; (i) scaling up of livestock products, and (ii) supporting two small-scale non-livestock based production systems.

- Indicator: increase of revenues by 5 percent in up to 70 communities (total of 1 400 people). (Baseline: average annual income per capita will be defined exactly during the first year, but it is estimated to be about USD 190 per household per year).

Outcome 3.1: Increased integration of SLM into the policies and programmes and reinforcement of existing policies, regulations and application. Outcome 3.1 will be partly monitored through the LD-PMAT tracking tool with targeted project values being:

- Indicator LD-1. i): one SLM policy discussed and submitted for approval. (Baseline score: 1, no sector policy in place, target score: 2 sector policy has been discussed and formally proposed).
- Indicator LD-1. i): one law implemented in project pastoral areas reinforcing tenure security. (Baseline score: 1, no land tenure arrangements and use rights in place, target score: 2, Land tenure arrangements and use rights in place).

- Indicator: one working platform is created for the implementation of Decree 216/11. (Baseline: no working platform in place, Decree not implemented in project area).

Outcome 3.2: By the end of the project decision making is reinforced through the establishment of a sector wide discussion panel on LD (including civil society research, international agencies, and government) focusing on transhumance areas to reduce duplication and increase awareness and lessons learned and collaborations on SLM established between at least three ongoing programmes.

- Indicator: sector wide discussion panel on SLM established between at least three ongoing programmes implemented by government or international agencies, or civil society. (Baseline: no collaboration mechanisms in place).

Outcome 3.3: Increased investments through specific budgetary provisions made by MA, MINANDER, and decentralized administrations for up-scaling SLM in agro-pastoral systems. Outcome 3.3 will be monitored through the LD-PMAT tracking tool with targeted project values being:

- Indicator LD 1. iv): draft investment plan in place for direct SLM payments. The plan is established in collaboration with at least two partners' policy schemes and/or governmental programmes with a budget of USD 5 million per year by the end of the project. (Baseline: no investment plan for SLM in place).

Outcome 4.1: Project implementation is based on results based management and lessons learned for the facilitation of future operations. The outputs corresponding to Outcome 4.1 are detailed in Section 2.4 below.

2.4 PROJECT COMPONENTS AND OUTPUTS

Component 1: Rangeland management planning

The objective of Component 1 is to facilitate integrated rangeland management planning by providing knowledge and training on LD assessment tools and by strengthening local decision making through awareness creation and the mitigation of conflicts between different interest groups. This will be delivered through the following outputs:

Output 1.1.1: 40 MA, MINANDER, and provincial government staff trained on-the-job in the implementation of LADA methodology assessment and LD knowledge (including local degradation processes and causes).

In the first year (PY1), the project will develop the capacity of staff selected from two key ministries (MA/MINANDER) to assess LD with globally recognized methods (LADA). The LD knowledge created at early project stages will allow for the better definition of LD hotspots and bright spots and will provide the basis for informed decision making in the project area. In the beginning of PY2, 40 MA/MINANDER officials will have the capability to assess LD statuses and trends and the effectiveness of SLM approaches. The training on the LADA method will support technical officers in the implementation of LADA-local assessments and will contribute to develop and reinforce LD baseline information for the entire project area. To include CCA considerations into the LD assessment, the tool and

methods of the "Self-evaluation and Holistic Assessment of climate Resilience of farmers and Pastoralists (SHARP)" will be introduced into the "LADA local" method in collaboration with the LADA team. The trainees will apply their knowledge in PY2 by assessing the LD status and trends in the project area covering an area of 5 000 ha. The results of the assessment will be published and discussed with local level decision makers by the end of PY2. The capacities built will allow LD assessments to be repeated in other areas.

The GoA will be supported in establishing contacts with the FAO implemented "Decision Support for Mainstreaming and Scaling up of Sustainable Land Management" GEF project and will be facilitated in participating in international meetings related to the LADA method application.

Output 1.1.2: Capacity of 20 decision makers and 20 civil society organizations is increased for ecosystem-wide participatory land management planning at the local

In PY1and PY2 the project will provide training to 20 existing or newly established civil society organizations and 20 selected local government personal or local leaders identified by communities to facilitate an integrated land management planning process. The focus of the training will include the appropriate application of; (i) existing policy instruments and the use of local level funds, (ii) the IGETI (Improved Gender Equity on Territorial Issues) approach on negotiated agreements, and (iii) the PNTD capacity building approach, designed by the Terra project. The selected approaches taught will increase negotiation skills in the local communities to facilitate dialogue, conflict resolution, and land management plan preparation. This will enable local administrative entities to make appropriate decisions for the inclusion of suitable SLM methods within their jurisdiction.

The activities will be accompanied by a socio-economic diagnosis of the three provinces undertaken in PY2. The diagnosis will allow the analysis and study of territorial dynamics to support local level endogenous decision making and territorial management planning. Based on the assessment results, the training process will be refined to increase civil society organizations and trained people's capacities.

At the end of PY3 20 trainees in five municipalities and will have sufficient skills to become local negotiation leaders and will be confident in project implementation and to maintain project results after the end of the project. The local trainees will; (i) understand the local impacts of environmental and SLM legislation on livelihoods, (ii) be able to apply for local level funding and financing, (iii) be able to undertake negotiations on behalf of the community, and (iv) be able to support the territorial management planning phase. Their activities will be supported by the 20 existing or newly created civil society organizations which will institutionalize the capacity created.

Output 1.1.3: Integrated land management plans developed with the participation of farmers/pastoralists and customary associations improving the land management on 3 000 ha

The land management plans will be one of the key results of the project, aiming at the management of transhumance level conflicts and will support discussions at a multicommunity level, covering the transhumance scale.

In PY1 a quality survey or study of existing non-formal agreements and plans, including the agreements relevant to indigenous peoples, will be undertaken. By analysing existing informal plans debate will be promoted involving men and women and stakeholders from

various levels of local societies, including local governments.. The activity will build upon and benefit from the awareness and capacity development activities under Output 1.1.2. The increased awareness regarding participatory development of plans managing LD, environmental issues and gender will support the preparation of the plan's negotiation phase. The negotiation phase will make use of the PNTD method, which will be implemented through the 20 reinforced or newly established organizations (1.1.2) and will be based on the *Jango Pastoril* method tested by the EU PAPEFSA project. The increased community and inter-community participation obtained through the *Jango Pastoril* will allow for best practices to be self-assessed and defined on a community and transhumance route scale. The few existing informal agreements will be improved and new land management plans will be promoted to facilitate a smooth collaboration between different stakeholders. At the end of the activities, eight territorial management plans using *Jango Pastoril* will be finalized and implemented.

Component 2: Rangeland rehabilitation through best range and herd management practices for smallholder agro-pastoralists

The objective of this Component is to enhance the adoption of knowledge-demanding SLM at the community level, to improve herd management, and to rehabilitate key grazing lands.

In order to reach its objective, the Component will include various specialized actors: the APFS groups (which will be the material executor of most activities), the experimental stations of Caraculo and Cacanda (will support varietal and wild grassland shrub and grass selection), the NGOs: COSPE, ADECO (will establish APFS, a community action plan including contribution to APFS groups, support participatory rehabilitation through local and wild species of fodder, and participatory rehabilitation of water points), Liga 4 de Abril (will support water point rehabilitation training and community involvement), the University of Mandume (will provide studies of non-livestock local forest products and organize the FFS/APFS master training), the University of Jose Eduardo do Santos (will provide studies for the use of local species and seed conservation and preservation), local municipalities (PMIDRCP mobilization and participation in the local planning phase of Component 1), and the Bibala IDF (contribution to ecosystem rehabilitation). Various activities will be supported by participatory GIS mapping including the selection of rehabilitation areas and water point re-establishment. The GIS activities will be used to assess biodiversity improvements with the participation of communities. Further, a NPP GIS assessment will support expert judgment on the project's impact and help the government in future interventions, as well as contribute to the project's M&E and PMAT preparation (mid-term and end-term stages). Finally, collaboration with the FAO Commission on Genetic Resources for food and agriculture will allow for the collection of data and for the exploration of the potential for Angola to implement the commission's rules in pastoral areas.

The following outputs will contribute to reach the Component's objective:

Output 2.1.1: A core group of 20 programme managers, trainers and extension service staff trained as APFS/FFS facilitators in SLM and herd management practices

Under this output the APFS approach which is new to Angola will be introduced to the country with support from and collaboration with the FAO/WB MOSAP project taking the available HoA experiences into consideration. The project will organize a comprehensive capacity building system for the implementation of the APFS. The capacity building will be

designed to cover all needed technologies and approaches required for SLM implementation in the project area, including grassland management, animal production and health, and agricultural production.

In collaboration with local universities and MA/MINANDER, 20 master trainers will be capacitated in PY1. The training will predominantly focus on agro-pastoralism and livestock management and will be provided by experts from the HoA in collaboration with local research personnel. In order to facilitate exchange learning, an exposure visit to APFS in Ethiopia will be organized with ten key programme managers, project staff, and experts.

Output 2.1.2: 70 SLM FFS/APFS has established and 2 800 herders and farmers (at least 25 percent women) adopting SLM and herd management practices through an APFS based community action plan

A community dialogue in PY1 will set the basis for the concepts and principles of APFS and FFS, and will help towards the selection of the community facilitator; the process is necessary to select the communities that will initiate the APFS process. The project team, COSPE and ADECO NGOs will initiate FFS implementation and based on results from Component 1, the project team will be able to select appropriate service providers from newly established or reinforced civil society organizations who will eventually support the establishment and strengthening of APFS.

By PY3 the APFS capacity building cycle will train groups of 40 farmers/herders who will focus on different activities including grassland selection and rehabilitation, rotational grazing using crop residues, agriculture, transhumance, animal health, water management, etc. The training will last 18 months and will be finalized with the development of a community action plan.

By the end of the project, the area will be covered by a network of 70 functioning and self-sustaining APFS. The developed action plans will be shared at the territorial level within the ongoing negotiation taking place in Component 1.

Output 2.2.1: Communities capacitated in ecosystem based rehabilitation principles and assessments undertake seeding in an area covering 500 ha

An ecosystem approach will be developed and taught through the established APFS network in order to rehabilitate the degraded project areas. The activity will start (PY1) with the participatory identification of forage and fruit seed to be prioritized for multiplication, including the selection of the most suitable wild species and varieties. Local expertise will also be used to identify and select wild grassland and shrub selection. The activity will be complemented by participatory local biodiversity mapping in order to gather sex-disaggregated data regarding rangeland biodiversity and vegetation cover diversity and use. For that purpose eighteen biodiversity participatory land-use mapping exercises will be implemented. The seeds of identified varieties will be collected by communities in a sustainable manner with the assistance and guidance of APFS personal and local experts. Experimental stations in the area and local universities will study and compare plant productivity and palatability, including comparing local and imported seeds, and will contribute to seed multiplication. Seeding of identified species with highest potential for the selection regions will be undertaken in PY3 through the APFS system.

A guardianship system will be agreed upon in PY2 and fully established in PY3 to protect the newly established grassland and rehabilitated areas from livestock intrusion. The system will be financed by revenue from solar energy off-grid appliances which will be introduced in

PY2. The small-scale solar energy system will allow the establishment of a small solar energy market that in turn will finance the guardianship structure, together with the APFS fund, which will sustain its long term maintenance and sustainability

By the end of the project, 500 ha of land will be rehabilitated through seeding cultivation and protected by the community financed management system. The data and results from the conducted activities will be used to assess Angola's potential for the implementation of the FAO Commission on Genetic Resources for Food and Agriculture in pastoral areas.

<u>Output 2.2.2</u>: 6 APFS-based verification and experimentation systems for grasses adaptability and palatability in place and six fodder and/or natural grazing land areas established and managed by communities.

In the project area no fodder production systems have currently been established nor do improved natural grassland systems exist. However, experience in the HoA demonstrates that a community based wild species and variety selection can be set up with the help of the APFS learning-by-doing cycle.

Based on participatory requests and community action plans, the establishment of fodder or natural grazing land in community areas for strategic livestock feeding and nutrient improvement will be planned in PY1. In selected communities, the APFS group will verify and experiment with grass adaptability and palatability to select the most appropriate seedlings in PY2. The activity will directly benefit from research results of wild grass species conducted under Output 2.2.1. Seedling and seed management systems will be partially financed through the APFS community action plan implementation fund and will improve grassland productivity. The guardianship system organized in 2.2.1 will help keeping rehabilitated areas excluded from grazing so that they can be used during dry periods and water shortfalls. The improvement of fodder and natural grasses will initially be supported through trained APFS facilitators and will form part of the APFS curricula. In selected cases, the areas to be rehabilitated will be defined based on the results from the gender-disaggregated biodiversity mapping (Output 2.2.1) so that the indigenous seed system is introduced in identified hotspots.

By the end of the project, six seed selection and seed multiplication systems are in place and six communities have the capacity to replicate the system by training other herders in its use and implementation.

<u>Output 2.2.3</u>: Community improved water management and livestock water availability through participatory rehabilitation of 15 water points

Degraded water points are identified as a serious problem by governmental partners and stakeholders. The identification of water points to be rehabilitated will be done in consultation with governmental partners and provincial planning systems. This will be part of the APFS community plan and will be negotiated at the territorial level (Component 1) as it influences the transhumance movement. The activity in water point rehabilitation will be held jointly by Liga 4 de Abril and COSPE. In PY1 ten critical water points will be identified for rehabilitation. In PY2 rehabilitation work will take place and management systems will be introduced and strengthened. In the same year 15 additional water points will jointly be identified for rehabilitation in PY3. By the end of the project, 15 water points along three subroutes will be rehabilitated collaboratively and their management system strengthened and reinforced through *Jango Pastoril* negotiations.

<u>Output 2.2.4</u>: 900 ha of mise en défense areas established in three communities for strategic livestock feeding, pasture improvement, as well as land and biodiversity conservation.

Areas protected from grazing and to be used only in dry periods do not exist in the project area. Some traditional/natural grazing reserves are present, but these are generally not negotiated at a community level and grassland areas have not been improved.
In PY1 up to three communities will select areas for participatory rehabilitation and will strengthen their communal areas' management systems through negotiations between APFS and customary and state institutions. In PY2 three protected areas will be established based on negotiations concluded in PY1. The management of *mise en défense* areas will include wild species thinning, seed selection from the seed soil bank if appropriate, seeding of local or improved species, introduction of bush fodder, grazing land manure, introduction of legume species and legume trees, and other technologies based on local and international expertise. The establishment of *mise en défense* areas will be discussed at a transhumance scale through the *Jango Pastoril* and supported by selected service providers and NGOs in close collaboration with the project team.

By the end of the project communities will improve the grasslands in the *mise en défense* areas which will only be used in dry periods. Established *mise en défense* areas (900 ha) will have a surveillance and guardianship system established (in collaboration with 2.2.1). The exact position and size of *mise en défense* areas will be assessed through participatory mapping.

<u>Output 2.3.1</u>: Agro-pastoralists and farmers in five pastoral communities adopt improved production technologies

The production system in the project area is mainly based on livestock and charcoal making which degrades the environment leading to the loss of land cover, loss of soil and soil nutrient components. The increase in revenue needs to be sustained by the diversification of production systems, including non-livestock products. The activity will start in PY1 with the participatory selection of appropriate non-livestock products to be introduced to local markets through community dialogue and APFS (in collaboration with 2.1.2). The activity will directly benefit from lessons learned from the conducted COSPE studies.

Once the most suited products have been identified, studies will be implemented in PY1 and PY2 to analyse the production technologies' potential for improvements, including but not limited to; harvest methods, improved filtration and pre-concentration technologies for oil production, solar drying for local fruits, capacity building for the improvement of final product hygiene conditions, and improved quality packaging. Based on the studies' recommendations, the project will support improvements in small scale technologies which will be inserted in the APFS curricula and in selected community action plans. COSPE, ADECO, and the University of Mandume will work on strengthening the local environmentally friendly, non-livestock production system and support local product commercialization.

By the end of the project, two local production systems are piloted for the formal market.

<u>Output 2.3.2</u>: Agro-pastoralists and farmers in five pastoral communities have improved beef production and beef value chains along a selected number of transhumance subroutes through APFS

The increase in revenue partly depends on the pastoral attitude to sell animals and in their capacity to increase livestock productivity. Livestock is sold to middle men at approximately 50 percent of the market value. Animals are generally used as banks; they are not sold on a regular basis, but only for emergencies or survival. The veterinary services in place do not cover all areas and needs.

At the beginning of the APFS cycle (PY1), identification of additional value inputs and the importance of market integration for live animals, including meat and milk products, will be inserted in APFS curricula. In PY2 and PY3 a total of three sustainable production systems will be piloted in selected communities. The systems will be fully operational by the end of the project (PY4).

Also, community animal health services will be improved through APFS on-the-job learning cycles and APFS will include animal health capacity building as part of the curricula. At least one ethno veterinarians per APFS will be trained (total of 70 in PY4) using best practices from the SANGA project. The improved livestock health management system will consider feeding, mass selection and breeding control systems. By the end of the project, all APFS members will be aware of the increased revenue and benefits related to improved livestock health.

COSPE, ADECO, and the University of Mandume will collaborate with IIV (Veterinary Research Institute) and ISV (Institute of Veterinary Services) to improve livestock production value chains.

Component 3: Mainstreaming SLM into agricultural and environmental sector policies and programmes

The objective of this Component is to mainstream rangeland/transhumance policy approaches with rural development sector practices. This mainstreaming process will be based on the findings from the on-the-ground application of SLM and herd management practices in Component 2 supported by a local institutional framework and the FFS APFS approach. By the end of the project an increased integration of SLM into the policies and programmes, and the reinforcement in regulations of existing policies and applications will be one of the Component's main outcomes. Also, decision making will be reinforced through a wide discussion panel on LD (including civil society research, international agencies, and government) focusing on transhumance areas. The forum will reduce activity duplication and increase awareness of lessons learned, as well as support scaling up of best practices. Finally, investments will be increased through specific budgetary provisions made by MA, MINANDER, and decentralized administrations for up-scaling SLM in agro-pastoral systems, and a draft investment plan will be in place after collaboration with at least two partners' policy schemes and/or governmental programmes.

<u>Output 3.1.1</u>: A policy reinforcing SLM application in pastoral areas is proposed for approval

This output will focus on the preparation of a draft policy focusing on improving SLM throughout pastoral areas in the country. The activity will be based on five case studies that will analyse policy gaps and establish best practices to be up-scaled at a national level. The

case studies which will be conducted in PY 2 will include APFS and *Jango Pastoril* approaches for SLM piloting and up-scaling based on the results from Components 1 and 2.

Policy recommendations will be produced by specialized consultants and will be validated through six public consultations undertaken at a regional and national level in PY3. After the consultation process, the draft policy will be submitted for approval through a MA structure in PY4.

Based on the MA's recommendations, most of the activities will be organized by a team of national consultants with support from international experts.

Output 3.1.2: Land Law is implemented and applied, facilitating SLM in pastoral areas

The project will support the establishment of an enabling environment to pilot Land Law regulations in the project area including the application of the Decree 58/07.

The use of appropriate legal packages will be included in the capacity building of selected local leaders and existing or newly established organizations (Component 1). Further, local consultations and awareness events on Land Law regulations will be realized through 50 small-scale meetings in PY2 when potential policy application will be discussed with local communities.

Based on event results, local level Land Law implementation tools will be used in PY 3 at a local level to delimitate community areas and transhumance corridors (including inter-provincial cattle routes). The land delineation results will be included in appropriate packages and presented to the local government for approval in PY4. The transfer of geographical knowledge to local experts and the preparation of geographical delineation packages will be supported by a FAO staff member with expertise in participatory mapping.

By the end of the project, appropriate land delineation packages will be presented to the local government for approval and will be prepared in ten communities (community and transhumance scale land delineation).

Output 3.1.3: SLM is integrated into 7 CMA projects and programmes

CMA is already addressing the general environmental policy coordination issue at the level of an institutional arrangement but lacks experience in the practical application. CMA has no institutional experience to support technical discussions, consultations, and consensus building regarding programmes and projects whose activities interfere with the environment.

At the beginning of the projects, bylaws and operations of the CMA, ongoing projects and programmes that potentially contribute to SLM will be reviewed and studies to assess potential SLM introduction will be undertaken. Based on consultations with CMA and MA, the integration of SLM in CMA planned programmes and projects will be proposed in PY2. By the end of PY2 the integration of SLM into CMA plans and programmes will be effective and will be disseminated at a national level. By the end of the project five CMA plans and programmes will be integrating SLM.

Output 3.1.4: A working platform for the implementation of Decree 216/11 for rural communities is created

A t the beginning of the project, barriers and constraints to implement the Decree 216/11 will be analysed and a mechanism for enhancing decree deployment will be proposed. Further to

that, awareness by the public and stakeholders is created through ten workshops and discussions on decree application are held in PY3 and PY4.

By the end of the project, a working platform for an effective implementation of the decree is in place.

Output 3.2.1: Mechanisms (forum/coordination mechanism) for cross-sectoral coordination for SLM operating with the involvement of MA, MINANDER and local/provincial Governments.

The project will support the establishment of a cross-sectoral discussion panel on LD involving national and international actors and civil society. After a thorough survey of relevant SLM actors in place in PY1 and a thorough consultation process, the forum will be piloted in PY2. At the end of the project the forum will be in place and will meet on a regular basis. Conditions for effective functioning of the coordination mechanism will be supported by the MA and a handover procedure to MA will be implemented at the end of the project.

Output 3.3.1: Draft governmental investment plan developed to support small credits for SLM and land rehabilitation budgetary provisions complementing the existing National Environmental Management Plan

At the beginning of the project, potential investment plans and their application at a local scale will be studied. In PY2 a draft SLM investment plan will be designed in alignment with at least two policies and or programmes. By PY3 the investment plan will be piloted and if necessary modified.

By the end of the project the plan will be ongoing with USD 5 million in financing to support SLM technologies and approaches in pastoral areas.

Component 4: Knowledge management, monitoring and evaluation

The objective of Component 4 is to ensure a systematic results-based monitoring and evaluation of project progress. Thus achieving project outputs and outcome targets that are established in the Project Results Framework, as well as promoting the wider dissemination of project information, data and lessons learned for replication in degraded areas. MA has dedicated field staff that will support the project implementation, in particular, Components 2 and 3. The FAO will execute the project budget and provide technical backstopping to the overall project cycle. The M&E system will be designed by the short-term M&E specialist. For further details please see Sections 4.5, 4.6, and 4.7.

Output 4.1.1: A project monitoring system is in place to providing six-monthly reports on progress in achieving project output and outcome targets

In PY1, the Project Coordinator will be responsible for preparing a Project Progress Report (six-monthly) in close cooperation with the PSC. The PPR includes the project results framework with project output and outcome indicators, baseline and six-monthly target indicators, the monitoring of the risk matrix, and will identify potential risks and mitigation measures to reduce those unexpected risks. At the end of PY1, the Project Coordinator supported by the Project Bilingual Assistant and in close coordination with the PSC will provide appropriate input to the Lead Technical Officer (LTO). The LTO-FAO will be responsible for preparing the Project Implementation Report (PIR, yearly). The PIR includes

the project results framework with project output and outcome indicators, baseline and yearly target indicators, the monitoring of the risk matrix, and will identify potential risks and mitigation measures to reduce those unexpected risks. The process in PY2 and PY3 will be the same as in PY1.

Output 4.1.2: Midterm and final evaluation conducted

After 18 months of project implementation, a mid-term project review will be conducted by an external consultant, who will work in consultation with the project team including the FAO-GEF Coordination Unit, the LTO, and other partners.
At the end of project implementation a final project evaluation will be conducted by an international external consultant under the supervision of the FAO Independent Evaluation Office, in consultation with the project team including the FAO-GEF Coordination Unit, the LTO, and other partners.

Output 4.1.3: Project-related "best-practices" and "lessons-learned" disseminated

In PY1 a website will be established for sharing the project's experiences and lessons learned. The website will be maintained and updated by project staff during project implementation and hosted by FAO on behalf of the Angolan Government after the end of the project implementation. In PY3 five publications will be issued on the project's best practices and lessons learned. All publications will be uploaded to the project website, and will be distributed through (limited) printed copies to local partners and government staff.

2.5 GLOBAL ENVIRONMENTAL BENEFITS/ADAPTATION BENEFITS

The key global benefits to be generated by the project include an increase in land area under SLM and an increase in vegetation cover which is expected to reach 13 500 ha by the end of the project. This will be achieved by supporting 2 800 herders and farmers in the project area to develop their capacities in SLM and in the rehabilitation of degraded land areas with seed and vegetative material. The establishment of FFS/AFPS networks, strengthening of existing and new organizations in SLM, conflict management and legal framework application, as well as mainstreaming SLM in existing and new policies will ensure the sustainability of the generated GEBs in the long run. The GEBs will be measured by applying the GEF LD PMAT (Chapter 2.3).

In particular the project will lead to the following increase in area under SLM:

- 12 000 ha of land under grassland and shrubland are covered by more sustainable transhumance practices,
- 600 ha of degraded land is covered by community based rehabilitation activities,
- 900 ha of rehabilitated and protected land is under *mise en défense*.

This increase in land under SLM, which comes to a total of 13 500 ha by the end of the project, will lead to the improvement in vegetative cover and increase in land productivity. By the end of the project the vegetation cover in all three targeted areas is expected to have an (NPP) increase of 5 percent against the baseline (-0.03 Kg C/ha in an average year). The increase in vegetation cover and the introduction of appropriate herd management practices through the AFPS network is expected to have a positive effect on the livestock productivity (increase in live weight gain of 35 kg per cow per year), contributing to an improvement in

livelihoods (increase of revenue by 5 percent). The latter will be further supported by strengthening existing beef value chains and by introducing non-forest-timber products to diversify local production.
In order to create an enabling environment to sustain, replicate and mainstream the envisaged development, the project will introduce a SLM policy, strengthen and improve existing policies on land tenure rights and support the introduction of an appropriate SLM investment scheme.

2.6 COST EFFECTIVENESS (alternative strategies and methodologies considered)

Cost-effectiveness is at the heart of FAO's Department of Agriculture and Consumer Protection's strategy for incorporating land management concerns and institutional support to sustainable pastoralism in sub-Saharan and southern African countries such as Angola. The proposed project design is expected to be highly cost-effective since it builds on existing Farmers Field Schools' structures that are already operational in several regions, and on ongoing activities with similar objectives and synergies with existing programmes.

During project preparation, a cost-effectiveness analysis was conducted through monitoring data made available through the FAO/OPV GIPD team. Cost-effectiveness can be greatly enhanced by a combination of basic principles:

Building on already in place FFS through the FAO-supported projects will allow for a significant reduction in costs for the proposed project. As APFS are not present in Angola, the cost can be approximated for existing FFS, although there are significant differences in costs between the two methods.

Exact data to estimate the cost of establishing FFS is not present. Nonetheless, the recently started MOSAP project provides information on the cost of establishing FFS in a new project area. In fact the project is establishing new FFS in an area with no presence of FFS, such as the province of Malanje, therefore working in a similar situation as in the case of the present project. The MOSAP project will establish 84 FFS in 2 years with 2150 farmers benefiting the provinces of Bie, Huambo, andMalanje, and the approximate cost is presented in the table 3.

Table 3. Cost of FFS training (FAO estimation based on MOSAP project document, 2012)

Activity (per 2150 farmers and 84 FFS)	**Cost in USD**	**Source**
Training	489 000	MOSAP project document
Personnel and contracts	168 000	MOSAP project document
Travel	60 000	MOSAP project document
Other costs	270 000	MOSAP project document
Total cost	987 000	Calculation
Total cost per farmer (this data **includes** project management, personnel, and travel costs over the 2 years)	460	Calculation

A comparison of APFS with a other "business as usual" capacity building activities for smallholder pastoralists to cover the entire APFS training period of 18 months (1.5 years) has been provided by COSPE during the PPG phase. COSPE using its long term experience in the area, estimated the training of 400 farmers for 1.5 years and made the hypothesis that the project would have to pay all the participants a minimum daily subsistence allowance (in line

with the cost of life in the Namibe area and the amount paid by local NGO or other contracting entities) for FFS/APFS trainings given. The total amount of the training, not including transport and lecturing costs, is depicted in the table 4. COSPE's calculation is based on real local costs and only includes training costs hence the entire project cost is not considered.

Table 4. Estimation of capacity building costs for "business as usual" training in the rural pastoral areas in Namibe province, based on COSPE consultancy report (PPG phase), year 2012

Trainings	**Units**	**No. of units**	**Participants**	**Unit cost in USD**	**Total cost in USD**
Initial training	Nights	14	400	40.00	224 000.00
Monthly trainings	Nights	3 per 18 months	400	40.00	864 000.00
Total					1 088 000.00
Total cost per farmer (this data **excludes** project management, personnel, and travel costs over the 1.5 years)					2 720

There is a big difference between the costs of the trainings at the FFS (Table 3) and in the BaU scenario (Table 4). The cost per farmer at the FFS is USD 694 over 2 years, compared to the USD 2 720 (excluding other vital costs) per farmer over 1.5 years. Furthermore, the participants will not be able to undertake experiential learning as in FFS and neither test their locally adapted solutions in their own fields, and the enormous value of endogenous capacity building experiences inherent to FFS would be lost.

However, it should be pointed out that the APFS have not yet been tested in the country and the cost comparison between FFS and APFS can be misleading and difficult to assess precisely at this stage. Furthermore the present project is likely to have higher costs due to remoteness and difficulty in accessing the project area, as well as due to the different types of grassland management schemes tested. Therefore other examples of the cost-effectiveness of the project approach were prepared that are shown hereafter. In fact ***adopting cost-effective LD technical options and practice**s* is a central tenet of the project strategy. The main cost-effective technologies will include various options.

***Participatory grassland selection and multiplication*:** The use of participatory APFS based grassland selection and multiplication of local grassland species lowers costs significantly compared to the usual process of variety selection by research centres. The participatory selection has been successfully experimented in the HoA and is done by a subgroup of the APFS that explores the area, selects more adaptable and palatable species that are disappearing, multiplies the plants if needed, and seeds them. The seedling stage is followed by an appropriate community guardianship period that is financed by the community through remuneration of solar energy ecosystem services. A local research centre will contribute to community the process and check the quality of selection. This method includes the research personnel but does not include the high costs involved in the selection itself. The use of local or locally adapted species will generate environmental conservation and increase biodiversity resilience, reducing the risk of species disappearance, and have an enormous benefit for the area. Participatory management and rehabilitation of water points is also considered much more efficient than government-driven interventions and will be part of the APFS.
To assess cost-effectiveness, the cost of the seedling three varieties of *Brachiaria spp* on a 5 ha area will be compared. These species are available in official Angolan markets (Brazilian or South African multinational products). The calculations in Table 5 depict the cost of

variety selection with a seedling test of the three varieties in each area on an area of 3 ha later to be established on 5 ha area.

Table 5. Cost of seedling of three varieties of *Brachiaria spp* on 5 ha/area in the rural pastoral areas in Namibe province, based on the COSPE consultancy report (PPG phase, year 2012)

Category	**Unit**	**# of units**	**Unit cost (USD)**	**Total cost (USD)**
Wells	# of wells	3	3 000	9 000
Water pump	# of pumps	3	1 000	3 000
Irrigation system link tools	# of link tools	3	250	750
Irrigation system in the breeding plot (tear drop)	metres	18 000	4	72 000
Seed box 1 kg	# of seed boxes	30	260	23 400
Fertilizer and manure	Estimation			3 600
Fuel	Litres	2 400	0.60	5 760
Total				117 510

The cost effectiveness of this solution is not favourable due to the high cost of imported products and poor transportation conditions in the area. The grassland areas often suffer from periodic lack of water; a well would be needed but it is not feasible for irrigating grasslands. Furthermore, this solution does not improve the GEBs' goals because it promotes imported seed rather than improving local varieties. This causes an imbalance in the ecosystem and makes local people reliant on unknown products. On the contrary, APFS costs would cover the cost of labour for the seed collection; this selection will be based on traditional knowledge which will make the indigenous appropriation very strong.

Establishment of *mise en défense* areas

Mise en défense green fences and solar fences are very costly to implement and maintain, and are not easily accepted by local communities. From an analysis conducted by COSPE, the estimated cost of the plant material to seal one area of 200 ha (not counting transportation and manpower) is provided in the table 6.

Table 6. Example of costs for fencing in the rural pastoral areas in the province of Namibe. Examples of two alternative methods; green fences, and solar fences. Based on the COSPE consultancy report (PPG phase, year 2012)

Perimeter of one *mise en défense* area: **200 ha = 6 000 m to be fenced**	**N° of units**	**Unit cost (USD)**	**Total Cost (USD)**
Green fences	12 000 plants	1.5	18 000
Solar fences	6 000 metres	30	90 000

Alternatively, the solution proposed by the present project is of much lower cost. The establishment of the *mise en défense* areas is an integral part of the native grassland selection and restoration; the area becomes strongly rooted in the community as a part of the APFS

benefits for pastoralists and farmers to use during drought periods and keep it maintained when other grazing areas are available. There will be no specific fences but there will be a community guardianship service which is supported by the small scale off-grid electricity production that is installed nearby the protected area.

2.7 INNOVATIVENESS

The project will represent an innovative step towards an ecosystem-wide/landscape approach to reduce LD processes and contribute to an increased collaboration and improved linkages between ongoing programmes and approaches to decrease the vulnerability of smallholder farmers and pastoralists. Field-based activities will develop the capacities for sustainable rangelands and agricultural management based on enhancing ecosystem functions and will comprise innovative interventions including community based learning processes, FFSs, APFSs and technical assistance for participatory rangeland and grasslands best practice processes. The APFSs as such will be introduced for the first time in southern Africa.

Above mentioned lessons learned from GEF UNDP *Sustainable Land Management Capacity Building for Angola* highlight critical land management problems on a smaller scale directly caused by lack of innovative technologies. The project will introduce innovative small scale technologies or improve/ reinforce existing technologies for the production of local products, and will study and support the commercialization of sustainable harvesting methods, improved filtration (pre-concentration) technologies for oil production, solar drying for local fruits, capacity building for the improvement of hygienic conditions, and improved quality packaging.

The integration between the APFS and the territorial management planning approach is also quite innovative in southern Africa, and will be based on FAO's ongoing experience in Ethiopia with the collaboration of the Terra team.

In the third Component the preparation of new regulatory schemes will be implemented. The recently approved decree 216/11, although not yet implemented, drives the country toward the important innovation of designing a cadastre of community land. The present project will be in line with both the Land Law and the decree 160/12 once intervening in the community and transhumance land management scale of grazing areas and the testing done at a local scale will support and rule the innovative process that the country is already undertaking.

Finally, a sample of results for categorization and classification of rangelands using the FAO ECONET method and satellite analysis has been tested to realize an innovative grassland class definition conducted by the FAO under the PPG. The method will support decision making in the GIS phases of the project.

SECTION 3 – FEASIBILITY (fundamental dimensions for high quality delivery)

3.1 ENVIRONMENTAL IMPACT ASSESSMENT

Based on the project objective, outcomes and outputs, no adverse environmental or social impacts are likely and it conforms to FAO's pre-approved list of projects excluded from a detailed environmental assessment. On the contrary, the project and the GEF resources invested are expected to have positive impacts on rangeland and sustainable use of pastoral resources, creating global environmental benefits. The investments in pastoral areas for SLM will follow Angola's standards and legislation.

There will be no negative impacts due to the collection of seeds from the wild ecosystems, as the collection will be guided by trained facilitators and will be based on the elder's experience. For the same reason, damaging invasive species will not be spread in the environment. *Mise en défense* areas will not use irrigation, and the increase in plant density will help enhance soil moisture and decrease soil erosion. Attention will be focused on maintaining low levels of fuel consumption for the production of local non-livestock products.

3.2 RISK MANAGEMENT

3.2.1 Risks and mitigation measures

Please see the risk table detailed by the Component in Appendix 4. Also, please see detailed explanations in behaviours and traditional rights contrasting modern rights in Appendix 8.

SECTION 4 – IMPLEMENTATION AND MANAGEMENT ARRANGEMENTS

4.1 INSTITUTIONAL ARRANGEMENTS

a) General institutional context and responsibilities

The project will be executed by FAO with the technical support of the National and Provincial Government(s), Municipal and Communal Administrations and their Technical Services.

The **Ministry of Environment** (MA) coordinates and elaborates on environmental policies and education, and states rules and procedures to apply legal instruments. The structure of the MA Technical Services includes various offices comprising of; Study, Planning and Statistic Offices, a Juridical Office, an Inspection and Fiscal Office, and a General Secretariat. The executive services include the **National Direction of Environment** (MAE), Biodiversity, Environmental Technologies, and Prevention and Assessment of negative Environmental Impacts. The MA is organized into the Provincial Direction of Urbanisation, Construction, and Environment.

The MA coordination of the project will primarily be lead through its executing service, the MAE. The MA, together with the FAO, will be responsible for the overall coordination of the project and for supporting technical outputs under Component 3. The MA Provincial Direction of Urbanisation, Construction, and Environment will provide staff and technical support to the project office located in Namibe.

The **Ministry of Agriculture and Rural Development** (MINANDER**)** is mainly responsible for developing and regulating activities in the agricultural sector, including crops, livestock, forestry and irrigation. The MINANDER's primary roles are to formulate appropriate agricultural policies, planning and monitoring, and evaluation within the overall national development framework. The MINANDER has a very elaborate structure and includes support, technical and consultative services. The following specialized services are important players in the project area: (a) Agricultural Research Unit (IIA), (b) Veterinary Research Unit (IIV), (c) Institute of Agricultural Development (IDA), (d) Institute of Forestry Development (IDF), and (e) Veterinary Services (SV).

Veterinary services (SV) are small operational units present in all project municipalities and are responsible for animal health and vaccinations campaigns. In the areas there are two **Institutes for Veterinary Research (IIV).** The Cacanda Zootechnical station, that was severely damaged during the flooding in 2011 but will be rehabilitated through the PMIDRCP and the Caraculo station. A second research station has been abandoned and is not functioning. The **Institute for Agricultural Development (IDA)** has Provincial Agriculture Offices (including in Namibe) and Municipal Agricultural Offices (EDA). The EDAs are the cohorts of the front-line extension workers involved in the day-to-day field activities with farmers and are present in Bibala, Quilengue, Namibe, and Chongoroi, and are soon to be opened in the Virei and Camucuio municipalities. The provincial IDA in Namibe is planning to open an EDA in each municipality. The **Institute for Forestry Development (IDF)** has provincial directorates and a municipal centre in Bibala. The **Institute for Agricultural Research (IIA)** is a nation-wide agricultural research institute in charge of development, testing, and supplying of seeds, planting materials and technology. The IIA centre in Huambo Province works on the preservation and conservation of local seed varieties and is closely allied with the Huambo Agricultural College, which has also partially reopened and is the only institute offering higher learning in agriculture.

There is a recently established **University** in Namibe (The Mandume Escuela Superior Politechnica de Namibe) that includes environmental studies and will collaborate with the present project. The university is significantly understaffed but capacities can be increased by supporting Master Trainer's courses and interchanges of experts. The university that has hosted PPG provincial meetings will provide staff, students and space for the organization of the Master Training and will support studies and investigations regarding local agro-biodiversity in the pastoral areas.

The **Provincial Governments** are supported by Social and Economic Development Plan(s) that include agricultural and environmental interventions. District governments (or **Municipal** government from Portuguese *municipios)* have among others, the role of managing local level budgets and investments, including PMIDRCP. **Communal Administrations** *(*from *comunas)* have among others, the role of supporting environmental protection.

b) Coordination with other ongoing and planned related initiatives

One of the main pastoral related activities is the project implemented by the BDA - Banco Desenvolvimento de Angola (Development Bank of Angola) and executed by a local company called AGROSHOP, over a period of eight years (2010 until 2018) with a budget of USD 22 million. The objective is to reinforce livestock production in the south of Angola and produce meat for the internal market. The project will take place in Virei and will design a Central Farm (*Fazenda madre*) of 5 000 ha. A local market for live animals will be organized at ten selling and storing points, whereby 54 identified traditional producers will trade. The Central Farm will have sufficient resources and fodder production to maintain the livestock acquired. For each producer, the property of an area of 1 000 ha will be legalized and 1 ha of irrigated fodder will be implemented. A slaughterhouse will be built in Namibe and a factory for cutting, preserving, and processing the meat will be built in Luanda. At the moment, the project is setting the scheme by realising a census and distributing legal documents to beneficiaries. The implementing phase will therefore start soon. The BDA project team has participated in the project validation workshop in Namibe. Collaboration will be established in the area of Namibe and in the Virei municipality.
At a national level, the FAO will work in close with the MA to seek collaboration with other environmental activities, in particular the activities of AfDB and UNDP that are strong actors in environmental policies. Based on Component 3, a national coordination mechanism on SLM will be established. This will facilitate mechanisms to achieve synergies with relevant GEF-supported projects and those supported by other donors or by the Angolan Government. These efforts will be facilitated through; (i) sharing of data and dissemination of materials between projects, (ii) strengthening the participation in the policy and rule preparation consultative processes, and (iii) sharing of important lessons learned in SLM and pastoralism.
The FAO and MA will also work in close collaboration with local governmental programmes to identify opportunities and facilitate mechanisms to achieve synergies with relevant entities. These efforts will be facilitated through; (i) informal communication between the institutions, (ii) sharing of data and dissemination of materials between projects, and (iii) strengthening of any local existing flora composed of representatives, government agencies, the private sector and civil society to address issues of common concern that effect LD.

The proposed GEF Project will also be implemented in coordination with a number of FAO ongoing and proposed projects in Angola:

- The recently submitted FAO CCA Project: "Integrating climate resilience into agricultural and agro-pastoral production systems through soil fertility management in

key productive and vulnerable areas using the Farmers Field School approach" will likely be approved and will expand FFSs' scope to climate resilience of smallholder agricultural farmers. The FAO CCA project has a budget of USD 7.5 million and is expected to be approved by GEF soon due to recent increase of LDCF resources. A letter of endorsement is also available.

- The LADA Project (*Land degradation assessment in drylands*) team that is managing the under preparation GEF LD project: "Decision Support for Mainstreaming and Scaling up of Sustainable Land Management", will provide capacity building and experience to implement the LADA local methods to assess LD and SLM. The GEF LD project has a budget of USD 6 million and is expected to be approved in the next few months.

- The follow up of the Terra Project: "*Apoyo a las instituciones gubernamentales para la mejora de la gestión de la tenencia y administración de la tierra y los recursos naturales, en las provincias de Huambo y Bié*" (GCP/ANG/045/SPA) will support the implementation of Component 1 in land management. The project has a budget of USD 2.2 million and will end in April 2014 but a second phase is under preparation and is expected to begin in January 2015.

- The lessons learned from the SANGA Project (*Strengthening of Livestock Services in Angola*, GCP /ANG/037/EC) that have a budget of USD 4.5 million will be used throughout the project. The project deadline is March 2013, but is expected to be extended until June 2013.

- The FAO Agro-pastoral Field School's activities in the HoA (Ethiopia) will be the key collaborators for the present project. The initial exchange will be held between Angola and Ethiopia. Ethiopia will provide master trainers for the start-up of the APFS activities. Also, the following projects will be collaborating with the current project: *Improving Food Security and Diversification of Livelihood Opportunities for Communities in Karamoja* (OSRO/UGA/101/EC, USD 3.5 million) that will end in March 2014 and *Strengthening Resilience and Adaptive Capacity of Agro-Pastoral communities and the Local Government to Reduce Impacts of Climate Risk on Livelihoods in Karamoja,* GCP/UGA/042/UK, USD 12 million) that will end in December 2015.

Particular attention will be given during the full project implementation to ensure complementarities with lessons learned from the GEF LD UNDP Project: *Sustainable Land Management Capacity Building in Angola.* Another important project for coordination in the Namibe Province will be the WB *National Biodiversity Project* funded by GEF that addresses biodiversity conservation in the Iona National Park. The project includes rehabilitation and community stewardship regarding biodiversity. Considering that the proposed GEF project and the WB Project will be ongoing during the same period, collaboration will be sought to increase sustainable land management of agro-pastoral and agricultural areas.

Another important UNDP Project is the recently approved: "*Promoting Climate-resilient Development and Enhanced Adaptive Capacity to Withstand Disaster Risks in Angola's Cuvelai River Basin*". The project aims at reducing climate-related vulnerabilities facing the inhabitants of Angola's Cuvelai River Basin through targeted investments and capacity building. The project will set up an early warning system for flooding and famine events,

conduct assessments on livelihoods, identify locally appropriate climate resilient germplasm resources and improve Cunene Province's master plan for climate resilience. The collaboration with this project could include an expansion of the project activities toward the south of Angola.

The recently approved AfDB project: "*Integrating CC into SLM practices*" will be a key partner to collaborate with. The project will be implemented in Namibe, Huambo, Kuando Kubango and Cabinda, and will apply rangeland rehabilitation to desert and dune ecosystems that are the starting points for the transhumance route. The collaboration is yet to be defined but it could include the utilization of APFS pilots in nearby areas.

4.2 IMPLEMENTATION ARRANGEMENTS

a) Roles and responsibilities of the executing partners

The **FAO** will be the GEF Agency responsible for supervision and provision of technical guidance during the project implementation. In addition, the FAO will be an executing partner by providing procurement and contracting services to the project, in accordance with FAO rules and procedures, as well as financial management of the GEF TF resources. The technical execution of the project will be carried out by the Government of Angola represented by the Ministry of Environment (MA) in close cooperation with the Ministry of Agriculture and Rural Development (MINANDER). Other executing partners include: the provincial governments (Namibe Huila and Benguela) and the municipal and communal administrations and their technical services. The project will work with other on-going programmes in the project implementation areas of south-western Angola in a complementary manner as highlighted in Chapter 4.1.b. There will be national and local level technical steering committees that harmonize approaches and cross pollinate experiences drawn from other projects to ensure maximum synergy.
The roles and responsibilities of the main institutional units involved in project implementation are as follows:

Lead project partners: The MA will be the lead government counterpart and will carry out the project's technical execution through its MAE directorate in close cooperation with the MA, FAO and the other project partners. The MAE directorate will also be the Project Technical Focal Point on behalf of MA. In particular, the ministry will support the project execution team in delivering Component 3 by providing guidance on sustainable land management (SLM) policy formulation and a platform for the cross-sectoral coordination (CMA) thereof. The MA will also play a vital role in facilitating and guiding the establishment of potential SLM funding mechanisms. They will further support the establishment of a cross-sectoral forum to coordinate SLM activities in Luanda.

Other key partners supporting the execution include: the MINANDER, the provincial government, the municipal and communal administrations and their technical services. The MINANDER through its IIV, IDA, and IDF will have an important role to ensure that infrastructure measures introduced by the government in the project region are streamlined with project activities and based on the project's results of participatory approaches and conflict mitigating resolutions. The provinces, in particular the Province of Namibe, will facilitate in infrastructure development and will incorporate lessons learned from local planning exercises in provincial planning activities. The municipalities will host the project technicians and provide administrative and political support to the implementation of PMIDRCP.

The project will achieve a number of key outputs through letters of agreements (LoAs) that will be elaborated and signed between the FAO and collaborating partners. The service providers and consultant will be administratively managed in Namibe, but funds will be made available through approval by the FAO Luanda. Funds received under a LoA will be used to execute the project activities in conformity with FAO's rules and procedures. The respective LoAs are listed under the "Contracts" budget line of the project budget. LoAs will mainly relate to the activities in Components 2 and 3 which are summarized in Table 7.

Table 7: List of LoAs that will be established throughout the project

Service provider	**Activity**
IIV research stations Caraculo and Cacanda	Support varietal and wild grassland shrub and grass selection
To be defined	Support fodder shrub and trees management for livestock feeding
To be defined	Support solar energy establishment (local association) nearby *mise en défense* areas
COSPE and ADECO NGOs	Establish APFS and community action plan implementation
MA Provincial Direction Namibe	Support environmental sustainability of community action plans
COSPE and ADECO NGOs	Participatory rehabilitation through local fodder and wild species
GIS spin-off of the University of Cordoba-Spain	Integrate satellite analysis and participatory GIS data to support stakeholder decisions (NPP estimation)
To be defined	Rehabilitation through shrub and local tree species
COSPE	Participatory rehabilitation of water points
Liga 4 de Avril	Support water point rehabilitation training and community involvement
Mandume University	Study of non-livestock local forest products
COSPE or contracting scientific partner	Support commercialization of non-livestock products
ADECO	Community mobilization for the production of local goods and their commercialization
IIV/ISV	Improve community based health services through training of APFS participants and vaccinations
COSPE or contracting scientific partners	Study to improve local technologies for production and packaging of non-livestock products
To be defined	Support improved fodder and natural grass production
CMA	Support to include CMA into SLM policy discussion
To be defined	Support to improve Land Law and produce new policy

b) FAO's role and responsibilities, as the GEF Agency (and as an executing agency, when applicable), including delineation of responsibilities internally within FAO

The FAO will be the GEF implementing and executing agency. As the GEF Agency, the FAO will be responsible for project oversight to ensure that LD and SLM policies and criteria are adhered too and that the project meets its objectives and achieves expected outcomes and outputs as established in the project document in an efficient and effective manner. The FAO will report on the project progress to the GEF Secretariat and undertake financial reporting to the GEF Trustee.

Executing Responsibilities (Budget Holder). Under the FAO's Direct Execution modality, the FAO Representative in Angola will be the Budget Holder (BH) of this project. The BH, working in close consultation with the LTO, will be responsible for a timely operational, as well as administrative and financial management of the project. The BH will head the multidisciplinary Project Task Force that will be established to support the implementation of the project (see below) and will ensure that technical support and inputs are provided in a timely manner. The BH will be responsible for financial reporting, procurement of goods and contracting of services for project activities in accordance with FAO rules and procedures. Final approval of the use of GEF resources rests with the BH, also in accordance with FAO rules and procedures.

Specifically, working in close collaboration with the LTO, the BH will: (i) clear and monitor annual work plans and budgets; (ii) schedule technical backstopping and monitoring missions; (iii) authorize the disbursement of the project's GEF resources; (iv) give final approval of procurement, project staff recruitment, LoAs, and financial transactions in accordance with FAO's clearance/approval procedures; (v) review procurement and subcontracting material and documentation of processes and obtain internal approvals; (vi) be responsible for the management of project resources and all aspects in the agreements between FAO and the various executing partners; (vii) provide operational oversight of activities to be carried out by project partners; (viii) monitor all areas of work and suggest corrective measures as required; (ix) submit to the GEF Coordination Unit, the TCID Budget Group semi-annual budget revisions that have been prepared in close consultation with the LTO (due in August and February); (x) be accountable for safeguarding resources from inappropriate use, loss, or damage; (xi) be responsible for addressing recommendations from oversight offices, such as Audit and Evaluation; and (xii) establish a multi-disciplinary FAO Project Task Force to support the project.

FAO Lead Technical Unit (LTU). The Plant Production and Protection Division of the Department of Agriculture, Ecosystem Management team (AGPME) at FAO HQ will be the LTU for this project and will provide overall technical guidance in its implementation.

FAO Lead Technical Officer (LTO). The team leader of the ecosystem management team of the Agricultural Plant and Production and Protection Division (AGPME) will be the LTO for this project. Under the general technical oversight of the LTU, the LTO will provide technical guidance to the project team to ensure delivery of quality technical outputs. The LTO will coordinate the provision of appropriate technical backstopping from all the concerned FAO units represented in the Project Task Force. The Project Task Force is thus composed of technical officers from the participating units (see below), operational officers, the Investment Centre Division/GEF Coordination Unit and is chaired by the BH. The primary areas of LTO support to the project include:

(i) review and ensure clearance by the relevant FAO technical officers of all the technical Terms of Reference (TOR) of the project team and consultants;
(ii) ensure clearance by the relevant FAO technical officers of the technical terms of reference of the Letters of Agreement (LoA) and contracts;
(iii) in close consultation with MA, lead the selection of the project staff, consultants and other institutions to be contracted or with whom an LoA will be signed;
(iv) review and clear technical reports, publications, papers, training material, manuals, etc.;
(v) monitor technical implementation as established in the project results framework;
(vi) review the Project Progress Reports (PPRs) and prepare the annual Project Implementation Review (PIR).

A multidisciplinary **Project Task Force (PTF)** will be established by the BH which is mandated to ensure that the project is implemented in a coherent and consistent manner and complies with the organization's goals and policies, as well as with the provision of adequate levels of technical, operational and administrative support throughout the project cycle. The PTF comprises of the BH, Technical Unit (AGPM) and the GEF Coordination Unit.

FAO GEF Coordination Unit in Investment Centre Division will review and approve project progress reports, annual project implementation reviews, financial reports and budget revisions. The GEF Coordination Unit will provide project oversight, organize annual supervision missions, and participate as a member in the FAO Project Task Force and as an observer in the project steering committee meetings, as necessary. The GEF Coordination Unit will also assist in the organization, as well as be a key stakeholder in the mid-term and final evaluations. It will also contribute to the development of corrective actions in the project implementation strategy in the case needed to mitigate eventual risks affecting the timely and effective implementation of the project. The GEF Coordination Unit will in collaboration with the FAO Finance Division, request the transfer of project funds from the GEF Trustee based on six-monthly projections of funds needed.

The **Investment Centre Division Budget Group (TCID)** will provide final clearance of any budget revisions.

The **FAO Finance Division** will provide annual Financial Reports to the GEF Trustee and, in collaboration with the GEF Coordination Unit and the TCID Budget Group, call for project funds on a six-monthly basis from the GEF Trustee.

c) Project technical, coordination and steering committees

A Project Steering Committee (PSC) will be established for the oversight of project activities at a national level and chaired by the Director of the MAE (or his/her nominee) with the participation of the MINANDER, the Ministry of Commerce, the Provincial Governments of Namibe, Huila, and Benguela, from the FAO, as well as at least one member from the Stakeholder Committee (LPSC – see below) and observers from civil society organizations. The PSC will meet at least two times per year and will have the following responsibilities: (i) overall oversight of project progress and achievement of planned results as presented in six-monthly Project Progress Reports (PPRs); (ii) take decisions in the course of the practical organization, coordination and implementation of the project; (iii) facilitate cooperation between MA/MINANDER and project participating partners and project support at the local level; (iv) provide information and overall guidance and coordination to the LPSC; (vi) facilitate that co-financing support is provided in a timely and effective manner; and (vii) review six-monthly Project Progress and Financial Reports and approve AWP/B.

Moreover the Committee shall ensure the project's sustainability (in view of up-scaling, replication and mainstreaming). It is proposed that the Director of the MAE will preside over the PSC.

A Local Programme Steering Committee (LPSC) hosted by the Province of Namibe will work under the guidance and coordination of the PSC and will comprise the local level representatives from key institutions such as the MA, MINANDER, province representatives, research representatives, and donors. Also NGOs, civil society, community based organization, and any other selected individual or institutions involved in the project will be invited to participate. The LPSC ensures that an agreed and coordinated plan of action extends to each province. A primary function of the PSC will be to encourage personnel from the three key institutions, at national and provincial levels, to work together to assist in achieving the clearly stated project aims and objectives. The objective will be to create mutual beneficial symbiotic relationships between the three different institutions, each doing what it is mandated to do, but in a shared environment where effective working links have been created. The project management will have a particular responsibility for ensuring that the project staff and NGOs meet these conditions in each of the provinces.

Project Management Offices (PMO) will be established in Namibe and will be hosted by either the local government or by the ministry offices and will responsible for the day-to-day management of the project. The PMO will be comprised of the National Project Coordinator (NPC), an Chief Technical Adviser (CTA), and a National Operations Officer (see below). The office will report directly to the BH and work in close collaboration with the LTO. The PMO will report on an annual basis to the Local Programme Steering Committee LPSC and the Project Steering Committee (PSC).

Four **Project Local Offices (PLOs)** will be established in the municipalities and will be hosted by them or by the Veterinary Research Institutes IIV that have an office in each municipality. Each local office will be led by a Local Activity Coordinator (LAC). The LAC will report to the NPC and, will be technically guided by the CTA and administratively depending on the PMO. They will support project implementation in the project area and will collect data for systematic monitoring of project progress and impact. Although the final decision will be taken in the first LPSC and PSC meeting, it is proposed that PLOs will be established in Virrei (the starting point of transhumance drylands), Bibala (located in the degraded transit area), Chongoroi, and Quilengue (both located at the end of the transhumance corridor, where conflicts over land use arise). The PMO will also manage the activities in the coastal areas of Namibe Province that are transhumance starting points.

A National Project Coordinator (NPC) will lead the PMOs and work closely with the MA in the day-to-day execution of the project. The NPC, with the support of the Chief Technical Adviser (CTA), will be responsible for terminal reporting, PPRs and providing inputs to the LTO for the preparation of the annual PIRs. In addition, the NPC will be responsible for: (i) the real-time monitoring of project progress and the notification of BH and LTO in the case of any foreseen irregularities/delays; (ii) establishment of a participatory monitoring system covering all aspects of the project; (iii) in consultation with the LTO, identify suitable consultants for the various tasks and supervise their performance; (iv) providing technical supervision and guidance to the Project local Offices (PLO) in implementing project activities; (v) conducting regular field supervision visits and provide on-site guidance to oblast/rayon technical staff; (vi) day-to-day coordination and communication with Field Office staff in charge of the GEF project; (vii) ensure the dissemination of lessons learned and sharing knowledge with all relevant stakeholders. **A Chief Technical Adviser** (CTA) will support the NPC in the day-to-day execution of the project for the first three years and provide technical advice, guidance and support developing the assessment tools and

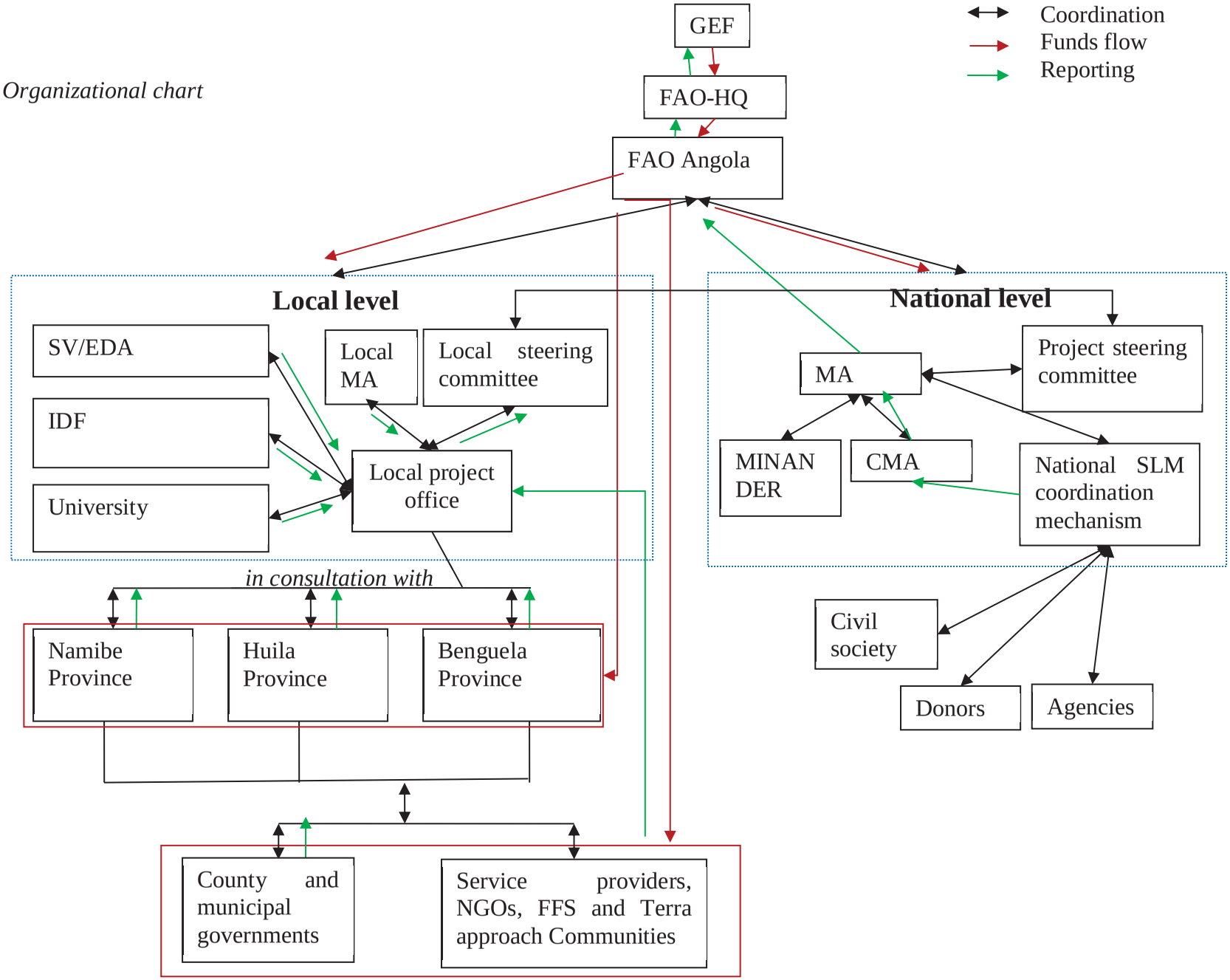
methodologies, as well as the design and implementation of technological packages. He/She will provide on-going support to the project for best practice assessment and implementation to enable the project to maintain strategic direction during implementation by helping project management remain focused on overall results in addition to the day-to-day implementation concerns. He/She will ensure that the project is an active member of a broader knowledge management network on adaptation to climate change and natural resource and land management. This includes emphasizing a learning and adaptive approach to project management and implementation in close cooperation with the national partners. The main responsibilities of the CTA with regards to the project's outcomes/outputs are to: i) provide technical backstopping for all aspects related to Sustainable Land Management (SLM); ii) support implementation of the LADA based land degradation assessment; iii) support the development of ecosystem-wide participatory land management plans; iv) define technical steps and supervise the implementation of the Agro-Pastoral Field Schools (APFS); v) support the decision making reinforcement through the appropriate use of policy tools at a local scale: and vi) support the *Jango Pastoril* application through the PNTD scheme. The CTA will collaborate in all technical phases of the project and will work in close conjunction with technical personnel from the MA and MINANDER, ensuring sustainability of the project technologies and approaches in place. Further, the CTA will coordinate the Local Activity Coordinators (LAC) in the day-to-day activities, by providing technical recommendations for the implementation of all project phases and will support the provision of inputs for the preparation of PPRs and PIRs. **A short-term Monitoring and Evaluation Specialist** will be in charge of developing and updating the project's M&E system. The M&E system will be used by the National Project Coordinator to monitor project progress and to make informed management decisions. The M&E Specialist will: i) support the NPC in conducting regular field visits to project sites and update project information in the M&E system. This information will be utilized by the NPC and reflected in preparing the six-monthly Project Progress reports (PPRs): ii) monitor progress in achieving project outputs and outcome indicators; and iii) proposing eventual shifts in project implementation strategies if the project is not performing as planned .**A National Budget and Operations Officer (part-time)** will be responsible for the day-to-day financial management of the project. The Budget and Operations Officer will work in close consultation with the NPC, the BH, LTO and executing partners, in particular with the FAO Representative in Angola and will: i) ensure the smooth and timely implementation of project activities according to FAO rules and standards: ii) coordinate the project operational arrangements: iii) provide support in procurement of project equipment and recruitment of project staff and consultants; and iv) support the BH in managing the budget and in preparing six-monthly budget revisions.

A project team comprising of international and national experts will include the following consultants whose ToR are provided in Appendix 6:

- International experts in the assessment of resilience
- International policy adviser
- LADA assessment assistant
- A LD expert for publication drafting
- A gender territorial monitoring and a land management expert
- A GIS/NRL expert to support in the participatory evaluation of plants used and their palatability
- A participatory policy expert (new policy design, Decree 216/11 case study and land concession study, CMA functioning study)
- CMA personnel for integration of SLM and pastoral issues;
- A consultant to support the coordination

- A web page design expert.

Organizational chart



4.3 FINANCIAL PLANNING AND MANAGEMENT

The total cost of the project will be USD 20,304,636, to be financed through a USD 3,013,636 GEF grant and USD 17,291,000 in co-financing from: (i) MA (USD 300,000); (ii) MINANDER (9,641,000); (iii) FAO (USD 550,000); (iv) Ministry of Commerce (USD 5,000,000); (v) Province of Namibe (USD 1,800,000). The table below shows the cost by component and outputs and by sources of financing. The FAO will, as the GEF Agency, only be responsible for the execution of the GEF resources and the FAO co-financing.

4.3.1 Financial plan (by subcomponent, outputs and co-financier)

Component/output	FAO	MIMANDER	MA	Ministry of Commerce	Province of Namibe	Total Co-financing	% Co-financing	GEF	% GEF
Component. 1: Rangeland management planning	**60,000**	**2,840,000**	-	-	-	**2,900,000**	**85%**	**500,000**	**15%**
O 1.1.1 40 MA, MINANDER, and provincial government staff trained on-the-job in the implementation of LADA methodology assessment and LD knowledge (including local degradation processes and causes).	-	-	-	-	-	-	0%	70,000	100%
O 1.1.2 Capacity of 20 decision makers and 20 civil society organizations is increased for ecosystem-wide participatory land management planning at the local level.	-	-	-	-	-	-	0%	200,000	100%
O 1.1.3 Integrated land management plans developed with the participation of farmers/pastoralists and customary associations covering an area of 3,000 ha.	60,000	2,840,000	-	-	-	2,900,000	93%	230,000	7%
Component 2: Rangeland rehabilitation through best ran	**250,000**	**4,000,000**	-	**4,900,000**	**1,700,000**	**10,850,000**	**86%**	**1,792,942**	**14%**
O 2.1.1 A core group of 20 program managers, trainers and extension service staff trained as APFS/FFS facilitators in SLM and herd management practices.	50,000	410,000	-	-	30,000	490,000	79%	130,000	21%
O 2.1.2 70 SLM FFS/APFS established and 2 800 herders and farmers (at least 25 percent women) adopting SLM and herd management practices through an APFS based community action plan.	20,000	490,000	-	500,000	300,000	1,310,000	78%	362,942	22%
O 2.2.1 Communities capacitated in ecosystem based rehabilitation principles and assemesments undertake seeding in an area covering 500 ha.	-	1,500,000	-	200,000	-	1,700,000	77%	500,000	23%
O 2.2.2 6 APFS-based verification and experimentation systems for grasses adaptability and palatability in place and 6 fodder and/or natural grazing land areas established and managed by communities.	40,000	400,000	-	2,000,000	400,000	2,840,000	93%	200,000	7%
O 2.2.3 Community improved water management and livestock water availability through participatory rehabilitation of 15 water points.	-	800,000	-	-	150,000	950,000	83%	200,000	17%
O 2.2.4 900 ha of mise en défens areas established in three communities for strategic livestock feeding, pasture improvement, as well as land and biodiversity conservation.	40,000	400,000	-	-	400,000	840,000	81%	200,000	19%
O 2.3.1 Agro-pastoralists and farmers in five pastoral communities adopt improved production technologies.	-	-	-	500,000	100,000	600,000	80%	150,000	20%
O 2.3.2 Agro-pastoralists and farmers in five pastoral communities have improved beef production and beef value chains along a selected number of transhumance sub routes through APFS.	100,000	-	-	1,700,000	320,000	2,120,000	98%	50,000	2%
Component 3: Mainstreaming SLM into agricultural and	**90,000**	**2,501,000**	**200,000**	-	-	**2,791,000**	**87%**	**400,000**	**13%**
O 3.1.1: policy reinforcing SLM application in pastoral areas is proposed for approval.	-	-	25,000	-	-	25,000	12%	176,000	88%
O 3.1.2: Land Law is implemented and applied, facilitating SLM in pastoral project area.	-	-	25,000	-	-	25,000	20%	100,000	80%
O 3.1.3: SLM is integrated into 7 CMA plans and/or programs.	-	-	25,000	-	-	25,000	56%	20,000	44%
O 3.1.4: A working platform for the implementation of Decree 216/11 for rural communities is created.	-	-	25,000	-	-	25,000	51%	24,500	49%
O 3.2.1: Mechanisms (forum/coordination mechanism) is in place for cross-sectoral coordination for SLM operating with the involvement of MA, MINANDER and local/provincial Governments.	90,000	-	75,000	-	-	165,000	87%	24,500	13%
O 3.3.1: Draft governmental investment plan developed to support small credits for SLM and land rehabilitation complementing the existing National Environmental Management Plan.	-	2,501,000	25,000	-	-	2,526,000	98%	55,000	2%
Component 4: Project Monitoring and dissemination	-	**250,000**	**50,000**	**50,000**	**50,000**	**400,000**	**74%**	**140,000**	**26%**
O 4.1.1: Project monitoring system providing six-monthly reports on progress in achieving project output and outcome targets	-	-	**25,000**	-	-	25,000	30%	**58,460**	70%
O 4.1.2: Midterm review and final evaluation reports	-	-	**25,000**	-	**50,000**	75,000	54%	**64,140**	46%
O 4.1.3: Project-related "best-practices" and "lessons-learned" disseminated via via publications, project website and others means.	-	**250,000**	-	**50,000**	-	300,000	95%	**17,400**	5%
Project Management	**150,000**	**50,000**	**50,000**	**50,000**	**50,000**	**350,000**	**66%**	**180,694**	**34%**
Total Project	**550,000**	**9,641,000**	**300,000**	**5,000,000**	**1,800,000**	**17,291,000**	**85%**	**3,013,636**	**15%**

4.3.2 GEF/LDCF/SCCF inputs

The requested GEF grant resources totalling USD 3 013 636 will be allocated mainly in support of capacity building, policy and legal studies and preparation of normative instruments, technical assistance for technical studies, the preparation of plans, and finding technical solutions for sustainable land rehabilitation and implementation of SLM. GEF resources will also finance publications for awareness raising and education on SLM best practices and will support community based adaptation at a local level through APFS and at a wider geographical scale through the *Jango Pastoril*.

4.3.3 Government inputs

The government in-kind co-financing will mainly consist of staff time, office space and utilities, and support for local travel. The government cash co-financing will support the improvement of infrastructure of water management, transport and seed multiplication, equipment for monitoring, and restoration of degraded lands.

The MINANDER co-financing (USD 9 641 000) will contribute to rural infrastructure measures, including a centre and residences for trainers, mapping of the programme intervention areas, economic provincial plan, production and provision of plants in collaboration and with the support of the project technical team, provision and installation of four water pumps, implementation of a micro-irrigation system, provision of transport and agriculture equipment and preparation of a Master plan to combat desertification. A strong collaboration will be established with ISV for vaccinations and animal health and with local IDF offices.

The MA will collaborate though a grant co-financing of USD 300 000 for Component 3 by establishing a high level discussion and coordination forums, working toward the SLM mainstreaming in different environmental and agricultural legislations and programmes, and in preparation of a draft investment plan; in Component 4 to support M&E and in project management.

The Province of Namibe and the Ministry of Commerce will contribute a total of USD 6 800 000 in co-financing (USD 1 800 000 in kind and 5 000 000 grant) to implement relevant activities included in the Provincial Namibe Plan: the rehabilitation of the zootechnical stations of Cacanda, Caraculo, and Lungo; the building of three dairies and stables in Namibe, Bibala, and Camacuio; building of three greenhouses; study for the road infrastructure improvement to support pastoral production; implementation of a statistical database for the pastoral sector; Programme for the Agriculture Incentive in Lola (Bibala); desilting of 15 dams; building of nine new dams; rehabilitation of 12 dams; and two studies to improve the dam of Chingo and to build the dam of Mucungo.

4.3.4 FAO inputs

FAO will provide technical assistance, support, training and supervision of the execution of activities financed by GEF resources. The GEF project will complement and be co-financed by several projects and activities implemented by the FAO Representation in Angola funded by the FAO Technical Cooperation Programme and by various donors through trust fund arrangements, as follows:

1) The project *Appui au redressement des capacités de production agricole et des moyens d'existence des populations affectées par les inondations dans la Province de Namibe* (TCP/ANG/3402 (11/IV/ANG/222)) will contribute to Component 2 of the present project through USD 60 000 in grant co-financing. Project structures and agricultural methodologies in place will speed up the start-up of the present activity.
2) The FAO implemented EU/FAO project *Strengthening of Livestock Services in Angola* (SANGA project) (GCP /ANG/037/EC) will contribute a grant of USD 50 000 and the project structure in place in very remote areas, and lessons learned derived from activities on animal health and ethno veterinaries, will greatly contribute to the start-up of the present activity
3) In conjunction with the previous initiative, the GoA has financed a small activity to provide technical assistance to livestock service providers, the project OSRO/ANG/101/ANG. The entire project will contribute to the start phase of the present activity.
4) The project *Market Oriented Smallholder Agriculture Project (*MOSAP), (TF/UTF/21/211/(TCSRD) will contribute by providing the structure of the FFS in place to the activities of Component 2 by providing master trainers that have experience in FFS and have been trained in pastoral activities under other international development projects.
5) The project *Increasing environmental and traditional community resilience in the south of Angola* with a budget of USD 2 million will focus on improving breeders capacities, rehabilitating water points, improving territorial management, and improving grassland management and grassland reserve structure and will contribute USD 290 000 in kind to the implementation of Components 1 and 2.

Total co-financing from FAO to the GEF project amounts to USD 550 000.

4.3.5 Other co-financiers inputs

N/A

4.3.6 Financial management of and reporting on GEF resources

Financial Records

FAO shall maintain a separate account in United States dollars for the project's TF resources showing all income and expenditures. Expenditures incurred in a currency other than United States dollars shall be converted into United States dollars at the United Nations operational rate of exchange on the date of the transaction. FAO shall administer the project in accordance with its regulations, rules and directives.

Financial Reports

FAO-AO as the BH shall prepare six-monthly project expenditure accounts and final accounts for the project, showing amount budgeted for the year, amount expended since the beginning of the year, and separately, the un-liquidated obligations as follows:

1. Details of project expenditures on a component-by-component and output basis, reported in line with project budget codes as set out in the Project Document, as at 30 June and 31 December each year.
2. Final accounts on completion of the project on a component and output-by-output basis, reported in line with project budget codes as set out in the Project Document.
3. A final statement of account in line with FAO Oracle project budget codes, reflecting actual final expenditures under the project, when all obligations have been liquidated.

The BH will submit the financial reports for review and monitoring by the LTU and the FAO GEF Coordination Unit. Financial reports for submission to the donor (GEF) will be prepared in accordance with the provisions in the GEF Financial Procedures Agreement and submitted by the FAO Finance Division.

Budget Revisions

Semi-annual budget revisions will be prepared by the BH in consultation with the FAO Representation in Angola in accordance with FAO standard guidelines and procedures.

Responsibility for Cost Overruns

The BH is authorized to enter into commitments or incur expenditures up to a maximum of 20 percent over and above the annual amount foreseen in the project budget under any budget subline provided the total cost of the annual budget is not exceeded.

Any cost overrun (expenditure in excess of the budgeted amount) on a specific budget subline over and above the 20 percent flexibility should be discussed with the FAO GEF Coordination Unit with a view to ascertaining whether it will involve a major change in project scope or design. If it is deemed to be a minor change, the BH shall prepare a budget revision in accordance with FAO standard procedures. If it involves a major change in the project's objectives or scope, a budget revision and justification should be prepared by the BH for discussion with the GEF Secretariat.

Savings in one budget subline may not be applied to overruns of more than 20 percent in other sublines even if the total cost remains unchanged, unless this is specifically authorized by the FAO GEF Coordination Unit upon presentation of the request. In such a case, a revision to the project document amending the budget will be prepared by the BH.

Under no circumstances can expenditures exceed the approved total project budget or be approved beyond the NTE date of the project. Any over-expenditure is the responsibility of the BH**.**

Audit

The project shall be subject to the internal and external auditing procedures provided for in FAO financial regulations, rules and directives and in keeping with the Financial Procedures Agreement between the GEF Trustee and FAO.

The audit regime at FAO consists of an external audit provided by the Auditor-General (or persons exercising an equivalent function) of a member nation appointed by the governing bodies of the Organization and reporting directly to them and an internal audit function headed by the Inspector-General who reports directly to the Director-General. This function operates as an integral part of the Organization under policies established by senior management, and furthermore has a reporting line to the governing bodies. Both functions are

required under the Basic Texts of FAO which establish a framework for the terms of reference of each. Internal audits of interest accounts, records, bank reconciliation and asset verification take place at FAO field and liaison offices on a cyclical basis.

4.4 PROCUREMENT

The Budget Holder, in close collaboration with the Project Coordinator, the Lead Technical Officer and the Budget and Operations Officer will procure the equipment and services provided for in the detailed budget in Appendix 3, in line with the Annual Work Plan and Budget and in accordance with FAO's rules and regulations.

Prior to commencement of procurement, the BH, in close consultation with the Project Coordinator and the Lead Technical Unit (LTU), will complete the procurement plan for all services and equipment to be procured by FAO.

The procurement plan shall be updated every 12 months and submitted to and cleared by the FAO Budget Holder and LTO with the AWP/B and annual financial statement of expenditures report for the next instalment of funds.

4.5 MONITORING AND REPORTING

Monitoring and evaluation of progress in achieving project results and objectives will be done based on the targets and indicators established in the Project Results Framework (Appendix 1 and described in section 2.3 and 2.4). The project Monitoring and Evaluation Plan has been budgeted at USD 140 000. Monitoring and evaluation activities will follow FAO and GEF monitoring and evaluation policies and guidelines. Supported by Component 4, the project monitoring and evaluation system will also facilitate learning and mainstreaming of project outcomes and lessons learned in relation to SLM, pastoral and grassland areas improvement, and collaborative LM plans.

4.5.1 Oversight and monitoring responsibilities

The M&E tasks and responsibilities clearly defined in the project detailed Monitoring Plan (see below) will be achieved through: (i) day-to-day monitoring and supervision of project progress (NPC); (ii) in Component 2 technical monitoring of APFS functionality and rehabilitation activities (CTA in coordination with monitoring national consultants, local level managers, and service providers with support from local communities); (iii) in Component 1 specific monitoring plans for the implementation of a negotiation and training process for the land management planning (CTA in coordination with local consultants with support from local communities and other stakeholders; (iv) in Component 3 monitoring of policy preparation and implementation at a local level (NPC); (v) midterm and final evaluations (independent consultants and FAO Evaluation Office); and (vi) continual oversight, monitoring and supervision missions (FAO).

During the inception Phase of the GEF Project, the NPC will set up a project progress monitoring system strictly coordinated with subsystems in each of the pilot areas. Participatory mechanisms and methodologies for systematic data collection and recording will be developed in support of outcome and output indicators, monitoring and evaluation to be self-assessed at the level of the APFS. During the inception workshop (see section 4.5.3

below), M&E related tasks to be addressed will include: (i) presentation and clarification (if needed) of the project's Results framework indicator targets and their means of verification, and assumptions and risks with all project stakeholders; (ii) review of the M&E indicators and their baseline; (iii) drafting the required clauses to include in consultants' contracts to ensure they complete their M&E reporting functions (the M&E expert will be part time as he will also support other FAO projects); and (iv) clarification of the respective M&E tasks among the Project's different stakeholders, (v) finalization of the first results-based annual work plan an budget, (vi) prepare financial reporting procedures and obligations, (vii) schedule of PSC and LSC meetings. One of the main outputs of the workshop will be a detailed monitoring plan agreed upon by all stakeholders based on the monitoring and evaluation plan summary presented in section 4.5.4 below.

The day-to-day monitoring of the Project implementation will be the responsibility of the NPC with support from the CTA and the M&E expert, driven by the preparation and implementation of an Annual Work Plan and Budget (AWP/B) followed up through six-monthly Project Progress Reports (PPRs). The preparation of the AWP/B and six-monthly PPRs will represent the result of a unified planning process between the main project partners. As tools for results-based-management (RBM), the AWP/B will identify the actions proposed for the coming project year and provide the necessary details on output targets to be achieved, and the PPRs will report on the monitoring of the implementation of actions and the achievement of output targets. Specific inputs to the AWP/B and the PPRs will be prepared based on participatory planning and progress review with local stakeholders and coordinated through the NPC and service providers and facilitated through project planning and progress review workshops. These inputs would be consolidated by the respective Service Provider Managers before forwarding them to the CTA and to NPC who will consolidate the information into a draft AWP/B and PPRs. An annual project progress review and planning meeting should be held with the participation of all involved service providers. Subsequently, the AWP/B and PPRs are submitted to the local and national PSC for approval (AWP/B) and Review (PPRs) and to FAO for approval. The AWP/B will be developed in a manner consistent with the project's Results Framework to ensure adequate fulfilment and monitoring of project outputs and outcomes.

Following the approval of the Project, the project's first year AWP/B will be adjusted (either reduced or expanded in time) to synchronize with an annual reporting calendar. In subsequent years, the FSP workplan and budget will follow an annual preparation and reporting cycle as specified in section 4.5.3 below.

4.5.2 Indicators and information sources

To monitor project outputs and outcomes including contributions to global environmental benefits, specific indicators have been established in the Results Framework (see Appendix 1). The framework's indicators and means of verification will be applied to monitor both project performance and impact. Following FAO's monitoring procedures and progress reporting format, data collected will be of sufficient detail to be able to track specific outputs and outcomes and flag project risks early on. The NPC will ensure that all AWP/B are related to the project's Result framework to ensure that project implementation maintains a focus on achieving the impact indicators as defined. The LD-PMAT will be used to monitor the project's overall impact on land degradation. Output target indicators will be monitored on a six-month basis while outcome target indicators will be monitored on an annual basis if possible or as part of the mid-term and final evaluations.

The project output and outcome indicators have been designed to monitor on-the-ground impacts and progress in building and consolidating SLM capacities. The baseline and target for these indicators are established in the Project Results Framework and will be fine-tuned and included in the M&E plan to be designed by the short-term M&E specialist in PY1. Key indicators at the outcome level include:

Increased vegetation cover in the targeted rangeland area

Outcome 2.2: Hectares with increased vegetative cover due to appropriate and sustainable livestock corridors management by transhumant herders, use of local or improved grassland and shrub species, community level seeding of wild grassland.

Increase in agro-pastoral productivity and community livelihoods

Outcome 2.1: Increase in livestock productivity (measured in live weight gain per cow per year).
Outcome 2.3: Number of households with an increase in revenue derived from livestock and non-livestock products.

The institutional strengthening and capacity building process indicators will capture:

Integrated planning and management tools developed and implemented

Outcome 1.1: The number of participatory developed territorial land management plans that are in place and the size of land they cover.

Levels of human capacity and awareness created

Outcome 1.1: The number of government officers and local PNTD advisers that are capacitated to use LD assessment and SLM-tools for a sector-wide land management planning process.
Outcome 2.1: The number of INRM methodologies that are applied by communities in the project area.

Policies on SLM developed and existing policies strengthened

Outcome 3.1: Introduction of Policy on SLM and submission for approval, reinforcement of existing Land Law in project area, establishment of working platform for implementation of Decree 216/11.

Cross-sectoral coordination

Outcome 3.2: Establishment of sector wide discussion panel on SLM between at least three ongoing programmes implemented by the government or international agencies, or civil society.

Increased investments in SLM

Outcome 3.3: Support in introducing draft investment plan for SLM in collaboration with at least two partners' policy schemes and/or governmental programmes.

The project will use the following activities and main sources of information to support the M&E program; (i) satellite images to measure NPP, (ii) participatory impact monitoring by

selected FFS/AFPS members using SHARP tool, (iii) on-site monitoring of the implementation of the FFS/AFPS taught practices, (iv) project progress reports prepared by the NPC with inputs from CTA, MA, MINANDER, and service providers, (v) consultants reports, (vi) APFS training manuals and list of participants, (vii) mid-term review and final evaluation, as well as post project impact and evaluation studies completed by independent consultants, (viii) financial reports and budget revisions, (ix) Project Implementation Reviews prepared by the FAO Lead Technical Officer supported by the FAO Representation in Angola; and (xi) the FAO supervision mission reports on targets to be achieved, and PPRs which will report on the monitoring of the implementation of actions and the achievement of output targets. Specific inputs to the AWP/B and the PPRs will be prepared based on participatory planning and progress reviews with local stakeholders. An annual project progress review and planning meeting should be held with the participation of the PMO. The AWP/B will be developed in a manner consistent with the project's Results Framework to ensure adequate fulfilment and monitoring of project outputs and outcomes.

The Reporting Schedule is detailed in the following section.

4.5.3 Reports and their schedule

Specific reports that will be prepared under the M&E program are: (i) Project inception report; (ii) Annual Work Plan and Budget (AWP/B); (iii) Project Progress Reports (PPRs); (iv) annual Project Implementation Review (PIR); (v) Technical Reports; (vi) co-financing Reports; and (vii) Terminal Report. In addition, assessment of the SCCF and GEF Monitoring Evaluation Tracking Tools (METTs) against the baseline (completed during project preparation) will be required at the midterm and final project evaluation.

Project Inception Report

After approval of the Project an inception workshop will be held. Immediately after the workshop, the NPC will prepare a Project Inception Report in consultation with the FAO LTO, BH and national executing partners.

The report will include a narrative on the institutional roles and 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, a detailed project monitoring plan based on the monitoring and evaluation plan summary presented in section 4.5.4 below. The draft inception report will be circulated to FAO and the Project Steering Committee for review and comments before its finalization, no later than three months after project start-up. The report should be cleared by the FAO BH, LTU and the FAO GEF Coordination Unit and uploaded in FPMIS by the LTUs.

Results-Based Annual Work Plan and Budget (AWP/B)

The draft of the first AWP/B will be prepared by the NPC in consultation with the Project Task Force and reviewed at the project Inception Workshop. MA inputs will be incorporated and the NPC will submit a final draft AWP/B within two weeks of the IW to the BH. For subsequent AWP/B, the NPC will organize a project progress review and planning meeting for its assessment. Once comments have been incorporated, the BH will circulate the AWP/B to the LTO and the GEF Coordination Unit on a no-objection basis 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 is contributing to the achievement of the indicators. 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 the 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.

Project Progress Reports (PPRs)

The NPC will prepare six-monthly Progress Reports (PPRs) and submit them to the FAO LTO and the BH no later than 31 July (covering the period January through June) and 31 January (covering the period July through December). The first semester six month report should be accompanied by the updated AWP/B. The PPRs are used to identify constraints, problems or bottlenecks that impede timely implementation and take appropriate remedial action. PPRs will be prepared based on the systematic monitoring of output and outcome indicators identified in the Project Results Framework. The FAO LTO and BH will review the progress reports, collect and consolidates eventual FAO comments from the LTU, the GEF Coordination Unit, and the BH Office and provide these comments to the MA. When comments have been duly incorporated the LTU will give final approval and submit the final PPR to the GEF coordination Unit for final clearance. Thereafter the BH will upload final documents in FPMIS.

Annual Project Implementation Review (PIR)

The LTU, with support from the NPC/CTA and BH will prepare an annual Project Implementation Review (PIR) covering the period from July (the previous year) through to June (current year). The PIR will be submitted to the FAO GEF Coordination Unit for review and approval no later than 10 September. The FAO GEF Coordination Unit will upload the final report on FAO FPMIS and submit it to the GEF Secretariat and Evaluation Office as part of the Annual Monitoring Review report of the FAO-GEF portfolio. The FAO GEF Coordination Unit will provide the updated format when the first PIR is due.

Technical Reports

Technical reports will be prepared to document and share Project outcomes and lessons learned. The drafts of any technical reports must be submitted by NPC to the BH who will share it with the LTU for review and clearance and to the FAO GEF Coordination Unit for information and eventual comments, prior to finalization and publication. Copies of the technical reports will be distributed to the PSC and other project partners as appropriate. The final reports will be posted on the FAO FPMIS by the LTU.

The drafts of any technical reports must be submitted by the NPC/CTA or executing partners to the BH who will share it with FAO LTO. The LTO will be responsible for ensuring appropriate technical review and clearance of the reports. The BH will upload the final cleared reports onto the FPMIS. Copies of the technical reports will be distributed to the national executing partners and other Project partners as appropriate. These will also be posted on the Project website and FAO FPMIS.

Co-financing Reports

The BH with support from NPC/CTA will be responsible for collecting the required information and reporting on in-kind and cash co-financing provided by the Government of Angola and eventual other partners not foreseen in the Project Document. The NPC, with support from the CTA will compile the information received from the executing partners and transmit in a timely manner to the LTO and BH. The report covers the period from July (the

previous year) through to June (current year). The format and tables to report on co-financing can be found in the PIR.

GEF LD Tracking Tool

Following the GEF policies and procedures, the tracking tool for land degradation focal area will be submitted at three moments: (i) with the project document at CEO endorsement; (ii) at the project's mid-term evaluation; and (iii) with the project's terminal evaluation or final completion report.

Terminal Report

Within two months of the Project completion date, the NPC, with the technical support of the CTA, will submit to the BH and LTO a draft Terminal Report. The Report will include a list of outputs detailing the activities undertaken under the Project, lessons learned and any recommendations to improve the efficiency of similar activities in the future. This report will specifically include the findings of the final evaluation as described above. The main purpose of the final report is to give guidance at the 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. A final project review meeting should be held to discuss the draft terminal report before it is finalized by the BH and approved by the FAO LTU and the GEF Coordination Unit.

4.5.4 Monitoring and evaluation plan summary

The table below provides a summary of the main M&E reports, responsible parties and timeframe.

Table 8. M&E summary, responsible parties and time frame

Type of M&E Activity	Responsible Parties	Time-frame	Budget
Inception Workshop	NPC, supported by the CTA, FAO LTU, BH, and the FAO GEF Coordination Unit	Within two months of project start up	USD 10,000
Project Inception Report	NPC, cleared by FAO LTO, LTU, BH, and the GEF Coordination Unit	Immediately after workshop	-
Field based impact monitoring training	NPC, with support from CTA and M&E expert and service providers	At the beginning of the project and periodically (defined at the IW)	USD 4,000
Field based impact monitoring	NPC, PLOs, participating executing partners (including communities) and other relevant institutions; LTO and FAO supervision missions.	Continually	USD 14,000

Type of M&E Activity	Responsible Parties	Time-frame	Budget
Technical backstopping and supervision missions	LTO and other technical units supporting the project, TCI/GEF Coordination Unit	At least once per year	The visits of the FAO LTO and the GEF Coordination Unit will be paid by GEF agency fee. The visits of the NPC/CTA will be paid from the project travel budget
Project Progress Reports	NPC, with inputs from the four local advisers working in the transhumance area and other partners; FAO LTO and BH; BH to submit PPR to GEF Coordination Unit for clearance and uploading on FPMIS	Six-monthly	USD 7,000
Technical Reports	NPC, CTA, LTO, LTU, BH	As appropriate	-
Project Implementation Review report	Inputs provided by the Project Coordinator. LTO and BH supported by the NPC and CTA. PIRs cleared and submitted by the FAO GEF Coordination Unit to the GEF Secretariat and uploaded on the FPMIS	Annual	Covered by fees
GEF LD Tracking tool	LTO, NPC, and CTA	Updated at the time of the mid-term evaluation and final evaluation	Covered by fees
Co-financing Reports	NPC with support from CTA, BH	Annual (with PIR)	USD 2,000
Mid-term Evaluation	FAO Evaluation Office in consultation with the project team including the FAO GEF Coordination Unit, the LTO, BH; external consultant(s)	At mid-point of project implementation	USD 40,000 Costs of FAO Evaluation Office covered by fee
Final evaluation	FAO Evaluation Office in consultation with the project team including the FAO GEF Coordination Unit, the LTO, BH; external consultants	At the end of project implementation	USD 40,000 Costs of FAO Evaluation Office covered by fee
Terminal Report	NPC,BH, LTO	At least two months before the ending date of the project	USD 5,600
Total			USD 132,600

4.6 PROVISION FOR EVALUATIONS

An independent mid-term evaluation will be undertaken after two years of project implementation. The review will determine progress being made towards achievement of objectives, outcomes, and outputs, and will identify corrective actions if necessary. It will, inter alia:

a. review the effectiveness, efficiency and timeliness of project implementation;
b. analyse the effectiveness of implementation and partnership arrangements;
c. identify issues requiring decisions and remedial actions;
d. identify lessons learned about project design, implementation and management;
e. highlight technical achievements and lessons learned; and
f. propose any mid-course corrections and/or adjustments to the implementation strategy as necessary.

An independent Final Evaluation (FE) will be carried out three months prior to the terminal review meeting of the project partners. The FE will identify the project impacts and sustainability of project results and the degree of achievement of long-term results. This Evaluation would also have the purpose of indicating future actions needed to expand on the existing Project in subsequent phases, mainstream and up-scale its products and practices, and disseminate information to management authorities responsible for the management of other project partners.

Some critical issues to be evaluated in the midterm and final evaluations will be: (i) progress in improving grassland status and palatability; (ii) the functioning and effectiveness of the APFS network and of the inter-institutional coordination mechanism in developing and implementing integrated planning in support of SLM for grassland areas and addressing key biodiversity threats; (iii) the level of capacities and involvement of local staff in terms of improved management effectiveness and land management plan implementation capability; (iv) the level of involvement of farmers and herders in land management models.

The Terms of Reference (TOR) for the Final Evaluation team (one international and one national consultant) will be prepared in close consultation with the Project Coordinator, the FAO BH, LTO and GEF Coordination Unit, and under the ultimate responsibility of the FAO Office of Evaluation, in accordance with FAO evaluation procedures and taking into consideration evolving guidance from the GEF Independent Evaluation Office. The TOR and the report will be discussed with and commented upon by the project partners.

4.7 COMMUNICATION AND VISIBILITY

The project will be transparent and ensure effective communication through the following component related activities:

- Component 1: The training and negotiation phase will include communication and training material and videos. The LADA/LD assessment phase and results of it will be published in form of an atlas.
- Component 2:The APFS establishment will include: i) communication and training materials, (ii) preparation and dissemination of material regarding added value to the

commercialization of livestock and non-livestock products, (iii) demonstration material to increase the visibility of the use of local and wild species for food and fodder, (iv) multiple training workshops including local institutions, stakeholders and populations in the project intervention areas, that will raise awareness among participants, (v) dissemination of results of gender-disaggregated assessments and selected community maps, and (vi) and preparation of APFS videos and spots.

- Component 3: The institutional strengthening will generate great visibility of the project among high-level government decision-makers (including regional, national and local government institutions).
- Component 4: A project website will be established that will issue periodic project newsletters and three specific publications on "best practices and lessons learned" in; a) land management of transhumance areas, b) diversification and SLM in APFS, and c) in policy level interventions.

SECTION 5 – SUSTAINABILITY OF RESULTS

5.1 SOCIAL SUSTAINABILITY

Social sustainability of project activities will be achieved through a participatory strategy aimed at enhancing the role of local communities and organizations in conservation and management activities, capacity-building and monitoring. The project planning phase has intensely analysed the socio-economic and ethnic composition before proposing appropriate solutions. Short and medium term socio-economic benefits will be created mostly through the integration of territorial planning (Component 1) and APFS (Component 2). In particular, the project will support:

- Gender equality in all decision making steps and project activities, as well as a gender-based assessment of the use of local natural resources, will be conducted in selected areas throughout the participatory decision making phases of the project;
- Active participation and ownership of local indigenous communities in the development and integration of NRM plans into sustainable SLM planning processes. In fact, it is the local communities who guide the planning process and prioritize the activities through their active participation in the pastoral committees. Furthermore, the local communities are fully responsible for the execution of project activities in the field, as well as for the operation and maintenance of equipment through a "Save and Loan scheme";
- APFS will build "grass-root labs" based on indigenous knowledge in which smallholder farmers and pastoralists build and expand their knowledge and develop their own management systems. FFS will improve local capacities for the adoption of knowledge demanding SLM practices and technologies and support community building;
- Local decision making and capacity building to enhance the administrative and technical abilities of local organizations and community members are integral components of the project;
- All project activities aim at conserving transhumant areas, especially traditional waterholes, as well as at the improvement of local livelihoods through scaling-up production and marketing of non-livestock products;
- Conflict prevention will be supported through the implementation of land management plans based on *Jango Pastoril* and APFS methods and through the capacity which is in place to apply eligible and appropriate local legal packages.

5.2 ENVIRONMENTAL SUSTAINABILITY

Being a GEF project with the main objective of contributing to improved NRM and to the protection of dryland ecosystems that can support transhumants, all project activities will inevitably contribute to environmental sustainability. Sustainability implies creating a solid knowledge as a basis for ensuring the continuous commitment of the actors involved in the issues related to SLM. The continued engagement of Angolan institutions to improving the state of LD is precisely one of the reasons why this project has been proposed. The project objective, outcomes and outputs in themselves address barriers for the environmental sustainability of the pastoral system in the Namibe Province of Angola. The project and the GEF resources that will be invested are expected to have a positive impact on the sustainability of; livestock and grassland resources, the conservation of local grassland biodiversity, and the sustainable use thereof, and conservation of the ecosystems.

The intervention strategy of the FAO is present at all times in order to reach sustainable results:

- Leaving a series of well-trained public servants in SLM practices, who have been in place since the pilot project at the local level;
- Assisting in clearly defining the responsibilities of land management related procedures of each partner institution. Improving the understanding and coordination between different institutions and trying to overcome conflicts of interest created among them;
- Identifying and training a number of NGOs together with government institutions to be able to replicate work started by the FAO once the project is completed;
- Leaving a sufficient number of actors in rural communities and other civil society areas involved in management activities and land use, in order to motivate other communities to follow the same steps as them. They may enlist help from partner organizations within the project who are specialized in this subject.

5.3 FINANCIAL AND ECONOMIC SUSTAINABILITY

NRM, prevention of LD and conservation of biodiversity and ecosystem services will always need support from public funding, and Angola is planning policy interventions to reduce the negative impacts of these damaging phenomena. This is also evident from the government's co-financing provided for this project. In addition, the project seeks to create economic and financial sustainability for the conservation investments in SLM by engaging state actors, economic sectors and local communities in investing in small-scale SLM. This will increase local stakeholders' revenues and will reduce environmental impacts. The project will support various measures to improve the financial sustainability of NRM initiatives. The economic, financial, and sustainability analyses of Components 1 and 2 are closely related. Sustainability will be achieved to the extent that activities are financially viable for the parties involved – whether individual pastoralist groups, communities and partners in the transhumance areas, or users and providers of environmental services. Examples for financial sustainability include:

- The planning in the transhumance areas and the specific prioritized activities which will be implemented will all be selected by the communities themselves through their active participation in committees. It is in the communities' interest to select activities that are financially viable, as beyond some initial support from the project, they will not receive any further assistance. As the specific activities to be implemented will be selected by the communities during implementation, it is impossible at this stage to foresee exactly what they will be, or to estimate their costs and benefits;
- At the national level the project will support the development of an investment plan to increase and diversify financial resources for SLM (Output 3.3.1), which would include establishing specific budgetary provisions within programmes and projects financed by the national government. The financial budgetary provision will be designed to remain in place after the end of the project. This coupled with incorporation of SLM priorities into sectoral policies and plans (Output 3.1.3) will ensure financial sustainability of activities at a local/regional level;
- Field based activities will develop capacities for sustainable rangelands and agricultural management based on enhancing ecosystem functions and will comprise innovative interventions including community based learning processes, Farmer Field Schools (FFS), Agro-pastoral Field Schools (APFS), and technical assistance for the implementation and rehabilitation processes of rangeland and grassland best practices,. FFS/APFS will be sustained in the long term by a community action plan that will be set in place and implemented during project activities. In the long term, the institutionalization of

FFS/APFS as MINANDER extension services could improve sustainability as already witnessed in various countries in West Africa.

5.4 SUSTAINABILITY OF CAPACITIES DEVELOPED

The sustainability of the expected project outcomes is built into the project approach and outputs as follows:

1 At the policy level, a national (high level) mechanism for coordination of SLM (Output 3.2.1) will be established with representatives from ministries dealing with natural resource management and other relevant stakeholders. The mechanism will focus on a collaborative diagnosis of problems, harmonization of policies, SLM investments and planning and implementation of SLM interventions. The coordination mechanism or platform will ensure sustainability of commitments beyond the project lifespan and will be financed through the governmental investment plan.

2 At the national level, the project will support the development of an investment plan to increase and diversify financial resources for SLM (Output 3.3.1), which would include the establishment of a specific budgetary provision within the national government. The financial budgetary provision will be designed to remain in place after the end of the project. This measure, coupled with the incorporation of SLM priorities into sectoral policies and plans, will ensure financial sustainability of activities at a local/regional level.

3 At a local level, the rehabilitated ecosystems will be managed by local communities through FFS and APFS (Output 2.1.1) and integrated land-use plans (output 1.1.3). Inherent to the APFS approach is a strong local ownership because of the practice oriented approaches where schools are based on experimental learning cycles following the crop cycle in farmer's fields. The schools are facilitated by trained FFS facilitators who may be farmers from communities supported by FFS trained extension staff. FFS facilitators can be paid by the FFS based "Save and Loan Scheme". FFS/APFS are "grass-root labs" of learning-by-doing activities that through using participatory monitoring will increase local leadership, strengthening long-term farmers' and herders' capacities in the adaptive management of their land.

4 Agreements between farmers and herders (Output 1.1.3) will be managed through the *Jango Pastoril* system with a Terra Project approach. The system was already tested by the PAPEFSA Project. The Jango is an effective method to discuss and analyse the situation of raising livestock, and to confront issues related to land-use by farmers and agro-pastoralists. The Jango proposes solutions to an inter-municipal (or transhumance path scale) commission for conflict resolution. The system will require a small amount of funds to remain in place. The project will promote the inclusion of specific budgetary provisions for this purpose (see Point 2).

5.5 APPROPRIATENESS OF TECHNOLOGY INTRODUCED

The project will test, validate and promote a local knowledge-based technology to increase sustainability and diversify production. Technologies will be introduced based on participatory requests by APFS or communities and will only include SLM schemes.

5.6 REPLICABILITY AND SCALING UP

Strategies for up-scaling FFS and APFS are built into the project design and are based on ongoing interests by the GoA regarding that approach. The project will build a bridge from the various FAO and WB FFS projects, which is also a good opportunity for exchange and scaling up on successful management approaches and practices in other Angola ecosystems.

APPENDICES

APPENDIX 1: RESULTS MATRIX

Project impacts linked to outcomes:

Impact	Baseline	Outcome indicators	Assumptions
Global Environmental Objective: The goal of the proposed project is to enhance the capacity of southwestern Angola's smallholder agro-pastoral sector to mitigate the impact of LD processes and to rehabilitate degraded lands by mainstreaming SLM technologies into agro-pastoral and agricultural development initiatives. The project's environmental objective is to pursue LD neutrality by enhancing the capacity of southwestern Angola's smallholder agro-pastoral sector to mitigate the impact of LD processes and to rehabilitate degraded lands by mainstreaming SLM technologies into agro-pastoral and agricultural development initiatives. The development objective is to increase local livelihoods by introducing locally adapted SLM approaches and by strengthening and diversifying livestock and non-livestock based value chains.	Component 1: Rangeland management planning **Outcome 1.1:** There is no capacity from national and provincial government to comprehensively assess LD to be used for the preparation of evidence-based land management planning. No systematic assessment of LD is in place. The PAPEFSA project and COSPE produced some baseline maps and studies. Component 2: Rangeland rehabilitation through best range and herd management practices for smallholder agro-pastoralists **Outcome 2.1:** Cattle productivity is 35 kg live weight gain per year. Extension services are lacking. APFS have not been introduced in the country. There is a core group of FFS master trainers capacitated by the NPFS and WB project (central plateau area) but very few have pastoral expertise, and there are no Angolan experts that have been exposed to APFS. No methodologies of INRM are applied in the project area. **Outcome 2.2:** Degradation is spreading and NPP is decreasing	Component 1: **Outcome 1.1:** Cross sectoral training courses for 40 government Officers (MA and MINANDER) and 20 PNTD trainees conducted. Eight integrated territorial land management plans introduced covering 3 000 ha. Component 2: **Outcome 2.1:** Increase in livestock productivity by 5 percent (live weight per cow per year) benefitting a total of 2 800 farmers. One methodology of INRM (rotational grazing including the use of crop residues) applied in the broader landscape of the project area. **Outcome 2.2:** Increased vegetation cover in 13 500 ha of	Component 1: Social acceptance of new policies/plans. High level of political support from key stakeholders. Component 2: A community based management plan will support in risk reduction through AFPS. The feasibility study and community testing of the various seeds for its germination and adaptation at different agro-ecological zones will increase ecosystem resilience. There is a market and continuous demand for selected products. Acceptance by communities to use water for the establishment of *mise en défense* areas. Co-financing available in time.

	by 0.3 kgC/ha/year (data to be reassessed during project implementation for project monitoring). Neither fodder nor natural grassland is improved except in very small areas (some communities have traditional/natural grazing reserves but used only in the dry season and not improved). There is no verification of palatability and production of local grassland and bushland along the transhumant routes. Biodiversity assessment and community rehabilitation is not in place. No *mise en défense* areas exist but some remote small areas are protected by the inhabitants themselves. **Outcome 2.3:** Average annual income per capita will be defined during first year, but it is estimated to be about USD 190 per household per year. The actual production system is mainly based on livestock and charcoal production which degrades the environment and leads to the loss of vegetative land cover, and loss of soil nutrient. Livestock are sold to middle men at a price of approximately 50 percent of the market value. The livestock are bartered, not sold in remote transhumant areas. Animals are used as a bank; they are not sold on a regular basis, but rarely in case of emergencies or survival. Revenues are too low for subsistence.	rangeland (NPP increase by 5 percent). **Outcome 2.3:** Increase of revenues by 5% in up to 70 communities (total of 1 400 people).	
	Component 3: Mainstreaming SLM into agricultural and environmental sector policies and programmes **Outcome 3.1:** Currently no policy facilitating the integration of SLM in pastoral areas is in place. Land Law is not implemented in common transhumance lands. Decree 216/11 is not implemented in project area.	Component 3: **Outcome 3.1:** One SLM policy discussed and submitted for approval. One law implemented in project pastoral areas reinforcing tenure security.	Component 3: High level political support from all main sectors for integrating SLM friendly policies, regulations and management practices. The high level of political support for the pastoralism environmental value is maintained. Continuation of strengthening awareness, lobbying and

		One working platform created for the implementation of Decree 216/11.	advocacy. Partnerships with the government will improve funds directed toward the support of agro-pastoralism.
	Outcome 3.2: Land-related conflicts are resolved either by the responsible ministry or by the provincial governments while there is not a single entity for pastoral areas at a national level. **Outcome 3.3:** There is a lack of intersectoral coordination regarding SLM No investment plan for SLM in pastoral area exists.	**Outcome 3.2:** Sector wide discussion panel on SLM established between at least three ongoing programmes implemented by government or international agencies, or civil society. **Outcome 3.3:** Draft investment plan for direct SLM payments in place with a budget of USD 5 million.	
		Component 4: Project implementation based on results-based management	Component 4: Allocated co-financing for M&E activities is available on time.

Project outcomes linked to outputs:

Outputs and targets	Baseline[1]	Target Values				Data Collection and Reporting	
		Year 1	Year 2	Year 3	Year 4	Means of Verification, Frequency and Reports	Responsibility for Data collection
Component 1: Rangeland management planning							
Outcome 1.1: Capacity is created and knowledge is available for participatory integrated land management planning.	LD-PMAT LD-3: i) Score 1 (No capacity by national and provincial governments to comprehensively assess LD to be used for evidence-based land management plan preparation). LD-PMAT LD-3 i) No territorial land management plans in place. No detailed integrated data available except for studies on vegetation and wells (chimpaca).	N/A	LD-PMAT Indicator LD-3: i): The capacity of 40 government officers in two ministries (MA and MINANDER) and 20 local PNTD trainees is developed to independently conduct LD assessments and apply the knowledge in inter-sectoral land-use planning activities.	LD-PMAT Indicator LD-3: i): 4 territorial management plans in place for 1 500 ha (area of "comuna" involved)	LD-PMAT Indicator LD-3: i): 4 territorial management plans in place for 1500 ha (area of "comuna" involved)	Published LADA assessment. Territorial management plans. Training reports. PPR; project midterm and final evaluations	FAO GEF project and key stakeholders/beneficiaries, members of municipal, communal administrations and provincial governments.

[1]Situation (in case of qualitative indicators) or value (in the case of quantitative indicators) at the beginning of the project (indicate the year the baseline was established during project preparation).

Output 1.1.1: 40 MA, MINANDER, and provincial government staff trained on-the-job in the implementation of LADA methodology assessment and LD knowledge (including local degradation processes and causes).	No capacity by national and provincial governments to comprehensively assess LD to be used for evidence-based land management plan preparation. No systematic assessment of land degradation is in place. The PAPEFSA project and COSPE produced some baseline maps and studies.	LADA local trainees selected. 30 people trained in "LADA local" methods (local agro-ecology assessment (and CC derived LD assessment).	LADA local assessment conducted by trainees covering a total area of 5 000 ha in three zones.	The LADA assessment results are published and available for local level decision making.	N/A	"LADA local" assessments. LADA local reports with indication of the area assessed published in a book. Training reports PPR, PIR	FAO GEF project and local administrations personnel.
Output 1.1.2: Capacity of 20 decision makers and 20 civil society organizations is increased for ecosystem-wide participatory land management planning at the local level.	Current capabilities in participatory land-use planning are not used in specific and practical ways, especially at the local level, to prepare land management plans. Organizations exist, (JP, GAS, etc.) but with limited development and leadership skills.	Twenty trainees and 20 organizations selected for territorial management training through community dialogues.	Training process for up to 20 trainees in five municipalities is realised. Socio-economic diagnosis of the three provinces finalized and results disseminated.	Twenty stakeholders qualified in planning, negotiations, conflict management, SLM, and soil degradation, of which half are women and at least ten able to train others in SLM. Twenty organizations are capable of supporting the full PNTD process to sustain SLM and conflict management	Twenty trained stakeholders and 20 trained organizations contribute to the development of Territorial management plans (Output 1.1.4).	List of participants trained (men and women). List of trainees/organizations actively involved in territorial management planning (list of presence in Jango Pastoril meeting, (Output 1.1.3) PPR; PIR	FAO GEF project and key stakeholders/beneficiaries, members of municipal, communal administration and provincial governments.

				negotiations at a community and transhumance route scale.			
Output 1.1.3: Integrated land management plans developed with the participation of farmers/pastoralists and customary associations covering an area of3 000 ha.	Agreements and discussions are informal and only include older generations. The younger generation is not interested in participating in discussions with other breeders and farmers.	Knowledge and awareness is created regarding existing agreements and plans, including the agreements relevant to indigenous peoples.	Increased multicommunity scale (transhumance subroute) discussion through JP, regarding the participatory development of plans on environmental issues and gender.	Four integrated land management plans developed with the participation of farmers/pastoralists and customary associations using *Jango Pastoril* (1 500 ha).	Four integrated land management plans covering an area of 1 500 ha developed and implemented with the participation of farmers/pastoralists and customary associations, using *Jango Pastoril*.	Number of land management plans in place addressing issues related to SLM. Participants list from Jango Pastoril meeting).	FAO GEF Project Community organizations involved. NGOs working with indigenous peoples. Municipal and communal administrations.
Component 2: Rangeland rehabilitation through best range and herd management practices for small scale agro-pastoralists							
Outcome 2.1: Integrated APFS-herd management practices lead to an increase in agro-pastoral production with a total of 2 800 herders (30 percent women) benefitting there from.	LD-PMAT LD-1: ii): Livestock productivity in the project area is very low but stable, score 2 (35 kg gain of live weight per year). LD-PMAT LD-3: iii): 0 methodologies of INRM practices applied in the wider landscape in targeted area.	N/A	LD-PMAT Indicator LD-3: iii): Rotational grazing including crop residues use applied in 250 ha	LD-PMAT Indicator LD-3: iii): Rotational grazing including crop residues use applied in 250 ha	LD-PMAT Indicator LD-1: ii): Target score: 5 (livestock productivity is increased by 5 percent).	APFS participatory monitoring. Livestock productivity survey. PPR; Midterm and Final evaluation.	FAO GEF project.

Output 2.1.1: A core group of 20 programme managers, trainers and extension service staff trained as APFS/FFS facilitators in SLM and herd management practices.	There is a core group of FFS master trainers capacitated by the NPFS and WB project (Central Plateau area) but very few have expertise in pastoral areas management. There are no Angolan experts that have ever visited APFS.	Twenty master trainers trained in APFS management. Core group of programme managers, project staff and experts aware of APFS through: i) a visit Ethiopia (ten selected experts), ii) one national level awareness workshop undertaken (50 participants).	N/A	N/A	Twenty master trainers able to provide training in SLM and herd management practices.	Training manuals and training reports. Joint Mission BToR PPR, PIR	FAO GEF Project Team leader of the mission (project personnel)
Output 2.1.2: 70 SLM FFS/APFS established and 2 800 herders and farmers (at least 25 percent women) adopting SLM and herd management practices through an APFS based community action plan.	No APFS exists in the country, only FFS.	Ten facilitators selected and trained. Ten APFS started with a learning curriculum and community action plans.	Twenty communities incorporate the APFS approach and use SLM. Twenty facilitators selected and trained. Twenty APFS started. Ten community action plans developed, validated, and implemented.	Forty communities incorporate the APFS approach and use SLM. Forty facilitators selected and trained. Forty APFS started. Twenty community action plans developed, validated, and implemented.	Forty community action plans developed, validated, and implemented.	List of facilitators selected and trained. APFS membership list PPR; PIR	FAO GEF Project. NGO COSPE/ADECO/Liga 4 de Abril. -University of Mandume.
Outcome 2.2: Ecosystem based rehabilitation is undertaken over 13 500 ha of which 600 ha are rehabilitated and 900 ha set as *mise en défense* leading to an improvement in vegetation cover.	LD-PMAT LD 1: iii): Land area under increased vegetation cover: 0 ha No integrated rehabilitation systems are in place in the area. NPP is decreasing by	N/A	N/A	N/A	LD-PMAT Indicator 1: iii) 13 500 ha of land area of production systems with increased vegetation cover (NPP increase by 5 percent).	PPR; project midterm and final evaluations NPP improved by the end of the project: satellite image modelling Ha with guarding system: participatory developed maps	FAO GEF project, ITA, LPCs, participatory GIS expert, grassland expert. IIV research stations Caraculo and Cacanda. COSPE and ADECO NGOs, Liga 4 de Avril.

	0.03 kg C/ha/y (NPP to be reassessed during project implementation). Neither fodder nor natural grassland is improved except in very small areas (some communities have traditional/natural grazing reserves but not improved). There is no verification of palatability and production of local grassland and bushland along the transhumant routes. Biodiversity assessment and community rehabilitation is not in place. There are six rehabilitated chimpaca but water is not sufficient for transhumance needs.						
Output 2.2.1: Communities capacitated in ecosystem based rehabilitation principles and	There is no verification of palatability and production of local grassland and bushland	Fruits and seeds to be multiplied are identified and prioritized for rehabilitation by communities.	Production and palatability of local and imported seeds are compared in experimental stations.	Seedlings are distributed for planting at the community level.	Potential for Angola implementation of the FAO Commission on Genetic Resources	NPP satellite data and final participatory assessment of biodiversity.	APFS groups, FAO GEF Project. Experimental stations: Caraculo,

assessments undertake seeding in an area covering 500 ha.	along the transhumant routes. No participatory biodiversity assessment has been set.	Local seed are collected by communities. Participatory local species and biodiversity participatory mapping is planned	Local and imported seed multiplication at research station is undertaken. Electrical off-grid solar systems are established. Five biodiversity participatory land-use mapping exercises are implemented, producing sex-disaggregated data regarding rangeland biodiversity and vegetation cover diversity.	Seeding undertaken in 600 ha and management system established. Guardian system established (and financed by community generated revenue using electricity system). Seven biodiversity participatory land-use mapping exercises are implemented producing sex-disaggregated data regarding rangeland biodiversity and vegetation cover diversity.	for Food and Agriculture in pastoral areas studied and assessed. Seven biodiversity participatory land-use mapping exercises are implemented producing sex-disaggregated data regarding rangeland biodiversity and vegetation cover diversity	Study in convention application. Ha of guardianship system (participatory mapping). PPR, PIR	Cacanda. NGO COSPE/ADECO/Liga 4 de Abril. University of Mandume, Univeristy Jose Eduardo do Santos. IDF Bibala.
Output 2.2.2: 6 APFS-based verification and experimentation systems for grasses adaptability and palatability in place and six fodder and/or natural grazing land areas established and managed by communities.	No fodder production system established nor improved natural grassland system exists.	Community based grasses seed selection team trained through APFS and knowledge created for the implementation of an indigenous seed selection system Local seed are collected by communities (2.2.1).	Verification and experimentation system for grasses adaptability and palatability in place in two selected APFS groups and compared with research results (2.2.1) Two communities adopt local seed multiplication systems.	Verification and experimentation system for grasses adaptability and palatability are in place in four selected APFS groups and compared with research results (2.2.1) Four communities adopt local seed multiplication systems Two fodder or natural grazing	Four improved fodder or natural grazing areas established by communities for strategic feeding and improved animal nutrition. Six seed selection and seed multiplication systems are in place and six communities have the capacities to replicate the system and train	Participatory mapping PPR, PIR	FAO GEF Project through CTA and international consultant supporting APFS.

				land areas established by communities for strategic feeding and improved animal nutrition. Seedling guardian system established in relevant community areas (see 2.2.1)	others herders		
Output 2.2.3: Community improved water management and livestock water availability through participatory rehabilitation of 15 water points.	There are six rehabilitated chimpaca (ponds) by various agencies (NGOs and government).	Ten critical water points identified for rehabilitation.	Five critical water points identified. Ten water points rehabilitated, and management system strengthened.	Five critical water points rehabilitated, and management systems strengthened.	Water points along three subroutes identified and rehabilitated collaboratively and their management system strengthened and reinforced through *Jango Pastoril* negotiations.	Number of water points managed (APFS list of members of participatory water point management team). PPR, PIR	International NGO Local NGO (Lega 4 de abril).

Output 2.2.4 900 ha of mise en défense areas established in three communities for strategic livestock feeding, pasture improvement, as well as land and biodiversity conservation.	There are no improved mise en défense areas. Some communities have improved traditional/natural grazing reserves.	Up to three communities select areas for participatory rehabilitation and strengthen management system through APFS and customary and state institution negotiations.	Three mise en défens areas established covering a total area of 900 ha.	Community activities for grassland and/or bushland improvement, potentially including but not limited to tinning, seed soil bank, seedling, manure, legume species introduction, are undertaken in three mise en défens areas. Guardian system for mise en defens areas established (see 2.2.1).	N/A	Participatory maps (see 2.2.1)	NGO and APFS members. FAO GEF Project.
Outcome 2.3: Livelihood of households in at least 70 communities have improved through; (i) scaling up the production of livestock products, and (ii) supporting two small-scale non-livestock based production systems.	Average annual income per capita will be defined during PY1, but it is estimated to be about USD 190 per household per year. Small-scale production is not properly and sustainably managed, and potential revenue is not fully exploited.	N/A	N/A	Revenue of 30 communities increased by 5 percent	Revenue of 40 communities increased by 5 percent	Reports on improved production systems. Revenue survey reports (monitored through representative sampling scheme). PPR; project midterm and final evaluations	APFS groups, FAO GEF Project. Experimental stations: Caraculo and Cacanda. NGO COSPE/ADECO/ Liga 4 de Abril. University of Mandume, Univeristy Jose Eduardo do Santos. IDF Bibala.

Output 2.3.1: Agro-pastoralists and farmers in five pastoral communities adopt improved production technologies.	The actual production system is mainly based on livestock and charcoal making which degrades the environment leading to the loss of land cover, loss of soil and soil nutrient components.	Two non-livestock products are identified for production by up to two APFS. Up to two studies set up to improve production technologies.	Two non-livestock products are identified for production by up to two APFS. Up to two technologies for local production are improved. One study on the improvement of production technologies for livestock products is completed.	Two production systems are improved, based on study and research results.	Two local production systems are piloted in the formal market.	One study on the improvement of production technologies for livestock products. PPR, PIR	Local NGO (COSPE/ADECO) and research (Mandume University and international partners).
Output 2.3.2: Agro-pastoralists and farmers in five pastoral communities have improved beef production and beef value chains along a selected number of transhumance subroutes through APFS.	Livestock sold to middle men at a price of approximately 50 percent of the market value. The livestock is bartered, not sold in remote transhumant areas. Animals are used as a bank; they are not sold on a regular basis, but only for emergency or survival. Veterinary services in place but are not covering all areas and needs.	Value addition inputs, potential market integration for live animals, and meat or milk products are identified to be improved through APFS. Awareness of livestock commercialization is raised through APFS. Awareness regarding improved feeding systems, mass selection, and a breeding control system is created through insertion into APFS curricula.	Ten ethno veterinarians trained through APFS and provide services to the APFS members. Two sustainable production systems piloted in selected communities	20 ethno veterinarians trained through APFS and provide services to the APFS members. One improved livestock production system is piloted in a selected municipality (target five pastoral communities).	40 ethno veterinarians trained through APFS and provide services to the APFS members. Three improved livestock production systems are fully functional	Number of training days for local ethno-veterinarians in vaccination and animal health through APFS (APFS list of presence). Number and list of ethno-veterinarians trained and actively participating in the APFS and in the transhumance cycle. Report on livestock production system. PPR, PIR	Local NGO (COSPE/ADECO) IIV, ISV
Component 3: Mainstreaming SLM into agricultural and environmental sector policies and programmes							

Outcome 3.1: Increased integration of SLM into policies and programmes and reinforcement of existing policies, regulations and applications.	LD PMAT Indicator LD1.i): Score 1 (There are no laws in place for SLM management of pastoral areas). Score 1 (No land tenure arrangements and use rights in place). No working platform for Decree 216/11 in place. Land-related conflicts are resolved either by the responsible ministry or by the provincial governments while there is not a single entity for pastoral areas at a national level. There is a lack of intersectoral coordination regarding SLM	N/A	SLM policy recommendations based on case studies prepared and available	SLM draft policy available for discussion Land Law implementation tools available.	LD-PMAT Indicator 1: i): Score 2 (sector policy has been discussed and formally proposed) Score: 2 (Land Law applied at local level in project area) Working platform is created for Decree 216/11)	SLM Policy Land delineation packages presented for approval to relevant authority Constitution of working platform PPR; project midterm and final evaluations	FAO GEF Project, policy expert. Government.
Output 3.1.1: One policy reinforcing SLM application in pastoral areas is proposed for approval.	Currently no policy facilitating the integration of SLM in pastoral areas is in place.	The policy preparation is set up through consultant's ToR preparation in collaboration with MA.	Five case studies for policy application are conducted. Policy recommendation based on case studies are prepared	Six public consultations (regional, national) and a policy draft validation is undertaken, with 500 decision makers involved in public consultations	Draft policy submitted for approval	Draft SLM policy PPR, PIR	FAO GEF Project Coordination Consultant (policy)

Output 3.1.2: Land Law is implemented and applied, facilitating SLM in pastoral project area.	Scarce implementation of existing Land Law regulations. Some implementation ongoing through civil society and the Terra Project.	Local consultations on Land Law regulations are realised.	Fifty events for Land Law awareness creation are organized at a local level.	Local level Land Law implementation tools are mainstreamed at a local level.	Appropriate land delineation packages to be presented for local government approval are prepared in ten communities (community and transhumance scale land delineation)	Land delineation packages presented for approval.	FAO GEF Project and consultants (Participatory policy expert).
Output 3.1.3: SLM is integrated into seven CMA plans and/or programmes.	SLM is currently regarded as an approach by the academic elite, not land users.	One report analysing by-laws and operation of the CMA ongoing projects and programmes that potentially contribute to SLM are reviewed and studied to assess potential SLM introduction.	One document proposing integration of SLM in CMA plans, programmes, and projects is prepared.	Two CMA plans and programmes integrate SLM.	Five CMA plans and programmes integrate SLM.	Number and list of plans and programmes integrating SLM.	FAO GEF Project and policy consultant.
Output 3.1.4: A working platform for the implementation of Decree 216/11 for rural communities is created.	The Decree 216/11 is not being implemented effectively.	One study analysing barriers and constraints to the implementation of the Decree is prepared. A mechanism for enhancing Decree deployment is proposed (report).	Awareness by public and stakeholders is created (ten workshops).	Decree working platform in place	N/A	Number of studies and mechanisms proposed.	FAO GEF Project and policy consultant.
Outcome 3.2: Decision making is reinforced through the establishment of a sector wide discussion panel on LD (including civil society research, international	A platform with assignments and operating rules to coordinate SLM at national and local level does not exist.	N/A	A sector wide discussion panel on LD is established (ten national/international actors and civil society).	Collaborations on SLM established between at least one ongoing programme implemented by government or international agencies, or civil	Collaborations on SLM established between at least two ongoing programmes implemented by the government or international agencies, or civil	Number and list of collaborations between programmes. PPRS, midterm and final evaluation.	FAO GEF Project. Government.

agencies, and government) focusing on transhumance areas to reduce duplication and increase awareness and lessons learned and collaborations on SLM.				society.	society.		
Output 3.2.1: Mechanisms (forum/coordination mechanism) is in place for cross-sectoral coordination for SLM operating with the involvement of MA, MINANDER and local/provincial Governments.	Currently the land-related conflicts are resolved either by the responsible ministry or by the provincial government.	A survey of relevant actors to be involved is undertaken.	A sector wide discussion panel on LD is established (ten national/international actors and civil society). Recommendations for consultation/conciliation are prepared.	Forum is in place and meets regularly and conditions for effective functioning of the coordination.	Forum meets regularly and conditions for effective functioning of the coordination mechanism are supported by the MA and the project structure.	Minutes of panel meetings. List of members.	FAO GEF Project (NPC).
Outcome 3.3: Investments increased through specific budgetary provisions made by MA, MINANDER, and decentralized administrations for up-scaling SLM in agro-pastoral systems	LD PMAT Indicator LD1.iv): No SLM investment plan in place. PMIDRCP invests in rural infrastructures but this is not linked to SLM in grassland areas. Best practices are identified and shared by rural communities, but no investment focuses on SLM	.	Draft investment plan in place and submitted to donors for approval.	LD PMAT Indicator LD1.iv): Plan ongoing with USD 1 million financing.	LD PMAT Indicator LD1.iv): Plan ongoing with USD 5 million financing and two partners involved.	Investment plan. Documentation related to investments undertaken and fund flow.	FAO GEF Project Government Partners

Output 3.3.1: Draft governmental investment plan developed to support small credits for SLM and land rehabilitation complementing the existing National Environmental Management Plan	No investment plan is in place. The partner GEF project developing FFS in the central plateau will work with similar issues.	FFS curricula content and its operations in the context of Components 1 and 2 is analysed to study potential options for an investment plan.	A draft investment plan in collaboration with at least two policies and or programmes is designed. Plan submitted to government and donors for approval.	N/A	N/A	List of actors providing funds and amount Documentation related to investments undertaken and fund flow.	FAO GEF Project Government Partners
Component 4: Knowledge management, monitoring and evaluation							
Outcome 4.1: Project implementation based on results based management and application of project lessons learned in future operations facilitated.		10 percent progress in achieving project outcomes.	30-40 percent progress in achieving project outcomes.	50 percent progress in achieving project outcomes	Project outcomes achieved and showing sustainability.	PIRs Midterm and final evaluations	NPC FAO GEF Project
Output 4.1.1: System for the systematic collection of field based data to monitor project outcome indicators operational.		Two six-monthly progress reports prepared. (one PPR and one PIR)	Two six-monthly progress reports prepared. (one PPR and one PIR)	Two six-monthly progress reports prepared. (one PPR and one PIR)	Two six-monthly progress reports prepared. (one PPR and one PIR)	PIRs PPRs	NPC FAO GEF Project
Output 4.1.2: Midterm and final evaluation conducted.				Report	Final evaluation report	Reports	FAO GEF Project
Output 4.1.3: Project-related "best-practices" and "lessons-learned" disseminated.		Website established	Website updated by project staff	Website updated by project staff. Five "best practices" and "lessons learned" in mainstreaming	Website updated by project staff and maintained by FAO after the end of the project. Publications	Number of publications. Number of visitors on website.	FAO GEF Project

				SLM into policies and agro-pastoral activities published.	distributed.		

APPENDIX 2: WORK PLAN (RESULTS BASED)

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Component 1: Rangeland management planning																		
Output 1.1.1 40 MA, MINANDER, and provincial government staff trained on-the-job in the implementation of LADA methodology assessment and LD knowledge (including local degradation processes and causes).	*Contract International "LADA local" expert and conduct on-the job training of local consultants by realising a field test of LADA local*	FAO AO																
	Refine the "LADA local" method to include CC derived LD assessment	FAO GEF project and local administrations																
	National consultant and government staff undertaking three "LADA local" assessments, including CC related LD	FAO GEF project and local administrations																
	Preparation of the LD/SLM "LADA local" publication	FAO GEF project																
Output 1.1.2 Capacity of 20 decision makers and 20 civil society organizations is increased for ecosystem-wide participatory land management planning at the local level.	*Contract the international project technical adviser and the international, national conflict management expert (Terra project expert), and national organization capacity building expert*	FAO AO FAO GEF project local administrations key stakeholders / beneficiaries																
	Select trainees and 20 organizations to be trained for territorial management training. (selection and identification of training needs undertaken through community dialogues. conducted with 2.1.2)	FAO GEF project local administrations key stakeholders / beneficiaries																
	Organize the training,(conducted with 2.1.2)	FAO GEF project local administrations key stakeholders / beneficiaries																
	Increase awareness of existing	FAO GEF																

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	early-stage organizations / in order to support their development and their ability to apply PNTD	project local administrations key stakeholders / beneficiaries																
	Prepare three socio-economical regional diagnostic studies prepared (1 per province)	FAO GEF project local administrations key stakeholders / beneficiaries																
	Train 20 stakeholders on-the-job, in planning, negotiations, conflict management, SLM, and soil degradation, of which half are women and at least ten able to train others in SLM (conducted with 2.1.1, 2.1.2)	FAO GEF project local administrations key stakeholders / beneficiaries																
	Train 20 organizations on-the-job to support the PNTD process and to sustain SLM and conflict management negotiations at a community and transhumance route scale (conducted through 2.1.1 and 2.1.2)	FAO GEF project local administrations key stakeholders / beneficiaries																
	Insert trained stakeholders into the land management planning process as community representatives or supporting staff. (undertaken in 1.1.3)	FAO GEF project local administrations key stakeholders / beneficiaries																
	Scale-up PNTD process through the support of trained organization (undertaken in 1.1.3)	FAO GEF project local administrations key stakeholders / beneficiaries																
Output 1.1.3 Integrated land management plans developed with the participation of farmers/pastoralists and customary associations covering an area of 3 000 ha.	*Contract the gender expert, and the territorial diagnosis expert*	FAO AO FAO GEF Project, CTA Community organizations NGOs working with indigenous																

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
		peoples (Component 2) Municipal and Communal Administrations																
	Revise existing plans, promote debate involving men and women and stakeholders at various levels of local societies, including local governments, and design a planning and agreement training process	FAO GEF Project, CTA Community organizations NGOs working with indigenous peoples (Component 2) Municipal and Communal Administrations																
	Set up Jango Pastoril and test negotiations in selected areas (negotiations as conducted with 2.1.2 and include APFS participants)	FAO GEF Project, CTA Community organizations NGOs working with indigenous peoples (Component 2) Municipal and Communal Administrations																
	Finalize and start-up of eight plans (conducted with 2.1.2) covering a total of 3 000 ha.	FAO GEF Project, CTA Community organizations NGOs working with indigenous peoples (Component 2) Municipal and Communal Administrations																
Component 2: Rangelands rehabilitation through best range and herd																		

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
management practices for smallholder agro-pastoralists																		
Output 2.1.1. A core group of 20 programme managers, trainers and extension service staff trained as APFS/FFS facilitators in SLM and herd management practices.	*Contract the international APFS training expert and the international project technical adviser*	FAO GEF Project																
	Contract training organizer (university of Mandume) and organize Master trainers workshop	FAO GEF Project and Training expert																
	Train 20 master trainers	FAO GEF Project University of Mandume, and Trainer																
	Core group of programme managers / project staff / experts (10) visit PFS during the training period (in Ethiopia)	Trainer of team leader of the mission (with FAO Ethiopia)																
	Organization of the grassland rehabilitation awareness workshop	FAO GEF project																
Output 2.1.2 70 SLM FFS/APFS established and 2 800 herders and farmers (at least 25 percent women) adopting SLM and herd management practices through an APFS based community action plan.	*Contract the operation officer*	FAO AO, *international APFS training expert, CTA* FAO GEF project																
	Contract local activities coordinators and service providers	FAO GEF project																
	Undertake initial village/community participatory selection through community dialogue	APFS expert, NGO COSPE/ADECO/ Liga 4 de Abril, University of Mandume																
	Establish APFS and implement training and validation/adoption processes of SLM technologies	APFS expert Contracting partners COSPE and ADECO MA Provincial																

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
		Direction Namibe																
	Establish community action plan	*APFS expert* Contracting partner																
Output 2.2.1 Communities capacitated in ecosystem based rehabilitation principles and assessments undertake seeding in an area covering 500 ha.	*Contract the operation officer, the international and national participatory mapping systems expert, the national natural resources expert, and local coordinators*	FAO GEF project, *international APFS training expert*																
	Participatory identification of forage and fruit seed, prioritization of best wild species and varieties, and collection by communities (in collaboration with 2.2.2)	APFS network and contracting partners (COSPE and ADECO), with GIS personnel and partners																
	Support varietal and wild grassland shrub and grass selection	Contracting partners (IIV research stations Caraculo and Cacanda)																
	Planning for participatory local species and biodiversity guardianship system and solar energy ecosystem services, including community resilience self-assessment	Contracting partner (local association) and FAO team																
	Studying and collecting data and exploring the potential for the Angola implementation of the FAO Commission on Genetic Resources for Food and Agriculture in pastoral areas	FAO experts																
	Comparison experimentation for production and palatability between local and imported seed and multiplication	APFS network and contracting partners (COSPE and ADECO)																
	Establish ten off-grid electricity system	APFS network																

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
		Liga 4 de Avril																
	Undertake twenty local biodiversity participatory mapping	APFS network, national and international GIS experts																
	Undertake seedling through APFS system using seeds from community selection or plants selected from experiments at community level	APFS network and contracting partners (COSPE and ADECO)																
	Establish guardian system maintained by community generated revenue (off-grid electricity system)	APFS network and contracting partners (COSPE and ADECO)																
Output 2.2.2: 6 APFS-based verification and experimentation systems for grasses adaptability and palatability in place and six fodder and/or natural grazing land areas established and managed by communities.	*Contract the fodder and natural grass production expert*	FAO GEF project, CTA, international APFS training expert, operation officer, national and international GIS experts																
	Verification and experimentation of adaptability and palatability by selected APFS groups through community dialogue and APFS (in collaboration with 1.2.3, 2.2.1, and 2.1.2)	FAO GEF project in collaboration with APFS and contracting partners																
	Seed multiplication (in collaboration with 2.2.1)	FAO GEF project in collaboration with APFS and contracting partners																
	Seedling and management system expanded in up to four communities (Guardian system maintained in collaboration with 2.2.1)	FAO GEF project in collaboration with APFS and contracting partners																

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Output 2.2.3 Community improved water management and livestock water availability through participatory rehabilitation of 15 water points.	*Identification of water points to be rehabilitated (in collaboration with 2.1.2 and through APFS)*	FAO GEF project, CTA, international APFS training expert, operation officer, mapping expert APFS network and contracting partners (COSPE and Liga 4 de Avril)																
	Test the participatory rehabilitation of up to 15 water points (in collaboration with 2.1.2 and through APFS and co-co-financing donors)	APFS network and contracting partners (COSPE and Liga 4 de Avril)																
	Reinforce water point collaborative management through APFS and Jango Pastoril (in collaboration with 1.1.3, and through APFS 2.1.2)	APFS network and contracting partners (COSPE and Liga 4 de Avril)																

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Output 2.2.4 900 ha of mise en défens areas established in three communities for strategic livestock feeding, pasture improvement, as well as land and biodiversity conservation.	*Communities select up to three areas to participatory rehabilitation and strengthen management system through APFS and customary and state institutions (in collaboration with 1.1.3, 2.1.1, and 2.1.2)*	CTA, the operation officer, the APFS international trainer, fodder and natural grass production expert APFS groups, national and international GIS experts																
	Communities establish three mise en défense areas covering 900 ha, including community activities for grassland and/or bushland improvement	APFS groups																
	Communities establish guardian system (with 2.2.1)	APFS groups																
Output 2.3.1 Agro-pastoralists and farmers in five pastoral communities adopt improved production technologies.	*Participatory selection of appropriate non-livestock products for market support through community dialogue and APFS (in collaboration with 1.1.3, and 2.2.1)*	CTA, operation officer, the APFS international trainer, local coordinators and field administration officer APFS network and *Jango Pastoril*, University of Mandume, COSPE and ADECO																
	Support production improvement and conduct one study on appropriate small-scale technologies	COSPE through long-term scientific partners																
	Introduction of up to two new products in the national market and commercialization (through	COSPE and local NGO/association through long-																

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	APFS and inclusion in selected community action plans)	term scientific partners																
Output 2.3.2 Agro-pastoralists and farmers in five pastoral communities have improved beef production and beef value chains along a selected number of transhumance subroutes through APFS.	*Contract service providers to reinforce community based livestock health services*	FAO GEF project CTA, operation officer, the APFS international, local coordinators																
	Reinforce ethno-veterinary system in APFS and in local communities	IIV/ISV collaborating with COSPE/ADECO																
	Participatory selection of appropriate livestock products, value added inputs, market integration for live animals, meat and milk products through community dialogue and APFS (in collaboration with 1.1.3, and 2.1.2)	APFS network and contracting partners																
	Study to improve local technologies for production and packaging of livestock products, including improved feeding systems, mass selection and breeding control to be integrated into APFS curricula	Scientific partner																
	Improvement of production systems (through 2.1.2)	COSPE/ADECO																
	Scaling up of livestock products production and commercialization (through APFS and inclusion in selected community action plans)	COSPE/ADECO																
Component 3: Mainstreaming SLM into agricultural and environmental sector policies and programmes																		
Output 3.1.1 A policy reinforcing SLM application in pastoral areas is proposed for approval	*Contract the international project technical adviser and the operation officer, select national policy consultant and international policy adviser*	FAO GEF project																
	Prepare ToR in collaboration with MA and other national	FAO GEF project																

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	actors.																	
	Conduct five case studies and policy recommendations	FAO GEF project Participatory policy consultant MA																
	Validate and conduct six public consultations (regional, national)	FAO GEF project Participatory policy consultant MA																
	Develop and submit the draft policy for approval	FAO GEF project Participatory policy consultant MA																
Output 3.1.2 The Land Law is implemented and applied, and facilitates SLM implementation in pastoral areas.	*Contract the national participatory policy consultant and the international policy consultant*	FAO GEF project CTA, National and international GIS expert, participatory policy consultant																
	Undertake 50 local consultations on Land Law	FAO GEF project Participatory policy consultant																
	Community and transhumance scale land delineation undertaken	FAO GEF project Participatory policy consultant National and international GIS experts																
	Develop and submit the Land Law packages for approval	FAO GEF project Participatory policy consultant National and international GIS experts																
Output 3.1.3 SLM is integrated into CMA projects and programmes	*Contract the policy consultant from CMA*	FAO GEF project CTA, operation officer																

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	Train CMA personnel and organize field visits	FAO GEF project MA																
	Review the bylaws and operation of the CMA, and prepare a study of ongoing projects and programmes that potentially contribute to SLM	FAO GEF project MA																
	Propose integration of SLM into two CMA programmes and projects and start dissemination of the integration	FAO GEF project MA																
Output 3.1.4 A working platform for the implementation of Decree 216/11 for rural communities is created.	*Prepare one study analysing barriers and constraints to the implementation of the Decree.*	FAO GEF project national participatory policy consultant MA																
	Undertake ten workshops to promote education and Decree awareness in collaboration with 1.2.2	FAO GEF project CTA, operation officer, national participatory policy consultant MA																
	Proposal for a mechanism to enhance Decree deployment is prepared (report).	FAO GEF project national participatory policy consultant MA																
Output 3.2.1 Mechanisms (forum/coordination mechanism) for cross-sectoral coordination for SLM operating with the involvement of MA, MINANDER and local/provincial Governments.	*Organize discussion panel meetings*	FAO GEF project national participatory policy consultant MA																
	Undertake forum meetings and prepare minutes, including lists of collaborations established	FAO GEF project national participatory policy consultant MA																
	Prepare meeting recommendations (including a	FAO GEF project national																

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	list of new collaborations in place)	participatory policy consultant MA																
3.3.1 Draft governmental investment plan developed to support small credits for SLM and land rehabilitation budgetary provisions complementing the existing National Environmental Management Plan	*Contract the operation officer and the investment plan expert*	FAO GEF project																
	Analyse content of the FFS and its operations in the context of Components 1 and 2 and study potential options for plan	FAO GEF project Investment consultant																
	Design a draft investment plan in collaboration with at least two policies and or programmes.	FAO GEF project Investment consultant																
	Submit the plan to donors for approval and plan revision as appropriate	FAO GEF project Investment consultant																
	Document ongoing investments in SLM	FAO GEF project and donor community																
Component 4: Knowledge management, monitoring and evaluation																		
Output 4.1.1: System for systematic collection of field based data to monitor project outcome indicators operational	*Contract the M&E expert*	FAO GEF project																
	Undertake the M&E missions	FAO GEF project																
	Preparation of the two six-monthly report	FAO GEF project																
	Preparation of the PPRs	FAO GEF project																
Output 4.1.2: Midterm and final evaluation conducted	*Selection of M&E team*	FAO GEF project																
	Medium term and final M&E mission	FAO GEF project																
	Report revision	FAO GEF project																
Output 4.1.3: 4.1.3: Project-related "best-practices" and "lessons-learned" disseminated	*Contract with web expert*	FAO GEF project																
	Web site established	FAO GEF project																
	Publication expert hired and publication prepared (LADA local during the second year and Best practices at the end of the project)	FAO GEF project																
Project Management																		
	Selection of project coordinator	FAO Angola and																

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3				Year 4			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
		LTO, MA and other partners																
	Coordination of activities, establishment of workshop calendar, APFS supervision, partnerships, and monitoring missions	FAO GEF project																

APPENDIX 3: RESULTS BUDGET

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APPENDIX 4: RISK MATRIX

Risks	Rating (High, Medium, Low)	Mitigation Measures
Remote locations causing problems with personnel, logistics, maintenance, etc.	Low	Flexibility by using multidisciplinary teams and by building efficient project coordination structure on the ground which will be supported by the municipality infrastructure in the targeted project areas.
New practices might clash with local cultures, resulting in slow adaptation of actions (gender, new forms of management, more effective management, alternative use of resources...)	Medium	The project will address this risk by joint planning, implementation and, monitoring and evaluation in order to create project ownership from the start. New practices will carefully be introduced through the APFS/FFS network and therefore tested by communities themselves using a bottom-up approach. Only eligible practices with a high social acceptance that meet the stakeholders' needs and cultural habits will further be tested and classified as best practices for a wider introduction based on principles of trial and observation by other stakeholders.
Traditional rights are still in use in the area, particularly in Sengi and Chongorói hampering the introduction of modern rights (e.g. Land Law).	Medium	The local governments are already aware of this risk and are working on the acceptance of modern policies. The project will further sensitize the stakeholders by using the Terra Project approach which will introduce the PNTD scheme and the *Jango Pastoril* method into the FFS/APFS process.
Degradation of ecosystem due to droughts and climate shocks	Medium	Project level emergency actions will be discussed and planned with participatory methods (*Jang Pastoril).* A community based management plan that supports risk reduction through AFPS will be developed and implemented. Finally, appropriate linking with on-going emergency / post-emergency initiatives and with Governmental programs regularly supporting animal health will improve responses to those risks.
Difficulty in implementing discussion spaces have emerged with the actions of other projects.	Medium	Involvement of local leaders and entities that have participated in participatory processes in the PAPEFSA Project will facilitate moments of reflection around potential options for land management negotiation.
Transhumant routes are encroachment by smallholder farmers.	Medium	The project will seek awareness creation, documentation and sharing of evidences on the role of transhumanism in the national economy, mapping of the transhumant routes and signing of the reciprocal agreement for protection and rehabilitation of the transhumant route.
Lack of appropriate and adaptable forage seeds that are able to grow along the transhumant route or lack of economically important and adaptable fruit plants in the project area.	Medium	The project will conduct feasibility studies and undertake the testing of the various seeds for germination and adaptations in different agro-ecological zones. Furthermore, it will havearrangements with research stations and universities to conduct continuous studies on different forage and fruit trees.

The transhumant herders do not respect *mise en defense* areas and the community does not undertake guardianship.	Low	*Jango Pastoril* will support farmer/herders to reduce conflicts and will help support the establishment of *mise en defense* areas and the rehabilitation of vegetation and grazing land. The off-grid electricity systems will constitute an environmental service contributing to cover costs for guardianship time.
Poor implementation capacity by stakeholders, especially the government department and lack of synergy between MA and MINANDER.	High	The project's capacity development aspects will increase the knowledge of government stakeholders on LD and SLM aspects at the national and local level. The capacitated master trainers will provide continuous support to various project stakeholders at the local level. The MA and MINANDER will be responsible for their own mandate and have a direct interest in the successful implementation of the project. The collaboration between the two entities will be strengthened through the inter-sectoral coordination platform.
Changing Composition of local/national Governing institutions.	Medium	Advocacy and lobbying to support the importance of the SLM policy implementation and harmonization will sustain continuous support by government institutions.
Scarce project resource might limit project implementation.	High	The mobilization of several partnerships will improve available funds, especially funds from government.
Delay in Approval of Policy.	High	Advocacy and lobbying will support the policy approval.
Low institutional sensitivity towards SLM.	Medium	Increased awareness will be supported at a local level by APFS and *Jango Pastoril*. At a national level the collaboration with CMA and the creation of a mechanism for collaboration with various institutions will strengthen interest in the process.
Limited Sensitivity on the importance of policy reform.	Medium	Strengthening awareness, lobbying and advocacy will address sensitivity.
Difficulty of obtaining local funds.	High	Attracting external funding sources will be a key part of activities; lobbying and advocacy will help coordinating and raising interest at all levels.

APPENDIX 5: PROCUREMENT PLAN

APPENDIX 6: TERMS OF REFERENCE (TORS)

REPUBLIC OF ANGOLA

Land rehabilitation and rangelands management in smallholders agro-pastoral production systems in Southwestern Angola

GEF/LDCF-FAO Project

TERMS OF REFERENCE
NATIONAL PROJECT COORDINATOR – 4 YEARS

The Food and Agriculture Organization (FAO) will be the GEF implementing and executing agency. As the GEF Agency, FAO will be responsible for project oversight to ensure that LDCF policies and criteria are adhered to and that the project meets its objectives and achieves expected outcomes and outputs as established in the project document in an efficient and effective manner. FAO will report on the project progress to the GEF Secretariat and financial reporting will be to the GEF Trustee. FAO will closely supervise and carry out supervision missions of the project (through the Lead Technical Unit (LTU) and the GEF Coordination Unit in the Investment Centre Division (TCI)), and monitor project progress and provide technical support (through FAO's Agriculture and Consumer Protection Department -AGPM).

The project will be executed by FAO-AO in partnership with MA. The project will have a National Project Coordinator (NPC) who will be based in the Project Management Unit in Namibe to coordinate the day-to-day execution of the project in consultation with the project focal points assigned by the MA and MINANDER. The NPC will also liaise with FAO AGPM and the FAO Representation in Luanda who will supervise and provide technical guidance to the project. The NPC will report to the focal points assigned by the MA and the MINANDER and will be assisted by a part-time CTA in charge of the direct technical back-stopping of the MA-based national coordination team. The NPC will be working with emphasis on Component 3 of the project.

The NPC will be responsible for the operational planning, management and monitoring of all projects' activities, as indicated in the project documents. The NPC will provide technical, logistics and managerial support and ensure a good implementation of the activities in line with the project result framework, work plan and approved budget. This will include:

1. Ensuring good management of the activities and tasks of the projects' staff and consultants by providing technical-operational advice.
2. Ensuring coordination and establishing partnerships with all concerned actors, institutions and projects located in the areas of intervention of the projects (especially with those operating on LD) in order to ensure complementarities and collaboration, including with national services and research institutions;
3. Drafting and/or supervising the preparation of contracts, letters of agreement, terms of reference, subcontracting and partnerships with appropriate organizations and partners, ensuring good management of financial resources; and adequate monitoring and evaluation of each contract.
4. Incorporating a participative approach sustainable land management into agro-pastoral production for food security in rural areas and ensuring the participation of communities at all stages of the project cycle: needs assessment, planning, implementation and evaluation;
5. Promoting APFS capacity building using training and communication materials; ensuring participation of stakeholders at all levels;
6. Setting up a simple but robust monitoring and evaluation system for all project components, outcomes and outputs and ensuring its implementation;
7. Providing direct technical support and advice to the implementation of Component three of the project, and ensuring coordination among the national consultants to ensure technically sound delivery

8. Facilitating the provision of all information required for the annual Project Implementation Review and all other information required by FAO, the GEF Evaluation Office and the GEF Secretariat and Trustee.
9. Prepare a report on project completion every three months and a one page note on months operation, and prepare a yearly detailed project report.
10. Undertake regular field trips in close cooperation with field advisors and the CTA.

Qualification and experience required:
Education: Advanced university degree in agriculture, agricultural economics, social sciences, rural development or natural resources. Project management and monitoring experience, and good knowledge of policy, institutional and cross-sector coordination issues related to NRM.
Experience: A minimum of 10 years professional experience in the field of rural development, disaster risk reduction, with a solid experience in project management. Significant knowledge regarding LD would be considered an asset as well as experience of the work done by UN agencies and of the country.
Languages: Working knowledge of Portuguese and English is essential.

Duration: 4 years part time
Duty station: Namibe

Selection criteria:
- Level and relevance of experience in project and programme development, management and monitoring;
- Level and relevance of experience in land degradation and SLM;
- Level of experience in of policy, institutional and cross-sector coordination issues related to NRM, and international experience with UNCCD agenda.
- Demonstrated knowledge of objectives and function of technical programmes as well as of FAO and/or UN operational guidelines and procedures;
- Capacity to manage tasks in a systematic and efficient manner with judgment, analysis, independence and initiative;
- Capacity to communicate clearly both verbally and in writing;
- Demonstrated ability to establish good working relationship and team spirit both inside the Organization and with external partners such as government officers, UN partners, donors or NGOs;
- Ability to use computer software such as MS Office and other project management software and database.

REPUBLIC OF ANGOLA

Land rehabilitation and rangelands management in smallholders agro-pastoral production systems in Southwestern Angola

GEF/LDCF-FAO Project

TERMS OF REFERENCE
CHIEF TECHNICAL ADVISER (CTA) – 3 years (part time)

The Food and Agriculture Organization (FAO) will be the GEF implementing and executing agency. As the GEF Agency, FAO will be responsible for project oversight to ensure that LDCF policies and criteria are adhered to and that the project meets its objectives and achieves expected outcomes and outputs as established in the project document in an efficient and effective manner. FAO will report on the project progress to the GEF Secretariat and financial reporting will be to the GEF Trustee. FAO will closely supervise and carry out supervision missions of the project (through the Lead Technical Unit (LTU) and the GEF Coordination Unit in the Investment Centre Division (TCI)), and monitor project progress and provide technical support (through FAO's Agriculture and Consumer Protection Department -AGPM).

The project will be executed by FAO-AO in partnership with MA. The project will have a National Project Coordinator (NPC) who will be based in the Project Management Unit in Namibe to coordinate the day-to-day execution of the project. The NPC will also liaise with FAO AGPM and the FAO Representation in Luanda who will supervise and provide technical guidance to the project. The NPC will report to the focal points assigned by the MA and the MINANDER and will be assisted by a part-time CTA in charge of the direct technical back-stopping of the MA-based national coordination team.

The CTA will support the NPC in the day-to-day execution of the project for the first three years and provide technical advice, guidance and support developing the assessment tools and methodologies, as well as the design and implementation of technological packages. He/She will provide on-going support to the project for best practice assessment and implementation to enable the project to maintain strategic direction during implementation by helping project management remain focused on overall results in addition to the day-to-day implementation concerns. He/She will ensure that the project is an active member of a broader knowledge management network on adaptation to climate change and natural resource and land management. This includes emphasizing a learning and adaptive approach to project management and implementation in close cooperation with the national partners. The CTA will collaborate in all technical phases of the project and will work in close conjunction with technical personnel from the MA and MINANDER, ensuring sustainability of the project technologies and approaches in place. Further, the CTA will coordinate the Local Activity Coordinators (LAC) in the day-to-day activities, by providing technical recommendations for the implementation of all project phases and will support the provision of inputs for the preparation of PPRs and PIRs. The CTA will be coordinated by and will support the National Project Coordinator in the following tasks:

(i) provide technical backstopping for all aspects related to Sustainable Land Management (SLM);
(ii) revise annual work plans and budgets;
(iii) review procurement and subcontracting material and documentation of processes and obtain approvals by FAO;
(iv) conduct Project technical support missions;
(v) review and edit financial and monitoring reports; and
(vi) provide any technical assistance to activities carried out by the execution partners.

The CTA will provide specific support to the National Project Team in the planning and follow-up of the following project outputs, including the supervision of international specialists:

Responsible for technical advice in Component 1 outputs:

Train government staff in SLM practices based on a systematic assessment of local degradation processes and causes and apply the LADA methodology
Support the emergence of new organizations and strengthen existing organizations mainly involved in SLM (pasture and water) with participation by women and men
Increase capacities and identification of training needs of key stakeholders / beneficiaries in: planning, negotiation, conflict management, SLM and soil degradation using participatory methods and gender sensitivity
Improve existing agreements and plans and promote the development / implementation of plans and arrangements related to environmental and gender issues

Under the guidance of the APFS and grassland rehabilitation officer, responsible for technical advice in Component 2 outputs

Train a multidisciplinary core group of master trainers in SLM technologies and A/APFS approaches
Exposure visits to APFS activities in East Africa (Ethiopia)
Conduct an awareness workshop for national stakeholders
Conduct community dialogue on the concepts and principles of APFS towards the selection of the community facilitator
Establish APFS and develop a community action plan
Ecosystem based pilot rehabilitation along three subroutes
Water point rehabilitation along three subroutes
Strengthen the local environmental friendly non-livestock production system and support local product commercialization
Improving livestock production value chains
Improve fodder and natural grasses production
Establishment of *mise en défense* areas along the transhumant route

Responsible for technical advice in Component 3 outputs

Prepare a policy reinforcing SLM application
Continue with Land Law implementation and application, supporting components facilitating SLM
Integrate issues related to SLM and introduce into CMA projects and programmes
Create a working platform for the implementation of Decree 216/11 for rural communities
Develop a National forum to facilitate dialogue between stakeholders to contribute to SLM and settle all land ownership disputes
Draft governmental investment plan available to support small credits for SLM and land rehabilitation budgetary provisions complementing the existing National Environmental Management Plan

Qualification and experience required:
Education: Advanced university degree in agriculture, agricultural economics, social sciences, rural development or natural resources. Project management and monitoring experience, and good knowledge of policy, institutional and cross-sector coordination issues related to NRM.
Experience: A minimum of 10 years professional experience in the field of rural development, disaster risk reduction, with a solid experience in project management. Significant knowledge regarding LD would be considered an asset as well as experience of the work done by UN agencies and of the country.
Languages: Working knowledge of Portuguese and English is essential.

Duration: 3 years over 4 years (consultant in WAE).
Duty station: Namibe

Selection criteria:

- Level and relevance of experience in project and programme development, management and monitoring;
- Level and relevance of experience in land management, rural development, and pastoralism;
- Level of experience in of policy, institutional and cross-sector coordination issues related to natural resources management through participated negotiations.
- Demonstrated knowledge of objectives and function of technical programmes as well as of FAO and/or UN operational guidelines and procedures;
- Capacity to manage tasks in a systematic and efficient manner with judgment, analysis, independence and initiative;
- Capacity to communicate clearly both verbally and in writing;
- Demonstrated ability to establish good working relationship and team spirit both inside the Organization and with external partners such as government officers, UN partners, donors or NGOs;
- Ability to use computer software such as MS Office and other project management software and database;
- Previous experience in Angola and knowledge of Portuguese language will be a strong asset, and ability to write in French, official language of FAO representation, will be an additional asset

SECURITY

Before starting the mission/travel, the consultant must find out in what security phase the country of assignment is in and what this implies for his/her own security. As soon as he/she arrives at the duty station, through the FAO Representation or directly he/she must contact the designated UN Security Officer to be briefed on all the recommended security measures. In case this procedure is not properly applied, the consultant may not be covered under the Malicious Acts Insurance Policy.

HEALTH

All consultants and staff members, on duty travel, must accept responsibility for their health and well-being as part of their official duties and also on their return. The following are the main responsibilities of the traveller:

- seek health advice, preferably four to six weeks before travel;
- comply with recommended vaccinations and other prescribed medication and health measures;
- ensure health precautions are taken before, during and after travel;
- obtain a physician’s letter pertaining to any prescription medicines, syringes, etc. being carried;
- take precautions to avoid transmitting any infectious disease to others during and after travel;
- report any illness on return, including information about all recent travel; and respect the host country and its population.

REPUBLIC OF ANGOLA

Land rehabilitation and rangelands management in smallholders agro-pastoral production systems in Southwestern Angola

GEF/LDCF-FAO Project

TERMS OF REFERENCE
OPERATIONAL AND ADMINISTRATIVE OFFICER – 28 months

Background and Tasks

The Food and Agriculture Organization (FAO) will be the GEF implementing and executing agency. As the GEF Agency, FAO will be responsible for project oversight to ensure that LDCF policies and criteria are adhered to and that the project meets its objectives and achieves expected outcomes and outputs as established in the project document in an efficient and effective manner. FAO will report on the project progress to the GEF Secretariat and financial reporting will be to the GEF Trustee. FAO will closely supervise and carry out supervision missions of the project (through the Lead Technical Unit (LTU) and the GEF Coordination Unit in the Investment Centre Division (TCI)), and monitor project progress and provide technical support (through FAO's Agriculture and Consumer Protection Department -AGPM).

The project will be executed by FAO-AO in partnership with MA. The project will have a National Project Coordinator (NPC) who will be based in the Project Management Unit in Namibe to coordinate the day-to-day execution of the project.

Under the direct supervision of the NPC and in consultation and close coordination with the FAO Budget Holder, the FAO Operations and Administrative Officer will have the following responsibilities and functions:

1. Ensure smooth and timely implementation of project activities in support of the results-based work plan, through operational and administrative procedures according to FAO rules and standards;
2. Coordinate the project operational arrangements through contractual agreements with key project partners;
3. Arrange the operations needed for signing and executing Letters of Agreement (LoA) and Government Cooperation Programme (GCP) agreement with relevant project partners;
4. Maintain inter-departmental linkages with FAO units for donor liaison, Finance, Human Resources, and other units as required;
5. Day-to-day manage the project budget, including the monitoring of cash availability, budget preparation and budget revisions to be reviewed by the Project Coordinator;
6. Ensure the accurate recording of all data relevant for operational, financial and results-based monitoring;
7. Ensure that relevant reports on expenditures, forecasts, progress against work plans, project closure, are prepared and submitted in accordance with FAO and GEF defined procedures and reporting formats, schedules and communications channels, as required;
8. Execute accurate and timely actions on all operational requirements for personnel-related matters, equipment and material procurement, and field disbursements;
9. Participate and represent the project in collaborative meetings with project partners and the Project Steering Committee, as required;
10. Undertake missions to monitor the outputs-based budget, and to resolve outstanding operational problems, as appropriate;

11. Be responsible for results achieved within her/his area of work and ensure issues affecting project delivery and success are brought to the attention of higher level authorities through the BH in a timely manner,
12. In consultation with the FAO Evaluation Office, the LTU, and the FAO-GEF Coordination Unit, support the organization of the mid-term and final evaluations, and provide inputs regarding project budgetary matters;
13. Provide inputs and maintain the FPMIS systems up-to-date;
14. Undertake any other duties as required.

Minimal Requirements:

a) University Degree in Economics, Business Administration, or related fields.
b) Five years of experience in project operation and management related to natural resources management, including field experience in developing countries.
c) Proven capacity to work and establish working relationships with government and non-government representatives.
d) Knowledge of FAO's project management systems.

Additional Requirements:

Language: Portuguese and English
Duration: 155 person weeks throughout the 4 years of the Project

OTHER TERMS OF REFERENCE

1. TRAINING SPECIALIST – 6 MONTHS

Under the supervision of: CTA, and LTO
Reporting to: CTA, PC, and LTO
The Training Specialist will be responsible, but not limited, to perform the following tasks and duties:

1. The training of a multidisciplinary core group of master trainers in SLM technologies and APFS approaches will be organized by the project team jointly with:
2. An exposure visits to APFS activities in East Africa (Ethiopia).
3. Conduct an awareness workshop for national stakeholders. APFS facilitators that are experts on grassland and livestock will support the project team in
4. Collaborate with APFS facilitators to conducting community dialogue. The community dialogue will set the basis for the concepts and principles of APFS and help towards the selection of the community facilitator; the process is necessary to select the communities that will initiate the APFS process.
5. Support the establishment of APFS and support the development of the community action plans. Based on results from Component 1, the project team will be able to select appropriate service providers from newly established or reinforced civil society organization that will support APFS.
6. Provide technical assistance and training to FAO's implementing partners in the formation, coordination, guidance, supervision and implementation of APFS.
7. Train multiple Agro-pastoral Field School facilitators and trainers (specifically in agro-pastoralism and grassland rehabilitation)
8. Organize missions to Ethiopia to study Agro-pastoral Field Schools (APFS)
9. Preparing the curricula for the Training of Trainer and Agro-pastoral Field Schools through a consultative process of all stakeholders.
10. Prepare education materials for use by agro-pastoral field schools in the improved production of key food crops as well as commercially viable crops in the project areas.
11. Represent FAO in forums related to the establishment and strengthening of Agro-pastoral APFS approach in Angola.
12. Perform any other associated duties as required by the NPC and CTA.

Duty Station: Various (Namibe, field and mission trips to Ethiopia)
Qualification and experience required:
Education: Advanced university degree in agriculture, veterinary, agricultural economics, or natural resources. Project management and monitoring experience, and good knowledge of policy, institutional and cross-sector coordination issues related to NRM.
Experience: A minimum of 7 years professional experience as Master Trained of Pastoral Field Schools. Coordination of a similar process is a required asset. Significant knowledge regarding land degradation would be considered an asset as well as experience of the work done by UN agencies and of the country.

PARTICIPATORY LAND USE AND DRYLANDS MAPPING EXPERT – 6 months

Under the supervision of: CTA, and LTO
Reporting to: CTA, PC, and LTO
For output 2.2.1, the expert will support the reporting of gender disaggregated land use and agro-biodiversity mapping, including the following activities:

(i) Design a gender-disaggregated participatory monitoring system of the use of the land, including use of local agrobiodiversity as fodder or wild food;
(ii) Advice and plan the in-country land use and capacity building activities, including negotiation for data to use and identification of training needs of national partners and support on identification of appropriate training structure, if necessary;
(iii) Provide guidance in the collection and acquisition of the appropriate GIS baseline data and detailed satellite images;
(iv) Coordinate the implementation of the GIS monitoring system and the capacitating of national consultants;
(v) Establish pilot areas for the monitoring system and conduct pilot monitoring;
(vi) Supervise the consultants and the national partners for the year if the project;
(vii) Refine a gender-disaggregated agrobiodiversity monitoring process, including a series of key tables and a draft methodologies for printing;
(viii) Produce a report of the disaggregated agrobiodiversity analysis.

Selection criteria:

- Level and relevance of experience in project and programme development and management;
- Level and relevance of experience in natural resource management, with emphasis on Agro-pastoral Field School approaches, promotion of Best Agricultural Practices, and LD;
- Recognised expert in participatory GIS in Africa;
- Experience in mapping of land use, with a specific focus on agrobiodiversity.
- Level of experience in training, supervision, management and coordination of project staff;
- Demonstrated knowledge of objectives and function of technical programmes as well as of FAO and/or UN operational guidelines and procedures;
- Capacity to manage tasks in a systematic and efficient manner with judgment, analysis, independence and initiative;
- Capacity to communicate clearly both verbally and in writing;
- Demonstrated ability to establish good working relationship and team spirit both inside the Organization and with external partners such as government officers, UN partners, donors or NGOs;
- Ability to use computer software such as MS Office and other project management software and database.

INTERNATIONAL EXPERT IN ASSESSMENT OF RESILIENCE AGAINST DESERTIFICATION IN AGRICULTURAL AND PASTORAL AREAS
16 months (4 months per year)

Under the supervision of: CTA, and LTO and in consultation with Training expert
Reporting to: CTA, PC, and LTO

The Expert will be responsible, but not limited, to perform the following tasks and duties:

- Support farmers and pastoralists assessment of resilience actions to be undertaken in the establishment of APFS including: assessment of APFS baseline situation, and development a community action plan (taking into consideration and collaborating with the FFS training expert, the local consultants, the service providers, and with the LADA expert)
- Support farmers in the understand of their self-assessment to undertake ecosystem based pilot rehabilitation.
- Use self-assessment information and support to community decision making to change their activities and practices regarding i) water point rehabilitation and management; ii) strengthen the local environmental friendly production system (including livestock and non-timber forestry products) and to iii) improve livestock production value chains

- Support local level technologies and practices analysis carried out with participants of an FFS that can subsequently be used to help inform the future FFS curriculum in order to incorporate capacity development leading to higher climate resilience.
- Provide a database from which future governmental projects and programmes will be able to draw to improve meet local needs.

Selection criteria:

- Advanced university degree in engineering, agriculture, or natural resources;
- Level and relevance of experience regarding climate related environmental risk and farmers/pastoralists resilience, including the SHARP tool;
- Level and relevance of experience in assessment of FFS, with emphasis on APFS, in Africa;
- Recognised expert in participatory activities in Africa;
- Level of experience in training smallholders in self-assessment, including the LADA local method;
- Capacity to manage tasks in a systematic and efficient manner with judgment, analysis, independence and initiative;
- Capacity to communicate clearly both verbally and in writing;
- Demonstrated ability to establish good working relationship and team spirit both inside the Organization and with external partners such as government officers, UN partners, donors or NGOs;
- Ability to use computer software such as MS Office and other project management software and database.

INTERNATIONAL POLICY AND INVESTMENT ADVISER
6 months

Under the supervision of: PC, and CTA
Reporting to: CTA, PC, and LTO

The Expert will be responsible, but not limited, to perform the following tasks and duties:

- Assess existing land tenure policies and arrangements and its influence and impact on current and future pastoral practices;
- Collaborate closely with MA to ensure alignment and complementarities of the new proposed SLM legislation with the current land codification structure;
- Analyse the past and present trends of SLM investments and develop recommendation for future sustainable land management based on these;
- Document and assess current customary land conservation practices which should be considered in promoting policies for sustainable land use and to implement the Land Law;
- Review the current responsibilities and capacities of the relevant Government departments, non-Government and private institutions, and make appropriate recommendations in their role for the implementation of the proposed SLM policy and Land Law implementation;.
- Ensure desertification issues are considered in the various proposed policy interventions;
- Plan, design and propose draft policy recommendation in collaboration with MA, and draft and/or review appropriate regulations to support the implementation of SLM investments in line with draft UNCCD documents;
- With the support of the MA, participate in and conduct at least two national stakeholder participatory consultations as part of the policy development process.

Selection criteria:

- An advanced degree in a field relevant to the above assignment (natural resource management, economics, environmental policy, agriculture and land management);
- Good working knowledge of national policy processes and policy language;
- Familiar with community-based natural resource management and social land management issues;
- Good understanding of international policies and agreements related to sustainable land management
- Ability to organize and facilitate workshops and meetings;

INTERNATIONAL LADA ASSESSMENT ASSISTANT
(2.2 months)

Under the supervision of: PC, and CTA
Reporting to: CTA, PC, and LTO

The Expert will be responsible, but not limited, to perform the following tasks and duties:

- Start-up LADA activities in the country
- Undertake capacity building national workshop for the "LADA local assessment"
- Undertake at least one pilot "LADA local assessment" in the project area together with the International expert in assessment of resilience against desertification in agricultural and pastoral areas
- Harmonize LADA method with other self-assessment resilience methods
- Supervise local teams during the realization of the full "LADA local assessment" activity (include remote coordination)

Selection criteria:

- An advanced degree on natural resource management, agriculture, or land management;
- Expert in the LADA local method
- Familiar with LADA local use in Africa
- Ability to organize and facilitate workshops and meetings

NATIONAL LADA ASSISTANT
(4 months)

Under the supervision of: International LADA assessment assistant, and CTA
Reporting to: CTA, International LADA assessment assistant

The Expert will be responsible, but not limited, to perform the following tasks and duties:

- Organize the "LADA local assessment" team structure activities in the country
- Support capacity building organization
- Organize, manage, and participate to the pilot LADA assessment in the project area together with the International experts (LADA and assessment of resilience against desertification in agricultural and pastoral areas)
- Organize and supervise local teams during the realization of the full LADA local activity

Selection criteria:

- A degree on natural resource management, agriculture, or land management;
- Familiar with participatory field assessment;
- Ability to organize and facilitate workshops and meetings

NATIONAL LAND DEGRADATION EXPERT FOR PUBLICATION DRAFTING
(3 months)

Under the supervision of: International LADA assessment assistant, and CTA, and in consultation with the national LADA assistant
Reporting to: CTA, International LADA assessment assistant

The Expert will be responsible, but not limited, to perform the following tasks and duties:

- Draft the "LADA local assessment" publication
- Prepare graphs and support draft revision
- Collect data from "LADA local assessment" and organize them for the publication

Selection criteria:

- A degree on media and publication, with specialization in environment;
- Experience preparing publication for an international audience and with UN;
- Willingness to travel in remote areas

NATIONAL GENDER TERRITORIAL MONITORING AND LAND MANAGEMENT EXPERT
(6 months)

Under the supervision of: CTA
Reporting to: CTA, International LADA assessment assistant

The Expert will be responsible, but not limited, to perform the following tasks and duties:

- Conduct assessments among rural women's groups, using a gender approach;
- Establish a profile of pastoral' and farmers' women needs to meet current short-term objectives, the plans of both men and women to realise these objectives;
- Assess needs for external support to overcome existing economic and institutional constraints at local level;
- Assess options for improving women's access to updated information and revise, on a demand-driven basis;
- Assess existing training modules and propose new one to assist women's groups in revitalizing their activities in the context of their current economic, social and cultural environment;
- Actively participate in the land management planning phase
- Submit a final report highlighting achievements, the objectives and needs of the target beneficiaries, and recommendations for the follow-up of project activities.

LOCAL ACTIVITIES ADVISERS (FOUR)
(four years each)

Under the supervision of: CTA
Reporting to: CTA, NC

The Experts will be responsible, but not limited, to perform the following tasks and duties:
+ in the area of his/her responsibility, coordinate the following Component 1 activities:
- Support the systematic assessment of local degradation (LADA methodology);
- Support the activities required for the emergence of new organizations;
- Support and organize capacity building to strengthen existing organizations mainly involved in SLM with participation by women and men;
- Support and organize planning, negotiation, conflict management, SLM and soil degradation using participatory methods and gender sensitivity;
- Organize the planning phase and promote the development / implementation of plans and arrangements related to environmental and gender issues;

+ in the area of his/her responsibility, coordinate the following Component 2 activities:
- Organize and conduct community dialogue on the concepts and principles of APFS towards the selection of the community facilitator;
- Support service providers for the establishment of APFS and the development of community action plan;
- Support and organize activities for the ecosystem based pilot rehabilitation (Water point rehabilitation and management, strengthen the local environmental friendly non-livestock production system, support local product commercialization, improvement livestock production value chains, and establish a network of ethno-veterinaries);
- Support and organize the improvement fodder and natural grasses production and the establishment of *mise en défense* areas along the transhumant route;

+ in the area of his/her responsibility, coordinate the following Component 3 activities:
- Support the preparation land delineation activities to improve Land Law implementation

+ in the area of his/her responsibility, coordinate the field level M&E activities under Component 4

Qualification and experience required:
Education: Advanced university degree in agriculture, agricultural economics, social sciences, rural development or natural resources.
At least 5 year project management and monitoring experience and good knowledge of agricultural and grassland system in the areas, and institutional and cross-sector coordination issues related to NRM.

Grassland expert (natural and fodder grasses, including palatability)
(22 months)

Under the supervision of: CTA, LAC
Reporting to: CTA, NC, LAC

The expert will be responsible, but not limited, to perform the following tasks and duties:

- Support all activities related to use of grassland species included outputs 2.2.1, 2.2.2, and 2.2.4

In the framework of 2.2.1 the expert will

- Support the grassland analysis and the selection of species for the research and improvement;
- Support the activities of grassland establishment and the experimentation system used in research centre for grasses adaptability and palatability in place in two selected APFS groups and compared with research results;
- Undertake APFS training regarding grassland establishment and improvement as appropriate
- Support the participatory monitoring of grassland established and guardianship system;
- Coordinate the activities between the APFS and the Research structures;

In the framework of 2.2.1 the expert will

- Support the activities of natural grassland establishment and the experimentation system for grasses adaptability and palatability in place in two selected APFS groups and compared with research results;
- Support selected APFS through participation to the selection of local seeds, and to the establishment of local seed systems

In the framework of 2.2.1 the expert will

- Support the establishment of *mise en défense* areas
- Ensure that the discussion regarding the localization of *mise en défense* areas is raised at the intra-community level through JP, participate to JP meeting, and ensure community participation at the JP meetings
- Provide guidance in tinning, seed soil bank, seedling, manure, and legume species introduction
- Support the participatory monitoring of grassland established and guardianship system

Qualification and experience required:
Education: Advanced university degree in agriculture, agricultural economics, geography, rural development or natural resources.
At least 2 year project management
Experience in monitoring and evaluation
Good knowledge of GIS
Experience in grasslands management, including use of local and wild species.

Support to participatory evaluation of plants used and palatability (GIS/NRL expert) (8 months)

Under the supervision of: CTA, International participatory mapping expert, and in consultation with expert in fodder and natural grasses production, LAC
Reporting to: CTA, International participatory mapping expert, NC, LAC

The expert will be responsible, but not limited, to perform the following tasks and duties:

- Support all activities related to use of grassland species included outputs 2.2.1, 2.2.2, and 2.2.4

In the framework of 2.2.1 the expert will

- Support the design a gender-disaggregated participatory monitoring system of the use of the land, including use of local agrobiodiversity as fodder or wild food;
- Support the guidance in the collection and acquisition of the appropriate GIS baseline data and detailed satellite images;
- Support the reporting and restitution of the gender-disaggregated agrobiodiversity monitoring process, including the production of a series of key tables and a draft methodologies for printing;
- Support the reporting of the disaggregated agrobiodiversity analysis;
- Support the activities of grassland establishment and the experimentation system used in research centre for grasses adaptability and palatability in place in two selected APFS groups and compared with research results.
- Support the participatory monitoring of grassland established and guardianship system

In the framework of 2.2.1 the expert will

- Support the activities of natural grassland establishment and the experimentation system for grasses adaptability and palatability in place in two selected APFS groups and compared with research results
- Support the participatory monitoring of grassland established and guardianship system

In the framework of 2.2.1 the expert will

- Support the establishment of *mise en défense* areas
- Provide guidance in tinning, seed soil bank, seedling, manure, and legume species introduction
- Support the participatory monitoring of grassland established and guardianship system

Qualification and experience required:
Education: Advanced university degree in agriculture, agricultural economics, geography, rural development or natural resources.
At least 2 year project management
Experience in monitoring and evaluation
Good knowledge of GIS
Experience in grasslands management, including use of local and wild species.

Participatory policy experts (new policy design, decree 216/11 case study and land concession study, CMA functioning study, investment plan)
(15 months)

Under the supervision of: CTA, NC, and International policy expert
Reporting to: CTA, NC

The expert will be responsible, but not limited, to perform the following tasks and duties:

- participatory policy formulation including organization of consultation workshops;
- local events supporting Land Law implementation;
- preparation of drafts of policies including new SLM policies and Decree working platform;
- Support the title concession process and establish dialogues with appropriate government institutions at all levels;
- Establishment of a regular dialogue mechanism between the public, civil society, and private sector around the policy agenda. The mechanism for dialogue will be structured to build institutional knowledge and process for consultation that will be an important function for the South Sudan government;
- Prepare draft investment plan and organize plan negotiation and approval;
- Organize meeting and negotiation for the participation of donors to the investment plan;
- Conduct a study to analyse by-laws and operation of the CMA ongoing projects and programmes that potentially contribute to SLM are reviewed and studied to assess potential SLM introduction;
- In consultation with project and CMA personnel, preparing one document proposing integration of SLM in CMA plans, programmes, and projects is prepared;
- Revise five CMA plans and programmes to integrate SLM.

Qualification and experience required:

- An advanced degree in a field relevant to the above assignment (natural resource management, economics, environmental policy, agriculture and land management);
- Good working knowledge of national policy processes and policy language;
- Familiar with community-based natural resource management and social land management issues;
- Good understanding of national policies and agreements related to sustainable land management;
- Experience with participatory policy preparation;
- Ability to organize and facilitate workshops and meetings;

Web page expert
(one month)

Under the supervision of: CTA, NC
Reporting to: CTA, NC

The expert will be responsible, but not limited, to perform the following tasks and duties:

- Design a draft web page using FAO format and technical specification

Qualification and experience required:

- At least one year experience in web page preparation using FAO standards and regulation

Expert in territorial diagnosis, local agreements and land management plans (30 months)

Under the supervision of: CTA, NC
Reporting to: CTA, NC

The expert will be responsible, but not limited, to perform the following tasks and duties:

- Support training planning and implementation related to Component 1, including training of local leaders and training of organization;
- Undertake a socio-economic diagnosis of the three provinces finalized and results disseminated;
- Ensure participation of farmers/pastoralists and customary associations using *Jango Pastoril* in the Component 1 ensuring and increased multicommunity scale (transhumance subroute) discussion making;
- Undertake appropriate action to ensure integration between Component 1 and APFS including: organization of meetings, ensuring the participation of APFS to community and JP meetings, etc.;
- Organize JP meetings;
- Provide guidance and support to project team regarding the participatory development of plans on environmental issues and gender;
- Organize, participate in the development, and draft integrated land management plans;
- Support the start-up of the plans and provide guidance for successful implementation;
- Ensure M&E data collection for Component 1 in collaboration with local managers.

TERMS OF REFERENCE

EXTERNAL EVALUATION TEAM – 6 Weeks

Under the ultimate responsibility of FAO Office of Evaluation, in accordance with FAO evaluation procedures and taking into consideration evolving guidance from the GEF Evaluation Office and in close consultation with the Project Coordinator, the FAO budget holder (AGPM), the FAO Lead Technical Unit the external evaluation team will three months prior to the terminal review meeting of the project partners conduct an independent final evaluation. The final evaluation will review project impact, analyse sustainability of results and whether the project has achieved its adaptation objectives and benchmarks. The evaluation will furthermore provide recommendations for follow-up actions.

The evaluation will, inter alia:

a. review the effectiveness, efficiency and timeliness of project implementation;
b. analyse effectiveness of implementation and partnership arrangements;
c. identify issues requiring decisions and remedial actions to insure sustainability of project outcomes and outputs;
d. identify lessons learned about project design, implementation and management;
e. highlight technical achievements and lessons learned; and
f. Prepare a final evaluation report.

Some critical issues to be evaluated in the midterm and final evaluations will be:

(i) progress in improving grassland status and palatability;
(ii) the functioning and effectiveness of the APFS network and of the inter-institutional coordination mechanism in developing and implementing integrated planning in support SLM for grassland areas and addressing key biodiversity threats;
(iii) the level of capacities and involvement of local staff in terms of improved management effectiveness and land management plan implementation capability;
(iv) the level of involvement of farmers and herders in land management models.

Requirements: The team should include professionals specialized in grassland land degradation and pastoralism and with demonstrated experience in project evaluation. They must have 10 years of professional experience in the field. Previous working experience in the region, as well as experience in project coordination with international bodies, will be especially valuable.

Languages: Portuguese / English
Location: Angola (Namibe and field)
Duration: 2 consultants (international and national) for 6 weeks each

PROJECT STEERING COMMITTEE DRAFT TERMS OF REFERENCE (TOR)

Role of the Project Steering Committee (PSC)

The PSC will be the policy setting body for the project. As and when required, the PSC will be the ultimate decision-making body with regard to policy and other issues that may affect the achievement of project objectives. The PSC will be responsible for providing general oversight of project execution, and will ensure that all activities in the GEF project document are adequately prepared and carried out. In particular, the PSC will:

1. Take decisions in the course of the practical organization, coordination and implementation of the project, and provide overall guidance to the Local Programme Steering Committee (LPSC);
2. Advise the LPSC on other ongoing and planned activities facilitating collaboration between the Project and other programmes, projects and initiatives;
3. Facilitate that co-financing support is provided in a timely and effective manner;
4. Review six-monthly Project Progress Reports (PPRs), and provide overall oversight of project progress and achievement of planned results as presented in the PPRs;
5. Ensure all project outputs are in accordance with the GEF project document;
6. Review, amend if appropriate, and approve the draft Work Plan and Budget for submission to FAO;
7. Provide inputs to the mid-term and final evaluations, review findings, and provide comments for the Management Response;
8. Ensure the dissemination of project information, lessons learnt, and best practices.
9. Facilitate cooperation between MA, MINANDER, Ministry of Commerce, Province governments, FAO, and project participating partners at the local level;

Meetings of the PSC

10. The PSC meetings will be normally be held bi-annually. Nevertheless, the PSC Chairperson will have the discretion to call additional meetings, if this is considered necessary. PSC meetings would not necessarily require a physical presence, and could be also undertaken electronically. No more than 7 months may elapse between PSC meetings;
11. Invitations to a regular PSC meeting shall be issued not less than 90 days in advance of the date fixed for the meeting. Invitations to special meetings shall be issued not less than 40 days in advance of the meeting date.

Agenda

12. A provisional agenda will be drawn up by the Project Coordinator and sent to PSC members following the approval of the Chairperson. The provisional agenda will be sent not less than 30 days before the meeting date;
13. A revised agenda including comments received from PSC members will be circulated 5 working days before the meeting date;
14. The agenda of each regular meeting shall include:
    1. A report of the Project Coordinator on project activities during the inter-sessional period;
    2. A report and recommendations from the Project Coordinator on the proposed Work Plan and Budget and the proposed budget for the ensuing period;
    3. Reports that need PSC intervention;
    4. Consideration of time and place of the next meeting;
    5. Any other matters as approved by the Chairperson.
15. The agenda of a special meeting shall consist only of items related to the purpose for which the meeting was called.

The PSC Secretariat

The PMCU will act as Secretariat to the PSC, and be responsible for providing PSC members with all required documents in advance of PSC meetings, including the draft Work Plan and Budget, and independent scientific reviews of significant technical proposals or analyses. The NPC will prepare

written report of all PSC meetings and be responsible for logistical arrangements regarding the holding of those meetings.

Election of Chairperson and Vice-Chairperson

The PSC will be chaired by the MA (or his representative). A Vice-Chairperson for PY1 will be nominated by PSC members at their first PSC meeting. The Vice-Chairperson will serve up to the PSC meeting in PY2, finishing her/his term upon the completion of the PSC meeting held closest to one year after selection. At this point, a successor Vice-Chairperson shall be chosen by the PSC members in similar manner.

Functions of Chairperson and Vice-Chairperson

The Chairperson shall exercise the functions conferred on him/her in these TORs, and in particular shall:

16. Declare the opening and closing of each PSC meeting;
17. Lead the PSC meeting discussions, ensuring the observance of these TORs, accord the right to speak, enounce questions, and announce decisions;
18. Rule on point of order;
19. Subject to these TORs, manage the proceedings of the meetings;
20. Ensure circulation of all relevant documents to PSC members through the PSC Secretariat;
21. Sign approved Work Plan and Budget and any subsequent proposed amendments submitted to FAO;
22. In liaison with the PSC Secretariat, the Chairperson shall be responsible for determining the date, site, and agenda of the PSC meeting(s), and chairing these meetings;
23. The Vice-Chairperson shall exercise the functions of the Chairperson in the Chairperson's absence or at the Chairperson's request.

Participation

The PSC will include the Minister of Environment, Minister of Agriculture, Ministry of Commerce, Province of Namibe, Huila, and Benguela, and the FAO Representative in Angola. The Project Coordinator and an official from the FAO GEF Coordination Unit shall be represented on the PSC, in ex-officio capacity. The Project Coordinator will also be the Secretary to the PSC.

Decision-making

All decisions of the PSC shall be taken by consensus.

Reports and recommendations

24. At each meeting, the PSC shall approve a report text that embodies its views and decisions, including, when requested, a statement of minority views;
25. A draft report shall be circulated to the PSC Members after the meeting for comments. Comments shall be accepted over a period of 20 days. Following its approval by the Chairperson, the final report will be distributed among PSC members and shall be uploaded to the MAG website.

Official language

The official language of the PSC will be Portuguese.

APPENDIX 7 THE TRANSHUMANCE AREA OF BIBALA, QUILENGUES, AND CHONGOROI

(prepared by FAO AGPME with inputs from ECONET and PAPEFSA project final reports and maps)

The area of the project implementation corresponds to agricultural areas 22/29, 23, 24, 27, 30 and 31 of the agricultural zoning of the Mission of Agricultural Surveys of Angola (MIAA). Within the implementation area, a zone of transition is present, the so called Center South Zone (Zone 31, MIAA) that equate to a wide range of transitional regions of humid and rainy climate to the semi-arid climate regions.

Soils are dominated by the presence of ferralítics, whose characteristics are determined by the rainy weather and strong leaching, representing three quarters of the region's soils that lack in good quality clay minerals and organic substances. Also, black clay soils (*barros negros*) have a broad representation across southwest Angola and this area is also dominated by soil susceptible to the risk of erosion. In 2006, MINANDER estimated a total soil erosion loss of about 20 million tonnes per year in the country, equivalent to the loss in capacity to feed 50 000 people annually. Soil erosion causes impacts such as soil sedimentation in streams and rivers, decreasing soil depth and fertility, altering soil structures and decreasing soil organic matter, thereby reducing the water holding capacity with consequent leaching of nutrients. All watercourses in the area have a torrential regime with subsoil flooding only during wet season.

The most important vegetative clusters in the area are; galleries of riparian forest, open woodland, dense dry forest, areas of *Colophospermum mopane* (mutiati), mosaics of dense forest and dense bush, dry wooded savannah with *Acacia kirkii* dominance, thickets or balcedos, steppe with shrubs and subshrubs and pseudo-steppe. The distribution of vegetation types include a first type corresponding to the open forest or similar types resulting from anthropogenic degradation, resulting in savannah-similar ecosystems. A second vegetation type comprises of thick, dense dry xerophyte plants in dry climate areas in Psamitic corrugated soils. The FAO's 2011 State of the World's Forests' Report gives a deforestation rate of 0.2 percent from 2000 to 2010, although a study in the Huambo Province (neighbouring the project area) revealed war displacement effects (Cabral *et al.* 2010): a reforestation period during the war was followed by the accelerated clearing due to agriculture and grazing after the end of the war. Based on a MA report (2009), loss of biodiversity (at habitat and species levels) is caused by overexploitation for domestic use (e.g. fishery activities, gathering of fuel, fencing, and charcoal wood), mining activities (e.g. oil, minerals), and deforestation for agricultural use. The slaughter of game can also result in increased bush encroachment and/or intensification of woody elements.

Description of the transhumance area of Bibala

A part of the selected area of project intervention, **the transhumance area of Bibala**, was studied by the PAPEFSA Project. The area presents an ecosystem based on the laws of nature that has been defined along centuries, and where traditional livelihoods of pastoralist are perfectly adapted. The Bibala area runs through three provinces namely, Namibe, Huila and Benguela. From the geographical point of view, there are not any natural barriers that limit the livestock flow across the country (south-north direction), therefore livestock (n°/flow) and diseases are not under governmental control.

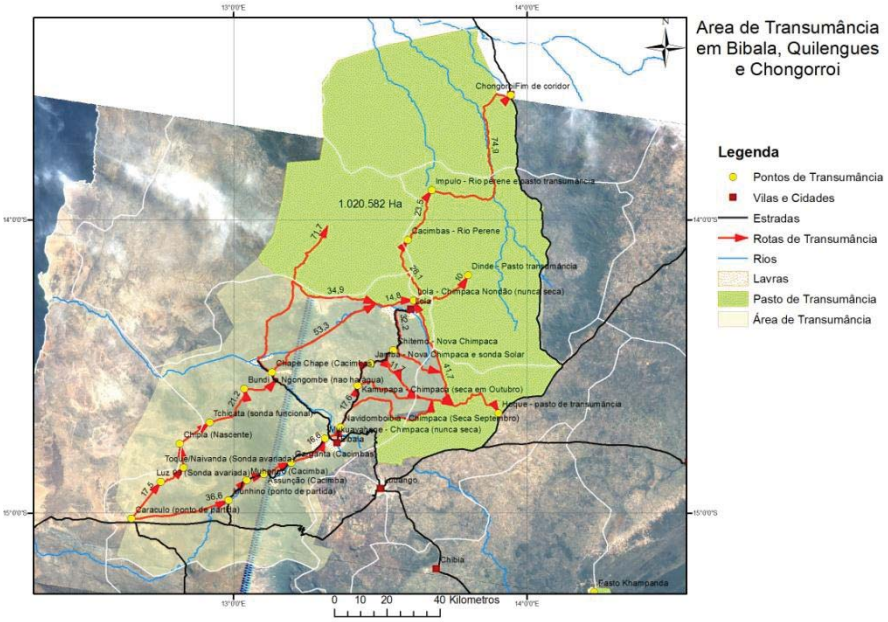

Figure 1, Appendix 7. Map of the transhumance area of Bibala, object of project intervention, as produced by the PAPEFSA Project (2011), with indication of departing and end points, and transhumance routes.

The PAPEFSA Project also mapped the most vulnerable areas of the transhumance route, in the southern part of the area of project intervention.

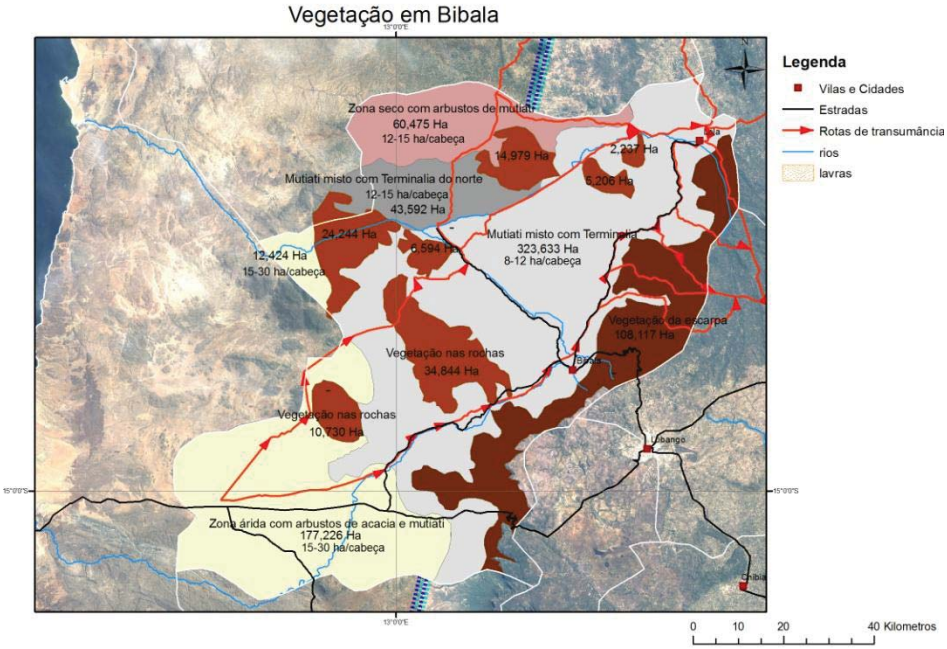

Figure 2, Appendix 7. Map of the vegetation in the southern part (starting area of yearly transhumance flow) transhumance area object of the project as produced by the PAPEFSA Project (2011), with indication of vegetation classes and transhumance routes.

The natural vegetation has peculiar characteristics. The FAO used the ECONET method under the PPG phase of the present project to prepare a first draft of a classification system of the classes of grazing land coverage in the area. The initial results will be improved during the present project and will form a basis for the assessment of LD using the LADA method. The

results showcase that shrub coverage dominates in the transhumance area while herbaceous coverage is very scarce.

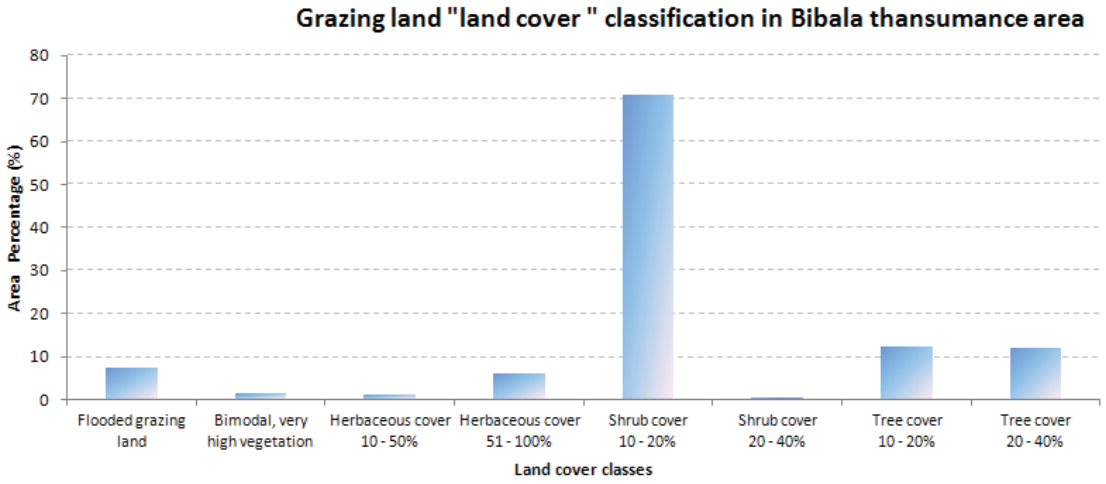

Figure 3, Appendix 7. First (temporary) sample of results for categorization and classification of rangelands using ECONET with an innovative grassland class definition conducted by the FAO under PPG.

Mutuati (*Colophespernum mopane*) is the dominant woody plant in the region although shrub species such as acacias and conifers frequently appear. The trees are deciduous or semi-deciduous, slow growing with an average height of 10 m, but in favourable climatic conditions can reach 20 m in height. They otherwise occur as a shrub, the bark is grey, more or less dark and characterized by longitudinal cracks.

Cattle grazing is predominantly natural, but goat grazing is also common, while sheep are scarce. No data exists for herds of cattle, although the Veterinary Services have estimates by municipality for the three municipalities where the project unfolds, which are shown below. Most pastoralists in the project area practice transhumance grazing in areas of the wet season grazing areas and for dry season and back again.

The load capacity for southern Angola was estimated by the Cooperative of Cattle Breeders in southern Angola as approximately 10 ha per head. Presumably this is an estimate for commercial farms located at sandy soils. Communal areas are more aimed at maximizing the herds than production per head and thus can be kept at a higher rate plan. In areas with a high density of shrubby and steep rocky slopes, the load capacity is extremely low and may even be zero. Based on an estimate from Sweet (2011) of the PAPEFSA Project: in Bibala where soils are poor, the gradient of decreasing rainfall from east to west is accompanied by a decrease in fodder production and loading capacity, which is about 5-7 ha per head in loamy soils, beneath the steep zone of 8-12 ha per head for the main part, dropping to 12-15 ha per head in the north and 15-30 ha per head in infertile western and south-western areas.

Surface water is abundant in the pastures during the rainy season from November to March-April. When the rains cease and ephemeral surface water supplies dry up, livestock depend on water points of various types and capacities that exist in various states of preservation or non-preservation. Apparently there are no records or maps showing the number or locations of water supply, beyond which were compiled by the project and who come from communities with which the project develops work.

These are the main types of water:

- Chimpaca - hafirs which depend on the surface flow
- Barragem - a dam higher with cement walls, along a river
- Açude – a dam of sand in the bed of a river (usually small)
- Cacimba – a well in the dry bed of a seasonal river
- Probe - a hole

Grazing land is characterized by the main trees and herbaceous essences as depicted in Table 1, Appendix 7

Tree Species	Tree	Shrub	Grazing value	Edible part	
				Leave	*Legume/Fruit*
Acácia ataxacantha	x	x	1		x
A. nilotica	x		2	x	x
Baikea plurijuga	x		0	-	-
Baphia massaiensis		x	3	x	x
Bauhinia petersiana	x	x	2	x	x
Bolusanthus speciosus	x	x	1	x	-
Brachylaena huillensis	x		0	-	-
Colophospermum mopane	x	x	2	x	x
Combretum apiculatum	x	x	3	x	-
C. collinum	x	x	3	x	-
C.hereroense x	x	x	3	x	-
Commiphora africana	x	x	0	-	-
C. angolensis	x	x	1	x	-
Croton mumbango		x	2	x	-
Croton spp (unidentified)		x	2	x	-
Euclea divinorum		x	0	-	-
Grewia spp. (several)		x	3	x	x
Schinziophyton rautanenii	x	x	1	x	x
Terminalia pruniodes	x	x	1	x	x
T.sericea	x		0	-	-

Herbacaous Species	Clay	Sand	Increasing / Decreasing	Palatability	Grazing value
				L/M/H	L/M/H
Aristida congesta		x			
Aristida stipitata	x	x	I	L	L
Aristida spp.	x	x	I	L	L
Chloris virgata	x		I	M	L
Cynodon dactylon	x	x	I	H	H
Digitaria eriantha		x	D	H	H
Enneapogon cenchroides	x		I	M	L-M
Eragrostis rigidior		x	D	M	M
Eragrostis superba	x	x	D	M	M
Eragrostis trichophora	x	x	D	M	M
Eragrostis spp.		x	D	M	M
Heteropogon contortus	x	x	I/D	L	M
Hordeum murinum	x	x	I	L	L
Melinis repens		x	I	M	L
Perotis patens		x	I	L	L
Pogonarthria squarrosa	x	x	I	L	L
Schmidtia pappophoroides		x	D	H	H
Sporobolus iocladus	x	x	I	M	M
Stipagrostis uniplumis		x	D	M	M

Figure 4, Appendix 7. Description of trees and herbaceous species in the area of the project, as referred to by the PAPEFSA Project.

The PAPEFSA EU Project detected a perceived decrease in grassland quality and availability in transhumance routes of the southwest caused by; increased livestock numbers, increased duration of dry periods, NR exploitation (e.g. mining activities), farmland encroachment, and lack of traditional entities managing access to pastures and transhumance routes.

APPENDIX 8. Traditional Heritage, traditional rights, and conflicts on the use of land

(prepared in collaboration with the Terra Project team with inputs from PAPEFSA Project's final reports)

Traditional versus modern heritage rights

Traditional rights still prevail in some areas (i.e. in Sengi Chongoroi,) where the patriarchal system chooses the nephew (sister's son) to be considered as the blood heir of the patriarch as a consequence of sexual promiscuity. This is in part due to issues of both male and female promiscuity, especially during critical periods of seasonal drought where men are with their cattle in other areas resulting in uncertainty in the parentage of many children. Both the Local Government and ruling MPLA party agree that modern forms of hereditary passage are more peaceful. They are also trying to get people to understand the benefits of switching to a modern practice that is legally accepted, results in the equitable division of assets involving children and where women are not discriminated against.

National laws, on the other hand, recognize land access in rural communities, pastoralists and peasants. Laws state that access for men and women is equal, however this is not the case in practice. The passages of transhumance are also foreseen in the policies. Nonetheless and despite efforts from civil society, the implementation and dissemination of the laws have resulted in insufficient coverage to be effective. For these rights to be respected there are processes that rural settlements should follow but the institutions responsible for the legalization of land management are often unaware or not incapacitated solve conflicts.

The succession process starts long before the hereditary death of a family leader. When the family leader reaches old age, younger wives are mated on the basis of work needs. The nephew is still regarded as a potential heir first by the fact that he might have been conceived from younger wives of the family leader under traditional promiscuity.

Land use in the past and present (including customary use)

In the past the access to land was guaranteed by customary rights that allowed transhumance movement in the areas of local communities. Men are predominantly involved in transhumance or in using their cattle to plough fields. The remaining land out of villages and agriculture was free and was managed as common pasture land. Communities usually knew, (and they know up until today) where to find resources, mainly linked to the pasture and some are even having "enclosure areas". Nonetheless this changes with generations. The new generation seems to have lost traditional respect for agricultural or reserved areas. In interviews with local people about the importance of having reserves of pasture and water, it was noted that the shepherds, mainly ethnic Mukubal and youth, will generally state that they would not respect enclosures.

Modern rights introduced more fixed kinds of rights as depicted in the following table:

Access Right Types	**Explanation**
Property right: Direito de propriedade	Common property right.
Customary right: Domínio útil consuetudinário	Ruled by article 23 of the Land Law, allow community use of the land.

Civil right: Domínio útil civil	Perpetual yet transmissible concession of rural or urban land subject to fees and taxes.
Surface right: Direito de superfície	For construction work purposes, not applied to the underground and for a maximum of 60 years.
Precarious right: Direito de ocupação precária.	Short-term occupancy right intended for mining prospective, research, construction, etc.

The Land Law regulates the access to land as follows:

> Article 22 Rural Land
> "The rural community lands are the lands occupied by families of local rural communities for their housing, for their activity or for other purposes recognized by custom or by this Law and its regulations".
>
> Article 23 Rural Community Land
> "Is the land used by a rural community based on the customary use of land, including, as appropriate, areas for temporary cultivation, the transhumance corridors for cattle access to water sources and pasture corridors, whether or not subject to access rights used to access the water or as roads ".

The modern right to access land is therefore mainly focused on not impeding transhumant's access to water or other natural resources including pastures; however the right cannot be considered as "secured". The present project will work in the current legal framework through the *Jango pastoril*. Nonetheless, within Component 3 of the present project the preparation of a new law ruling SLM in grazing land areas will be discussed and drafted. It could be considered adequate for transhumance stakeholders to establish the customary right (*Dominio Util Consuetudinario*) similarly to the sedentary community's rights.

The typology of conflict management

The main conflicts of the transhumance sector are related to:

- Theft of livestock, mainly conducted by the Mukubal ethnic group. This action takes place at the time when they return to their home areas while leading/shooing all the cattle along the path.
- Inheritance disputes among nephews and children where the children's parentage is uncertain. Children often do not understand why their parentage is uncertain and only find out the traditions when they reach adulthood.
- Breeders and farmers often come into conflict at the time of transhumance where fields are overrun by cattle. Cattle keepers are sometimes obliged to resolve the conflicts by paying with cattle (according to the damage, 3-5 cattle).
- Conflicts around water points, which worsens dramatically during periods of drought.
- Conflicts of adultery. The transhumance is normally done by men leaving the women behind. If adultery happens these conflicts might generate tensions but can be resolved with payment of cattle. For example in Koithe such offenses can go up to 15 head of cattle, increased if the act was committed in the house of the victim.

The management issues in the use and resource imbalances that cause soil and environmental degradation

The accumulation of cattle during peak periods of transhumance causes imbalances in the ecosystem (an area that has about 1,000 head suddenly sees about 10,000 or more head). The most important affected areas are pastures, which degrade rapidly because of the large number of cattle trampling the area. Water reserves are also depleted quickly and easily filled with sand. When rains do come, these areas are especially vulnerable to erosion resulting in gullies.

At the beginning of the period of transhumance, pastoralists have a few choices in selecting areas where to move their cattle. Ideal pasture lands are rapidly depleted by excess cattle. This accumulation of cattle is conducive to the spread of cattle diseases that many are already suffering from in their areas of origin, resulting in a large loss in number of cattle in short periods if farmers are not careful. Those who lose almost all their cattle end up having no alternatives to recover. Many end up resorting to using timber resources, transforming them into energy resources such as coal and firewood mainly used for the preparation of food. This contributes greatly to deforestation of areas that already have problems of environmental imbalances caused by extreme natural phenomena such as cyclical droughts, torrential rains with flooding, causing erosion and land degradation.

The general population uses fire as a way of clearing land for cultivation and clearing an area with a lot of grass. It also facilitates the work of clearing and weeding. This practice may have some positive impacts for farmers but many significantly negative impacts in those areas. The following is a list of practices that are considered positive by farmers but have negative consequences:

Positive Practice for the Farmer	**Negative Impact for Ecosystem**
Controlling pests and diseases	Destruction of biodiversity (killing indiscriminately without monitoring, local flora and fauna)
Clearing areas for cultivation	Loss of soil cover, erosion and soil acidity
Renewing pastures	Decreased amount of water
Gathering wood for energy	Deforestation, contribution to the acceleration of climate change
Low cost of cleaning a particular area without using effort in manual labour or mechanized high costs	Deforestation, smoke causes health problems in people, especially children and the elderly. Uncontrolled fire can become disastrous for a given area

Gender relations: the characteristics of women and men engaging in land management in project areas (Brigitte Bagnol and Karen Verhoesel, PAPEFSA 2009)

The practices surrounding cattle issues lead to women being discriminated against because cattle issues are exclusively the responsibility of men. This results in the suffering of women, especially during periods of drought and leaves them out of critical decision making. Men for instance can choose whether and how to invest the money earned by women. Water is a heavy burden for the women because it is their responsibility to provide water for the whole family and then the men their cattle get preferential use. The distances that women must travel to gain access to water, especially in drought periods increases from 10kms to more than 40kms per day and have to walk the distance carrying the water on their heads. Once livestock have watered, women can no longer use the water, neither for household consumption nor for small animals.

For *Sambos* (households) that have cattle, family life revolves largely around these animals. Usually, women prepare food for the men to eat during the trip. Generally an adult and a child bring food to them in the new pasture sites regularly. Often boys and girls discontinue their studies to perform these tasks. In the field, the girls have a central role in household tasks such as fetching water and caring for the younger children. It should be noted in terms of access and permanence in schools that girls tend to leave the education system earlier than boys because of conflicts between the value systems and different forms of socialization, see the study: "Cattle: symbolic capital. Gender relations among pastoral communities".

Project beneficiaries

Based on the previous social settings assessment, the direct beneficiaries at the local level will include:

- Local stakeholders - communities, Community Based Organizations (CBOs), local farmers groups and organizations, farmers (including young and female farmers) and communities participating in degradation prone transhumance zones whose livelihoods currently are – or will be in the foreseeable future - affected by the negative impact of reduction in grazing availability, individual farm households participating in demonstrations, etc.;
- Local ethnic groups - Mukubal, Muhumbes, Mumuilas, Ndendelengo and Mucuis;
- Extension officers and staff in line departments - IDA, EDA, IDF and SV, IIV – at a community, village, municipality and provincial level;
- Selected staff in research institutes;
- Field staff from associated government and Civil Society Organizations implementing FFS;
- Local and national policy makers responsible for the development of policies to support climate change adaptation, reverse or limit land degradation and ensure food security.

The exact number of beneficiaries per municipality will be defined during the APFS planning phase (Output 2.1.2) through "community dialogues". The dialogues will support the definition of specific community needs. The number, activity and localization of APFS will be defined based on community needs.

APPENDIX 9. Non-forestry products in the transhumance areas

(prepared by COSPE and University of Florence)

Plant name	Category	Properties
Omumpeke (onompeke)	English name	Yellow Plum / Sea Lemon
	Latin name	*Ximenia americana*
	Plant Family	Olacaceae
	Medicinal use	Oil: help heal wounds, soothes joint pain Leaves: cough, injuries, skin balm, antidote for scorpion venom Shell: malaria
	Cosmetic use	Strengthens and nourish hair. Gives tone and elasticity to skin. Prevents stretch marks and varicose veins.
	Food use and nutritional value	
Kwanana	English name	Apple-Ring Acacia
	Latin name	*Aristolochia / Albida*
	Plant Family	*Aristolochiaceae / Birthwort*
	Medicinal use	Leaves: reduce general sickness Shell: gastrointestinal illness, fever, malaria Root: protection against urinary tract inflammations Root & leaves: diuretic, anti-spasmodic, vermicide, bactericides Acid from the plant is carcinogenic and is a neurotoxin which is taken over long periods
	Cosmetic use	
	Food use and nutritional value	
Mbungululu	English name	Sneeze-wood
	Latin name	*Ptaeroxylon obliquum*
	Plant Family	Ptaeroxylaceae
	Medicinal use	Leaves & bark: protect against malaria, gastrointestinal diseases and liver problems Branches: cough Coumarin: against colic, angina, and asthma problems
	Cosmetic use	
	Food use and nutritional value	
Endombo	English name	Coastal Aloe Vera
	Latin name	*Aloe littoralis*
	Plant Family	Aloaceae
	Medicinal use	Leaves: eye problems (swelling, conjunctivitis) Roots: gastrointestinal disease, inflammation, Anti-inflammation, anti-microbial, analgesic

	Cosmetic use	
	Food use and nutritional value	The sugar has anthraquinones, phospholipids, minerals, vitamins, etc.
Mukua (makua)	English name	Baobab tree
	Latin name	*Adansonia digitata*
	Plant Family	Bombacaceae
	Medicinal use	Catechins (acid from the plant): reduces fever, anti-inflammatory, reduces blood pressure, and reduces asthma
	Cosmetic use	
	Food use and nutritional value	Leaves contain vitamin C, uric acid, carbohydrates, and tannins. The fruit pulp is used to make a dough or pasta used in cooking. Rich in carbohydrates (75 percent), proteins (2.3 percent), vitamin C (300 mg), vitamin Group B, fibre, minerals
Omumbe (onombè)	English name	Bird Plum
	Latin name	*Berchemia discolor*
	Plant Family	Rhamnaceae
	Medicinal use	Shell: prevents gastrointestinal disease
	Cosmetic use	
	Food use and nutritional value	Fresh or dried fruit. Lombi leaves. Leaves are used in agriculture as fodder.
Omugongo (ngongo)	English name	Type of Cashew
	Latin name	*Sclerocarya birrea*
	Plant Family	Anacardiaceae
	Medicinal use	
	Cosmetic use	Trunks are used to build houses, and branches to make crafts
	Food use and nutritional value	Makes a refreshing fruit drink containing vitamins. Can produce an alcoholic drink (if fermented). Dried fruit seeds and oil are also used.
Capim o eholi	English name	Ruellias or wild petunias
	Latin name	*Ruellia*
	Plant Family	Acanthaceae
	Medicinal use	Bark and root: prevent gastrointestinal disease
	Cosmetic use	Make sheets for children
	Food use and nutritional value	
Muwé	English name	Acacia
	Latin name	*Faidherbia albida*
	Plant Family	Mimosaceae
	Medicinal use	
	Cosmetic use	Leaves and legumes are used as fodder
	Food use and nutritional value	Vegetable and legumes are very high in protein.
Mupandji	English name	Sicklebush, Bell mimosa or Chinese lantern tree.
	Latin name	*Dichrostachys cinerea*
	Plant Family	Mimosaceae
	Medicinal use	

	Cosmetic use	Leaves and legumes are used as fodder
	Food use and nutritional value	Vegetables and seeds are very-protein rich (11-15 percent) and is used to prevent soil erosion.
Mutate	English name	Mopane
	Latin name	*Colophospermum mopane*
	Plant Family	Caesalpinaceae
	Medicinal use	Leaves: prevents gastrointestinal disease, anti-malaria, helps with healing, reduces coughs Shell: prevents gastrointestinal disease
	Cosmetic use	Leaves and legumes are used as fodder
	Food use and nutritional value	
Maungo	English name	Mopane worm (moth)
	Latin name	*Imbrasia belina*
	Plant Family	Lepidoptera
	Medicinal use	
	Cosmetic use	
	Food use and nutritional value	Larvae are dried in the sun, preserved with salt and cooked