FAO/GLOBAL ENVIRONMENT FACILITY

DRAFT PROJECT DOCUMENT

PROJECT TITLE: Participatory assessment of land degradation and sustainable land management in grassland and pastoral systems PROJECT SYMBOL: GCP /GLO/530/GFF
Recipient Countries: Global
Resource Partner: Global Environment Facility (GEF)
FAO project ID: 628937 GEF Project ID: 5724
Executing Partner : International Union for the Conservation of Nature (IUCN) National Executing partners: - General Directorate of Pastoral Resources Management in Burkina Faso; - Directorate of Livestock Production in Kenya; - Department of Pasture in Kyrgyzstan; - Ministry of Livestock in Niger; and - Ministry of Agriculture, Livestock and Fisheries in Uruguay.
Expected EOD (starting date): July 2016
Expected NTE (End date): June 2019
Contribution to FAO's Strategic Framework[1] a. Strategic Objective/Organizational Result: Strategic Objective 2: Increase and improve provision of goods and services from agriculture, forestry and fisheries in a sustainable manner; Output 1.2: Innovative approaches for ecosystem valuation, management and restoration are identified, assessed, disseminated and their adoption by stakeholders is facilitated Strategic Objective 3: Reducing Rural poverty; Output 3.1: Empower the rural poor gaining access to resources and services b. Regional Result/Priority Area: Sustainable management of natural resources c. Country Programming Framework Outcome: The project will have a global focus, and will develop an assessment and monitoring procedure and method for pastoral areas encompassing grasslands and rangelands, with pilot cases in Africa (Niger, Burkina Faso and Kenya), Asia (Kyrgyzstan), and Latin America (Uruguay).

[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

GEF Focal Area/LDCF/SCCF: Land Degradation	
GEF/LDCF/SCCF Strategic Objectives: LD-4: Increase capacity to apply adaptive management tools in SLM	
Environmental Impact Assessment Category (insert √): A B C √	
Financing Plan: **GEF/LDCF/SCCF allocation**: <u>Co-financing:</u> IUCN - Building Drought Resilience through Land and Water Management in Arid and Semi-Arid Areas, Kenya and Uganda IUCN - Enhancing the Value of Ecosystem Services in Pastoral Systems IUCN – Global Dryland Initiative (GDI) FAO-FOA through EU-ACP project in Burkina Faso and Niger "Action against desertification in support of the implementation of the Great Green Wall for the Sahara and the Sahel initiative and south-south cooperation in ACP countries" and the "Global Drylands Assessment" Pastoral Knowledge Hub Mountain Partnership Secretariat FAO AGPM Ministry of Agriculture, Livestock and Fisheries in Uruguay Subtotal Co-financing: **Total Budget:**	 **USD 2,639,726** USD 1,000,000 USD 100,000 USD 100,000 USD 2,000,000 USD 562,270 USD 500,000 USD 300,000 USD 1,200,000 USD 5,762,270 **USD 8,401,996**
EXECUTIVE SUMMARY Grasslands cover approximately 30 percent of the earth's ice-free land surface and 70 percent of its agricultural lands. They provide many ecosystem services of vital importance for local communities and are in particular a significant source of livestock feed and of livelihoods for stock raisers and herders. However, it is estimated that 40% of extensive pastoral land use systems and 58% of agro-pastoral systems are degraded, and that Land Degradation (LD) costing the global economy around USD40 billion annually worldwide. LD has significant consequences on grassland and rangeland. Degraded land is costly to reclaim and, if severely degraded, may no longer provide the range of ecosystem functions and services it once did, leading to a loss of the goods and many other potential environmental, social, economic and non-material benefits that are critical for society and development.	

Multiple systems have been developed in the past to monitor and assess the health of grassland and rangelands. However, despite the high importance placed on evaluating the drivers, current state, trends and impacts of LD, there is yet to be a global standard protocol defined for monitoring and assessing LD in grasslands and rangelands to upscale Sustainable Land Management (SLM), which is what the proposed project is aiming at. Existing tools do not deal in particular with the link between pastoralism and LD in grasslands and rangelands, and no global participatory and holistic method and process is available yet to monitor LD and SLM practices and related benefits to make informed decisions.

The GEF project "Participatory assessment of land degradation and sustainable land management in grassland and pastoral areas" will be implemented by FAO in five pilot countries, namely: Burkina Faso, Kenya, Kyrgyzstan, Niger and Uruguay. The objective of the project is to strengthen the capacity of local and national stakeholders in pastoral areas comprising of grasslands and rangelands to assess LD and make informed decisions to promote SLM in a way that preserves the diverse ecosystem goods and services provided by rangelands and grasslands. The International Union for Conservation of Nature (IUCN) will be the project's main executing partner through the Global Drylands Initiative that strongly focuses on supporting restoration and sustainable management including sustainable pastoral development.

Working with various partners, the project offers a framework to design a methodology for the participatory assessment and monitoring of LD and multiple benefits of pastoral areas. The findings of the assessment and monitoring process will also identify SLM best practices that can feed into policy processes. The project will work with national partners in each pilot country, including the General Directorate of Pastoral Resources Management in Burkina Faso, the Directorate of Livestock Production in Kenya, the Department of Pasture in Kyrgyzstan, the Ministry of Livestock in Niger and the Ministry of Agriculture in Uruguay.

The project is structured through three main components. The first component consists of the development of a participatory assessment and monitoring system for pastoral areas comprising of grassland and rangeland. This system will comprise a holistic and practical framework of indicators together with a procedural and operational manual that will both be tested in the field and refined accordingly. The second component aims to inform international and national agro-sylvo-pastoral decision making processes on the basis of the results and best practices from the participatory pastoral areas assessments realized under the first component. The third component focuses on knowledge management, communications, monitoring and evaluation of the project.

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LIST OF ABBREVIATIONS AND ACRONYMS

Acronym	Full Name
ACP	African, Caribbean and Pacific Group of States
AGWA	Automated Geospatial Watershed Assessment
ASAL	Arid and Semi-Arid Land
AUC	African Union Commission
CACILM	Central Asian Countries Initiative on Land Management
CBD	Convention on Biological Diversity
CCA	Climate Change Adaptation
CDE	Center for Development and Environment
CELEP	Coalition of European Lobbies for Eastern African Pastoralism
CERZOS	Centre for Renewable Natural Resources in Semi-Arid Zones
CENPAT	Patagonian National Research Centre
COP	Conference of the Parties
CSIRO	Commonwealth Scientific and Industrial Research Organization
DAD-IS	Domestic Animal Diversity Information System
DLDD	Desertification, Land Degradation and Drought
DPSIR	Driving Forces, Pressure, State, Impacts and Responses
DSA	Daily Subsistence Allowance
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FEWSNET	Famine Early Warning Systems Network
FFS	Farmers Field Schools
GDI	IUCN Global Dryland Initiative
GEF	Global Environmental Facility
GGWSSI	Great Green Wall for the Sahara and the Sahel Initiative
GHG	Greenhouse Gas
GIS	Geographic Information System
GLADA	Global Assessment of Land Degradation and Improvement
GLADIS	Global Land Degradation Information System
GLASOD	Global Assessment of Soil Degradation
GLCN	Global Land Cover Network
GTOS	Global Terrestrial Observing System
HAPEX	The Hydrologic-Atmospheric Pilot Experiment
IADIZA	Argentine Institute for Research in Dry Areas
IGAD	InterGovernmental Authority on Climate Change
ILRI	International Livestock Research Institute
INTA	National Institute of Agrarian Technology
IUCN	International Union for the Conservation of Nature
LADA	Land Degradation Assessment in Drylands
LD	Land Degradation
LDN	Land Degradation Neutrality
LULUCF	Land Use, Land Use Change and Forestry
M&A	Monitoring and Assessment
M&E	Monitoring and Evaluation
MPS	Mountain Partnership Secretariat
NDVI	Normalized Difference Vegetation Index
NEPAD	New Partnership for Africa's Development
NTFPs	Non-Timber Forest Products
NPP	Net Primary Productivity
ONDTyD	National Observatory of Land Degradation and Desertification
PALM	Sustainable Land Management in High Pamir and Pamir-Alai Mountains

PC	Project Coordinator
PE	Policy Expert
RAAKS	Rapid Appraisal of Agricultural Knowledge Systems
RATA	Resilience, Adaptation and Transformation Assessment
RS	Remote Sensing
SDG	Sustainable Development Goals
SEAGA	Socio-economic and Gender Analysis
SHARP	Self-evaluation and Holistic Assessment of climate Resilience of farmers and Pastoralists
SLM	Sustainable Land Management
SNAP	National System of Protected Areas (Uruguay)
STAP	Scientific and Technical Advisory Panel
UMSEF	Forest Assessment Management Unit
UNCCD	United Nations Convention to Combat Desertification
UNDP	United Nations Development Program
UNEP	United Nations Environment Program
UNFCCC	United Nations Framework Convention on Climate Change
WAMIP	World Alliance of Mobile Indigenous People
WFP	World Food Programme
WOCAT	World Overview of Conservation Approaches and Technologies

SECTION 1 – RELEVANCE (strategic fit and results orientation)

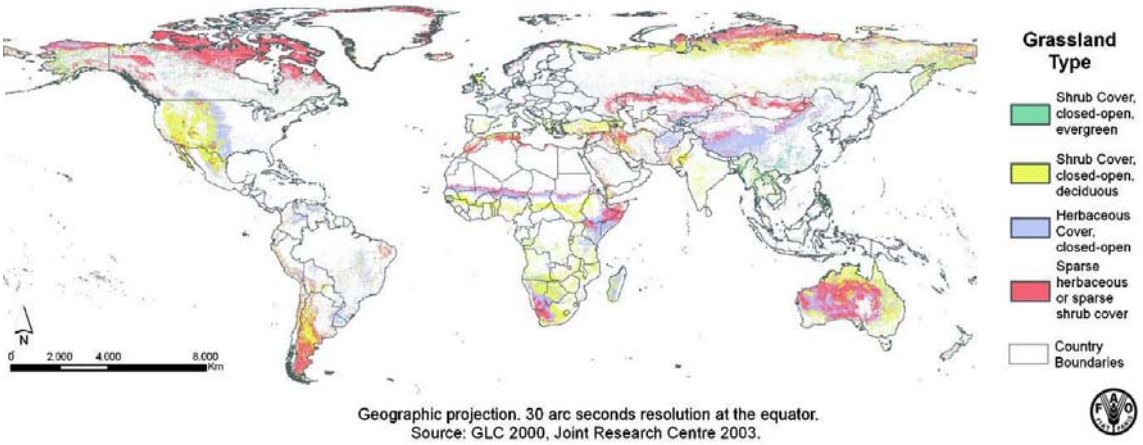
1.1 GENERAL CONTEXT

1.1.1 General development context, land degradation and grasslands and rangelands ecosystems

Grasslands and rangelands

1. Grasslands cover approximately 30 percent of the earth's ice-free land surface and 70 percent of its agricultural lands (FAO, 2005a; WRI, 2000; White, et al., 2000). Many definitions of grasslands and rangelands exist. The Oxford Dictionary of Plant Sciences (Allaby, 1998) gives a succinct definition: "Grassland occurs where there is sufficient moisture for grass growth, but where environmental conditions, both climatic and anthropogenic, prevent tree growth. Its occurrence, therefore, correlates with a rainfall intensity between that of desert and forest and is extended by grazing and/or fire to form a plagioclimax in many areas that were previously forested". Following the approach used in the grassland resource assessment for pastoral systems[2], "grasslands" is used in this document from a pastoral resource viewpoint and refers to any extensive areas of grazing, not only natural grasslands but also including shrub lands and forested lands that have an herbaceous or shrubby understorey providing feed for livestock. Different types of grassland and their locations are presented in the map below.

Figure 1: Typology of Grasslands



2. Grasslands provide many ecosystem services of vital importance for local communities. They are a significant source of livestock feed and of livelihoods for stock raisers and herders. Most of grasslands are catchment areas and their sustainable management is crucial to ensure the maintenance of hydrological cycle and the protection of watersheds. Grasslands are major biodiversity reserves and provide important wildlife habitats and in-situ conservation of genetic resources. Grasslands are a very large carbon sink at global scale and they play a major role in the recycling of Greenhouse Gases (GHG).

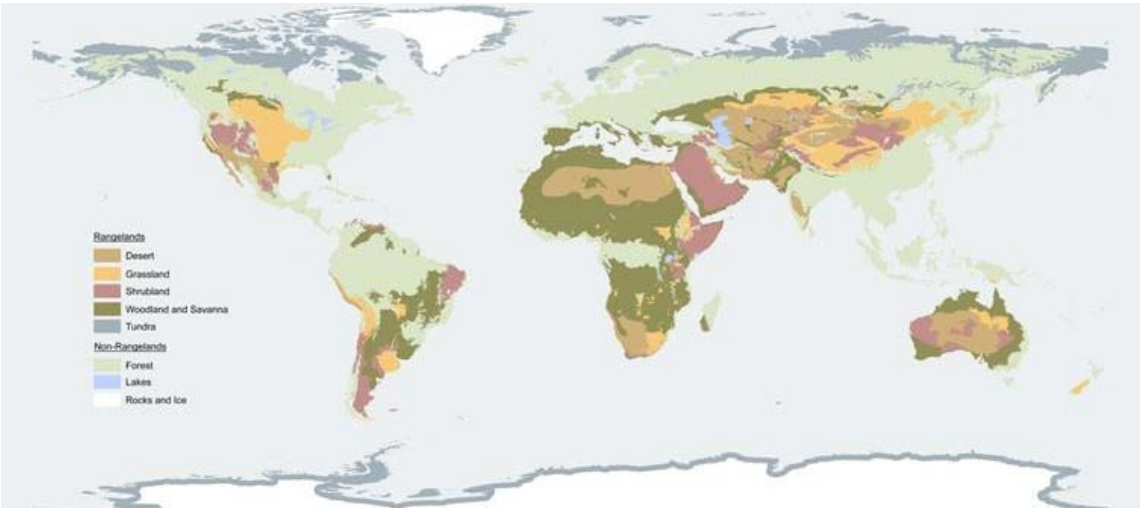
3. Rangelands include various biomes including grasslands, shrublands, savannahs, open woodlands, most desert, tundra, meadows, wetland and riparian edges (Khauffman and Pyke, 2001). Their

[2] FAO. 2000. *Grassland resource assessment for pastoral system*, FAO plan production and protection paper 162.

extent has been estimated to cover anywhere from 18% to 80% of the global terrestrial surface (Lund 2007). The large variance in their extent is attributable to a lack of a standard definition of rangelands. A recent effort at standardisation describes rangelands as "land on which the indigenous vegetation (climax or sub-climax) is predominantly grasses, grass-like plants, forbs or shrubs that are grazed or have the potential to be grazed, and which is used as a natural ecosystem for the production of grazing livestock and wildlife" (Allen et al., 2011).

4. The Society for Range Management has produced a World Map of Rangelands (on which grasslands are captured in yellow) based on major forms of plant growth (Figure 2). Forested eco-regions were assigned to 'forests' and the remaining desert; grassland; shrubland; woodland and savannah; and tundra eco-regions were assigned to 'rangelands'.

Figure 2: Rangelands of the world (Society for Range Resources)



5. Grasslands and rangelands are subject to various forms of interference such as fire, and grazing by livestock or large herds of wild herbivores. Other anthropogenic interventions on grasslands include clearing of woody vegetation, subdivision of land with or without fencing, provision of water points, and "improvement" techniques such as over-sowing with pasture grass and legumes seeds, with or without surface scarification and fertilizer. Pastoral activities impact biomass production, soil compaction and biodiversity conservation.

6. Over 1 billion people depend on livestock, and 70 percent of the 880 million rural poor living on less that USD 1.00 a day are at least partially dependent on livestock for their livelihoods[3]. Extensive pastoralism occurs on one fourth of the global land area and supports around 200 million pastoral households[4]. In Africa, 40 percent of the land is dedicated to pastoralism[5]. In traditional farming systems on the one hand, livestock is mainly used for subsistence and saving, and has various purposes such as meat, milk and fibre provision, and frequently fuel in the form of dung-cakes. Many traditional systems are sedentary and use agro-pastoral practices where they combine crop cultivation and livestock raising. Extensive grasslands and rangelands are, on the other hand, frequently exploited by transhumant or nomadic systems where herds move freely between grazing areas according to the season. Mobile pastoralists often use herding strategies that mimic nature and that, while supporting their livelihoods, provide global environmental benefits such as carbon sequestration or species conservation[6]. However, regardless of the great importance of pastoralism

[3] World Bank. 2007a. World development indicators. Washington D.C

[4] Nori M., Switzer J. & Crawford A. 2005. *Herding on the Brink: Towards a Global Survey of Pastoral Communities and Conflict* – An Occasional Paper from the IUCN Commission on Environmental, Economic and Social Policy; Gland, Switzerland.

[5] IRIN. 2007. *Africa: Can pastoralism survive in the 21st century?* UN Integrated Regional Information Networks.

[6] IUCN, UNCCD. 2012. *Conserving Dryland Biodiversity*.

for livelihoods and environmental management, pastoralist communities are often socially and politically marginalized around the world.

7. Most of the better-watered parts of grassland zones in the world have been transformed into arable land for farming which relegated grazing and pastoral communities to marginal lands, unfit for crop cultivation and where the population is entirely dependent of livestock. Developing the best land for cropping has negative effects on the use of remaining land for grazing such as the obstruction of traditional transhumance routes and the denial of access to water points[7].

Drylands

8. The FAO defines drylands as those areas with a length of growing period of 1-179 days (FAO 2000a), which includes regions classified as climatically as arid, semi-arid and dry sub-humid. A large part of grasslands and rangelands (described above) can therefore be classified as drylands. Drylands are characterized by a scarcity of water, which affects both natural and managed ecosystems and constrains the production of livestock as well as crops, wood, forage and other plants and affects the delivery of many environmental services. The United Nations Environment Programme (UNEP) defines drylands according to an aridity index (AI), which is the ratio between average annual precipitation and potential evapotranspiration; drylands are lands with an AI of less than 0.65. UNEP's classification system subdivides drylands on the basis of AI into hyper-arid lands, arid lands, semi-arid lands and dry subhumid lands (UNEP, 1992). UNCCD (United Nations Convention to Combat Desertification) follows UNEP's classification system. Drylands cover more than 40 percent of the world's land area. Almost a third of the world's population and some half of the global livestock are found living on them[8]. Degradation is widespread and climate change is likely to make matters worse. Yet dryland trees, forests and agro-sylvo-pastoral systems can play a major role in improving environmental sustainability, productivity and resilience. Restoration, i.e., regaining ecological functionality and enhancing human well-being, is both a compelling need and a major opportunity. However, despite their importance, drylands and their use are not well understood or researched, and receive inadequate recognition and attention. Drylands, grasslands and rangelands remain poorly known in terms of extent, condition, and change. However an increasing political interest at global level for drylands and LD in recent years may reverse this trend (see Section 1.1.3).

The pilot countries

9. The GEF/FAO project is a global project focussing on Land Degradation (LD) and Sustainable Land Management (SLM) in pastoral areas comprising of grasslands and rangelands. The project will be implemented in five pilot countries, namely Burkina Faso, Kenya, Kyrgyzstan, Niger and Uruguay, covering a large variety of ecosystems with different pastoralist systems.

10. It has been proposed to narrow-down the number of pilot countries originally selected in the PIF based on a set of criteria to make the project more realistic in achieving its objectives and expected impacts on the ground. Lessons learned collected from the development of the assessment and monitoring method and procedures and their testing phase in the five pilot countries will inform their revision and finalisation and their replicability in other countries.

11. Five main criteria were used to select the five pilot countries out of the nine countries originally proposed in the PIF:

    - The importance of the pastoralism sector for the countries, their economies and the livelihoods;
    - The effects of LD on rangelands and grasslands;
    - Potential collaborations, leverage effects and co-financing; and
    - The level of access to data.

[7] FAO. 2005. *Grassland of the World*, Plant Production and Protection Series.
[8] Source: FAO Drylands Monitoring Week, 19-23 January 2015, FAO HQ, Rome.

12. Following the inception workshop for the design process held in January 2015, a selection matrix was drawn compiling data for these different selection criteria. Based on this matrix, a first list of 5 pre-selected countries was developed and then submitted to the different stakeholders for comments and advise. Field visits were organized to consolidate and to strengthen partnerships. The final list of pilot countries was then validated during a project preparation workshop held in September 2015.

    Below is presented a general overview of the five selected countries. Table 1 in Section 1.1.2 provides an overview of the status, threats and drivers of land degradation. Detailed data for the selected pilot sites within these countries is provided in Section 1.7.

- **Burkina Faso**

13. Socio economic conditions. Burkina Faso is ranked among the poorest countries in the world with 46.4 percent of the population living below the poverty line in 2010[9], while more than 80% of the population is rural and rely heavily on agriculture and livestock for their livelihoods. In 2014 Burkina Faso's Human Development Index was 0.388, giving the country a rank of 181 out of 187 countries. Rural populations remain largely dependent on agriculture and continue to experience higher rates of poverty-50.7 percent of the rural population lives below the poverty line as compared with 23.7 percent in urban areas.

14. Geographic characteristics. Situated in the Sahel-Sahara region, Burkina Faso is affected by soil erosion due to wind and water, loss of soil nutrients, bush fires and pressure on resources. It is estimated that 34 percent of the land, mostly grazing areas, has deteriorated as a result of anthropogenic factors, continuing at a rate of 105,000 to 250 000 hectares each year, while 74 percent of arid and semi-arid areas are affected by desertification or land degradation. Local populations are unequipped to deal with climatic changes and, as demonstrated during the 2007 droughts and the 2009 floods, this can lead to devastating damage and loss of life. Given that scientists have observed a rapid increase in the occurrence of severe weather and erratic climatic conditions, adaptation to climate change will be an increasing priority.

15. Climate and agro-ecological zones. The socio-economic, climatic and geographical conditions make Burkina Faso one of the countries forecasted to be most vulnerable to climate change[10], in particular to water scarcity and droughts. Due to high poverty levels, a large part of the population rely on natural resources as a livelihood source coupled with over reliance on primary food production. The pressures related to meeting livelihood demands has led farmers to intensely cultivate marginal lands which causes land degradation, and as a result affect human health, food security, economic activities, natural resources and environments. Burkina Faso, as shown in the figure below, has two large agro-ecological zones: the sahelian zone in the north, where pastoralism and agro-pastoralism predominate, and the sudanian zone with most of the cultivable land. The targeted project area will be located in the North Sahelien agroecological zone. It is described in more details in Section 1.7.

Figure 3: Map of agro-ecological zones in Burkina Faso

[9] Africa Social Safety Net and Social Protection Assessment Series (2011).
[10] World Bank. Country note on disaster risk management and adaptation to climate change in Burkina Faso. Available: https://www.gfdrr.org/sites/gfdrr.org/files/documents/Country_Program_Burkina_Faso.pdf (accessed on 03/12/14)

16. Livestock Sector. Livestock plays a crucial role in the economy and is central in the country's fight against poverty. It contributes approximately 18% to the country's GDP, and it represents 26% of the country's total export, making it the third foreign exchange earner after gold and cotton[11]. Additionally, pastoralism contributes to agricultural sector through manure production.

- **Kenya**

17. Socio-economic conditions. Kenya is ranked as a lower middle income country by the World Bank, a position it achieved in 2012 with a 5.7% economic growth rate in 2013[12]. The major sectors contributing to the country's GDP include tourism, agriculture, and industry and manufacturing. 75% of the population is employed in agricultural sector while it contributes 60% of national income directly and indirectly[13]. The CIA factbook reports 30% of GDP from the agriculture sector.

18. Geographic characteristics. The total area of Kenya is 224,960 square miles (581,309 km^2) with a population estimated at 39 million according to the last census[14], with 67.7% of the population living in rural areas. Kenya straddles the equator on Africa's east coast with climatic conditions ranging from moist to arid. The topography can be divided into four distinct geographical and ecological regions or zones with different land use patterns namely, the coastal plain, the arid low plateau, the highlands and the Lake Victoria basin.

19. Climate and agroecological zones. Kenya can be divided into seven agro-ecological zones, as presented in the figure below. The last one is represented by the Chalbi desert in Marsabit district. The Chalbi is a salt desert with very sparse salt bushes as the only vegetation found. This vast land is used by pastoralists as a source of mineral lick for livestock, particularly during the rainy season. Virtually 80% of the country lies in Arid and Semi-Arid Lands (ASALs), which are predominantly inhabited by pastoralists and agro-pastoralists. Kenya's ASALs support about seven million people and more than 50% of the country's livestock population. These areas, which are also classified as grasslands, are unsuitable for rain fed cultivation due to physical limitations such as aridity and poor vegetation.

Figure 4: Map of agro-ecological zones in Kenya

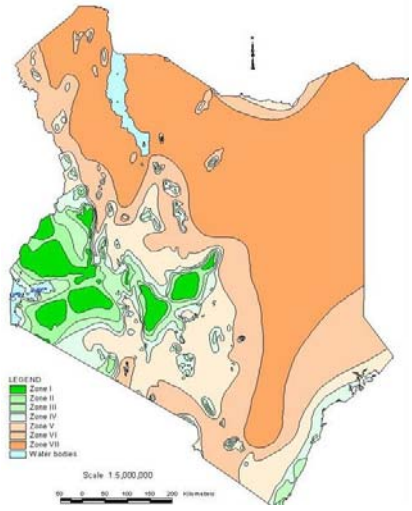


Table: Agro-ecological zones of Kenya

Zone	Appr. Area (km2)	% Total
I. Agro-Alphine	800	0.1
II. High Potential	53,000	9.3
III. Medium Potential	53,000	9.3
IV. Semi-Arid	48,200	8.5
V. Arid	300,000	52.9
VI. Very arid	112,000	19.8
Rest (waters etc)	15600	2.6

[11] Government of Burkina Faso. 2010. PAPISE 2010-2015
[12] World Bank. 2014: Kenya Overview. Available at: http://www.worldbank.org/en/country/kenya/overview (accessed on 05/01/2015).
[13] FAO. 2012. Adapting to climate change through land and water management in Eastern Africa.
[14] Government of Kenya: National Climate Change Action Plan 2013-2017

20. The targeted project areas will be located in the eastern part of the country, in ASALs. They are described in more details in Section 1.7.

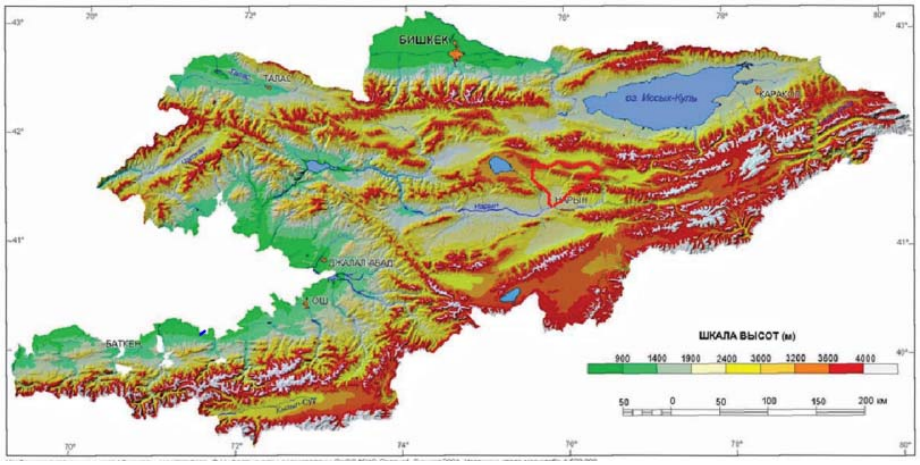
21. Livestock sector. Within the agricultural sector, the livestock sector is very important to the country's economy, contributing over 45% to the GDP[15] and comprising 50% of the agricultural GDP. In spite of the importance of the livestock sector, previous marginalization and perception that pastoralism was a backward way of life led to the fact that many pastoralists in Kenya are actually getting poorer[16].

- **Kyrgyzstan**

22. Socioeconomic conditions. The economy is primarily agricultural and the sector generates about one-fifth of the country's GDP, a third of its employment, and about 13% of total exports[17]. Farm incomes are driven by irrigated agriculture (1.3 million ha) and pasture-based livestock production (9 million ha) comprising of sheep, horse, and cattle. The livestock sector contributes 15% to the country's GDP[18].

23. Geographic characteristics. More than half of Kyrgyzstan lies at an elevation higher than 2,500 m, and only about one eighth of the country is lower than 1,500 m. The territory occupies about 20 million hectares of land with only 1.4 million hectares being arable land area. 70% of the arable land depends on irrigation for productivity.

Figure 5: Topographical map of Kyrgyzstan



24. Climate and agroecological zones. Livestock is traditionally grazed in varied locations in the country throughout the year.

    - *Winter pastures* occupy an area of 2,063,000 ha. The definition of a winter pasture does not correspond to altitude, landscape features or vegetation type, but they are usually close to permanent settlements, in areas of light or negligible snow fall where stock can be easily housed, at least at night. Currently, almost all dairy cows, and often other animals, graze on the winter pastures located close to settlements all year round, causing their severe

[15] Source: Behnke, R. and Muthami, D. 2011. The contribution of livestock to the Kenyan economy. IGAD LPI Working Paper 03-11. Addis Ababa, Ethiopiai: IGAD Livestock Policy Initiative.
[16] Save the Children UK. 2007. Vulnerability and Dependency in 4 Livelihood Zones in North Eastern Province, Kenya.
[17] Source: World Bank. 2014. Kyrgyz republic partnership program snapshot.
[18] Source: FAO. 2007. Subregional report on animal genetic resources: Central Asia. Annex to The State of the World's Animal Genetic Resources for Food and Agriculture. Rome.

overgrazing and degradation. These pastures are in especially bad conditions being overused and not properly managed.

- *Summer pastures*, usually situated in middle elevation and in the high mountain valleys and gorges, occupy an area of 4,129,000 ha, and present a high productivity. They are used in summer period from one to four months. They are located at significant distances from the settlements and sometimes it is difficult to access them due to passes through fast river streams. Most of the traditional summer pastures are nowadays underuse, which is in stark contrast with the heavy stocking and continuous use of the more accessible pastures, currently getting little or no seasonal relief.
- *Spring-Autumn pastures* are usually located on the foot hills below 2 500 m and occupy about 2,955,000 ha. Grazing starts here in early spring when vegetation just starts and then in fall when harvest is taken from the fields. These pastures are extremely important for livestock because they serve as first natural feeding source after winter, and are used for insemination, shearing, and dipping of sheep. It is important for livestock not to be taken to these pastures at the beginning of grass vegetation, which varies depending on the location. However these pastures in many localities are being grazed all year round causing overgrazing, erosion and overall degradation.

25. The targeted project areas will be located in the Centre and South of the country, in the mountaineous Naryn region. They are described in more details in Section 1.7.

26. Livestock Sector. Before the Soviet Era (1922-1991), pasture management was transhumant, harnessed by herders' knowledge in selecting locations taking into account climatic zones, communal rights and decentralized decision making on pasture grazing rights. The Soviet rule led to the collectivization of livestock with creation of state farms, division of labour and state ownership of livestock. During this time, livestock reached peak numbers, with the regimes scientists viewing LD as a temporal phenomenon that could be remedied[19]. The concept of carrying capacity was therefore applied to predict damage but not to manage it. Yet while land was owned by the state, some aspects of transhumance were maintained with management decisions made by rural councils. However, the pastures were overgrazed and showed increasing degradation. After 1991, the Post-Soviet Era saw dissolution of collective farms, livestock privatization while pastures were state owned and a collapse of rural economy. Livestock numbers fell considerably in the first 5 years after independence as subsidies and wages dropped as well as large scale animal slaughter to enable rural communities to survive the crisis period. The result of this privatization, lack of wages and facilities as well as low livestock numbers resulted in pasture use restricted to former Spring, Winter and Autumn pastures located in low and mid altitude near villages resulting in exhaustion and degradation. The post-soviet management systems have also potentially created alienation between herders and the pasture management, in systems that historically resign them to observatory role more than pro-active management. Capitalism has also encouraged the settlement of pastoralists, particularly in lowland winter pastures.

- **Niger**

27. Socio economic conditions. Agriculture, comprising livestock keeping and farming, is a major livelihood source for approximately 80% of the population found in rural areas and accounts for over 40% of the country's GDP[20]. With 10.5 million tropical livestock units, the country has the

[19] Source: World Bank. 2007. Integrating Environment into Agriculture and Forestry Progress and Prospects in Eastern Europe and Central Asia-Kyrgyzstan

[20] Source: World Bank 2013. Tackling climate change in Niger. Available at: http://www.worldbank.org/en/news/feature/2013/04/03/tackling-climate-change-in-niger (Accessed on 04/12/2014).

largest herd population in the Sahel region. The contribution of livestock to gross agriculture domestic product is 40%, but was much higher in the past.

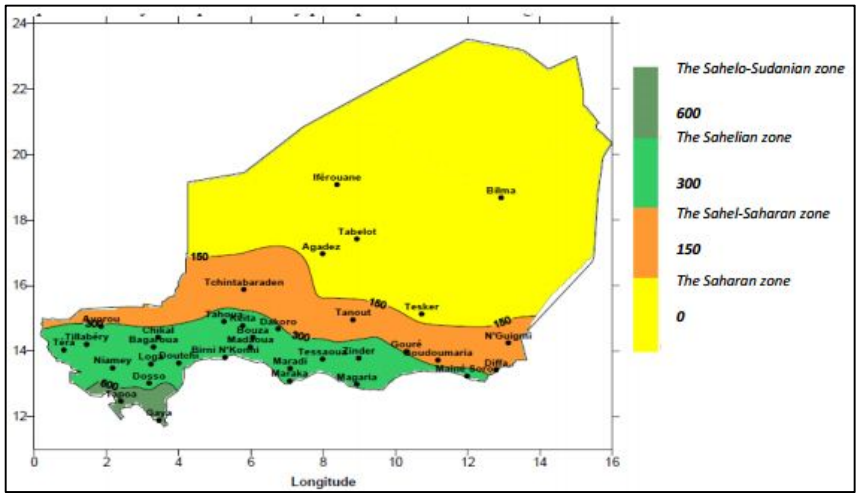
28. Geographic characteristics. As a landlocked country lacking moderating influences of a water body and situated at the centre of the Sahel, Niger is a desert country for a two/thirds of the territory. This geographical position and climate risk exposure makes it one of the most vulnerable countries to climate change and LD. Niger is one of the hottest countries in the world with two types of hot climates: a desert climate on the major part of its surface, and a semi-arid climate with only one rainy season.

29. Climate and agroecological zones. Using rainfall characteristics, the agro-ecological zones of the country are distinguished as:

    i. The Sahara zone in the North of the country representing around 65% of the national territory, with very scarce rains. The rainfall remains always less than 100 mm per year with long dry season and average temperatures higher than 35° C;
    ii. The Sahelo-Saharian zone covering 12.2% of the national territory with 200-300 mm rainfall per year. During this time, most rivers are temporary and only flow after precipitation;
    iii. The Sahelo-Sudanian zone covers 21.9% of the national territory comprising a drier Sahelian part in the North occupied by mainly of nomadic pastoralists. The rainfall varies from 300 to 600 mm per year; and
    iv. The Sudanian zone which receives more than 600 mm of rain per year, representing 0.9% of the national territory.

30. The project intervention areas will be located in the western part of the country, within the Sahelian and Sahel-Saharan zones.

Figure 6: Map of Niger's agro-ecological zones



31. Livestock Sector. The contribution of pastoralism to the GDP varies from time to time due to drought effects that often decimate animals especially in the last 30 years but the recent FEWSNET (Famine Early Warning Systems Network) report indicates a contribution of 14% to the GDP. Pastoralism is constrained by the distribution of water resources, which has also led to overexploitation and destruction of pastoral ecosystems even where they are not actively exploited. Though, the subsector has adapted itself to cope with various challenges through modification of herds' composition and transfer of animals from pastoral zone to southern agricultural regions deemed more favourable, but also more populated, which often provokes conflicts between pastoralists and farmers.

32. The livestock system in Niger could be classified into:

- *The pastoral zone*, where transhumance and nomadism dominate and largely falls within the Agadez Region, and covers the northern parts of most other regions (Tillaberi, Tahoua, Maradi, Zinder, and Diffa). Herds in these areas are adapted to the specific climatic and environmental conditions. This area has traditionally accounted for the vast majority of livestock, particularly camels and goats, although herd sizes are decreasing and transhumant pastoral households are increasingly moving south. It is mostly located in the Saharan and Sahel-Saharan agro-ecological zones;
- *The agro-pastoral zone* spanning the country from east to west, and all regions except for Dosso and Niamey, and accounts for two-thirds of the cattle herd in Niger. Agricultural activities have been increasing in these areas due to migration southward of transhumant pastoralists, and because high population density in the southern agricultural zones is pushing pastoral-dominant households northward. It is mostly located in the Sahel-Saharan and Sahelian agro-ecological zones; and
- *The agricultural zone* on the southern belt, wider in the west than in the east, spans the entire country and receives on average 400–600 millimetres of rainfall per year (up to 800 millimetres in southern Dosso areas)[21]. In this zone, livestock ownership favours the rich; 90 percent of cattle and 75 percent of small ruminants are owned by the wealthier farming households. It is mostly located in the Sahelian and Sahel-Sudanian agro-ecological zones.

33. The Tillaberi region in the southwest of the country where the project will intervene is straddling these three different livestock systems from north to south.

- **Uruguay**

34. Socio economic conditions. It is an essentially agricultural country that includes the livestock sector, crops, and forestry with agriculture constituting over 85 percent of the country's exports and earning about 10% to the country's GDP being the main source of foreign exchange[22]. The main activity of the country is extensive cattle and sheep rearing; more than 13 500 000 ha are under permanent pasture, almost 83% of the agricultural area[23]. Cattle raising is the most important activity of the primary sector; cattle are kept on more than 83% of farms. More than half of the cattle are for beef which is a main source of income.

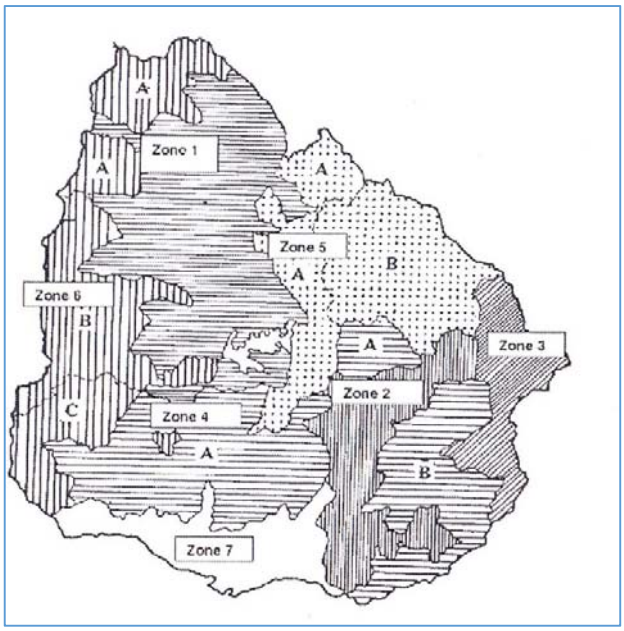
35. Geographic characteristics. Uruguay is situated in the south-eastern part of South America, located between 30° to 35° south and 53° to 58° west. It is bordered on the west by Argentina, on the north and north-east by Brazil, on the south by the Río de la Plata, and on the east by the Atlantic Ocean covering 176,215 km2 or 17.6 million hectares. The World Bank, in 2013 approximated the total population at 3.4 million and a GDP of USD55.7 billion.

36. Climate and agro-ecological zones. Uruguay has a subtropical to temperate climate with very marked seasonal fluctuations. Extremes in temperature are rare with precipitation fairly evenly distributed throughout the year, and annual amounts increase from southeast to northwest of the country. The climate is sub humid as potential evapotranspiration in summer is greater than precipitation causing water deficiencies in the soil. The annual potential evaporation is of 1,200 mm in the North and 1,000 mm in the South, and is maximum in the months of December and January and minimum in June. The highest precipitation occurs in summer and autumn; in the first season, precipitation is very irregular, having summers without precipitation and others with more than 600 mm of rain; in the second season, precipitation has minor variability. Although in winter precipitation has a somewhat smaller volume, there is no marked rainy season. It is possible to

[21] Source: World Bank. 2013. Agricultural sector risk assessment in Niger: Moving from Crisis Response to Long-Term Risk Management.
[22] Source: Mercosur Group, 2014: Agricultural Insurance Against Food Demand.
[23] Source: FAO, 2006. Country Pasture/Forage Resource Profiles-Uruguay. Available: http://www.fao.org/ag/agp/agpc/doc/counprof/PDF%20files/Uruguay_English.pdf

emphasize the great irregularity of rainfall, as much as in regularity as in intensity, which leads to droughts and floods that can happen in different seasons of the year. This irregularity is the main cause of problems in forage production.

Figure 7: Agro-ecological zones in Uruguay



37. The diverse and complex geology of the country has created a variety of soil types for a country of its size. This geology, soil types, climatic conditions and topography define the agro-ecological zones in the country as the following:

    i. Zone 1-Basalt: Characterized by shallow and medium soils, the area is predominantly used for livestock production. Cattle and sheep graze freely throughout the year with natural pastures covering 93% of the total land.

    ii. Zone 2. East "Sierras": Natural pastures represent 87% of the zone and cultivated and improved pastures 8.3%.

    iii. Zone 3. East Plains: 30% of this area is wetlands with rice being the major crop grown. Places with no rice production due to irrigation problems are used for extensive livestock production particularly cattle raising.

    iv. Zone 4. Granitic Centre (4A) and East Lomadas (4B): In this area, granitic soils cover an area of 469 000 ha. Soils are medium to deep, and suitable for agriculture. Natural pastures represent 69% of the zone and cultivated, improved and annual pastures 22%. The eastern hillocks of Lomadas cover 1 276 000 ha. The landscape is characterised by rolling hills while rocky areas (patches) are infrequent. Natural pastures represents 80% of the area and cultivated, improved and annual pastures cover 14%.

    v. Zone 5. Sandy soils (5A) and Northeast (5B): Zone 5A is mainly sandy soils and has an area of 1 237 000 ha. The landscape is characterised by rolling hills, with deep soils of low fertility. Major changes have occurred because of the rapid increase of forestry plantations based on Eucalyptus and Pinus representing 13% of the area on land that had been used for cattle and sheep. Natural pastures represent 79% and cultivated, improved and annual pastures 8%. Pasture production in terms of dry matter is high, mainly in spring and summer, but of low quality.

    Zone 5B is in the Northeast covers 1 500 000 ha. It is characterised by the heterogeneity of soil properties, such as texture, fertility and depth. Forages are mainly natural grasses that represent 87% of the area and cultivated with improved and annual pastures covering10%. Soils of the Northeast zone have a high potential for increased productivity and are suitable for winter, summer crops and cultivated pastures.

    vi. Zone 6. Deep soils, crops, intensive livestock and dairy production: Sub-zone, 6 A is in the North of the country covering over 846 000 ha mainly used for extensive livestock production. Natural pastures represent 90% of the total area and 6% correspond to cultivated, improved and annual pastures. In the last 20 years, irrigated rice has been increasing the cultivated area in this sub-zone. After rice harvest, it is possible to sow by plane highly productive clover and pasture crops. The production of these pastures is four times higher than the stubble.

    Sub-zones 6 B and 6 C have the most intensive livestock and crop production systems of the country and have a high proportion of cultivated pastures with the use of silage and hay to conserve forage. The main crops are wheat, barley, sunflower, sorghum, maize and soybean.

Sub-zone B covers 1 323 000 ha. Cultivated, improved and annual pastures represent 24% of the area, crops represent 8% and natural pastures 58%. In this zone 9% of the area is planted with trees such as Eucalyptus and Pinus.
Sub-zone C covers 711 800 ha. This is the area with the highest percentage of sown, improved and annual pastures reaching 38%. Crops cover 21% of the area and natural pastures only 40%.

vii. Zone 7. Deep soils: This is a dairying zone with vegetables and orchards. In these fertile soils south of the country, the mainly intensive production system is dairying producing milk for the internal market (60%) and the rest (40%) is exported. Orchard and vegetable production are also concentrated in this zone. This zone covers 886 000 ha. Natural pastures represent 48% of the total area whereas cultivated pastures, improved campo and annual forages 40%.

38. The project intervention areas will mostly be located in Zone1 and 2.

39. Livestock sector. Natural grasslands and rangeland cover have been changing over the years from sudden expansion of soy bean cultivation, even surpassing the cultivation of wheat; a dominant crop in Uruguay. The area under soybean cultivation increased from 89 km^2 to 8,000 km^2 between 2000 and 2009[24]. This expansion occurs at the expense of traditional crops, grazing pastures and native grasslands.

40. Currently, the categories of livestock production systems are notable as[25]:

- The rearing of animals on natural pastures or grasslands. In this system, shortage of food in winter typically leads to a loss of weight, followed by large weight gains in spring and then moderate gains over summer and autumn. Typically, when a "campo steer" is three years old, it weighs 330 to 380 kg, and it requires one more year of fattening;
- The rearing of animals on improved pastures. Improved nutrition and managed grazing means weight gains can be maintained through winter. Steers often reach 380 kg by the age of two;
- Intensive rearing systems, in which weight gains can be above 350 kg per year.

Land degradation (LD)in grass and rangelands

41. The Food and Agricultural Organization (FAO) of the United Nations defines LD as the reduction in the capacity of the land to provide ecosystem goods and services and assure its functions over a period of time for the beneficiaries of these.

42. In the world's pastoral systems, LD is a significant concern, although there are questions over the exact extent and nature of the challenge. Some sources suggest that the greatest threat to grasslands and rangelands are land use change through conversion to agro-ecosystems and urban landscapes.

43. The FAO's State of Land and Water (SOLAW- LADA) indicates that 40% of extensive pastoral land use systems and 58% of agro-pastoral systems are degraded. It is estimated that LD costs around USD40 billion annually worldwide, without even taking into account hidden costs of increased fertilizer use, loss of biodiversity and loss of unique landscapes[26].

44. The World Overview of Conservation Approaches and Technologies (WOCAT, 2009) estimates that 73 per cent of grasslands are affected by soil degradation, whereas Bai et al., (2008) found grasslands to be relatively underrepresented in degrading land (during the period 1981-2003) at only 10% and over-represented in the area of land that was improving. However, this analysis only showed vegetation changes during the monitored period and makes no assessments of what the authors call "the legacy of thousands of years of mismanagement in some long-settled areas". The bottom line is that there remains considerable uncertainty over the true extent of degradation in

[24] Source: FAOSTAT, 2010. Crop Production. Available at: http://www.fao.org/docrep/018/i3107e/i3107e03.pdf
[25] FAO, 2006 (ibid).
[26] http://www.fao.org/nr/land/degradation/en/

grasslands and rangelands, which is aggravated by a combination of weak data collection by many countries and poor understanding of what constitutes degradation in these ecosystems.

45. LD has several consequences such as reduced land productivity, socio-economic problems, including food insecurity, migration, limited development and damage to ecosystems. Degraded land is costly to reclaim and, if severely degraded, may no longer provide the range of ecosystem functions and services it once did, leading to a loss of the goods and many other potential environmental, social, economic and non-material benefits that are critical for society and development[27].

Previously developed LD and SLM assessment tools and approaches

46. Different LD and SLM assessment tools have been developed over time. The table provided in Appendix 4 summarises these tools, their strengths and weaknesses. The results of the latter will guide the development of the specific LD and SLM assessment tool and method to be developed as part of this project for pastoral areas including grasslands and rangelands. They will feed the overall approach and methodology and the lessons learned obtained from their implementation will be used as a basis for a sound and comprehensive design process. Some of the main tools the projects will build upon to assess land degradation at different scales are described in the following section.

47. In order to improve the ability to diagnose the LD problem and its impacts, the GEF and FAO/UNEP supported the Land Degradation Assessment in Drylands (**LADA**) project, which in Partnership with the World Overview of Conservation Approaches and Technologies (WOCAT) further developed the LD and SLM mapping methodology and tested it together with six LADA-pilot countries. The LADA project started in 2006 with the aim of creating the basis for informed policy advice on LD at global, national and local level. The main LADA objective was to develop tools and methods to assess and quantify the nature, extent, severity and impacts of LD on dryland ecosystems at national, sub-national and global levels. The project developed innovative tools and methods that were analytical and process oriented, geo-referenced and multi-level by combining information from land use systems, expert knowledge and sample sites. The LADA project developed manuals for conducting local level LD assessment, as well as guidelines and a database software.

48. LADA is based on the DPSIR (Driving Force – Pressure – State – Impact – Response) [28] framework as follows:

    - State of land degradation – type of land degradation (soil, biological and water);
    - Direct pressures towards land degradation – over-exploitation of vegetation;
    - Wider influences on land degradation "driving forces' – access rights/tenure;
    - Impacts of land degradation – impact on ecosystem services; and
    - Responses – macro-economic policies.

49. The participatory and decentralised approach of LADA has proven an effective way of gaining national understanding of the state of degradation at that level and it is the first important step towards integrated assessments. The involvement of a wide stakeholder base is also attributed to the success of the wide-scale acceptance of assessment results.

50. Through LADA, a global assessment of LD was conducted (34 databases) as well as six national assessments (one per pilot country and 22 local assessments). Land cover change studies in Cuba, Senegal, South Africa and Tunisia were also realized. In total, LADA activities have been carried

[27] http://www.fao.org/nr/land/degradation/en/

[28] DPSIR framework has been developed by the European Environment Agency (EEA) from the OECD PSR (Pressure, State, and Response) System (Vogt et al. 2011).

out in 26 countries. Moreover, over 1,000 people were trained on the jobs in the pilot countries and 46 additional countries were trained through awareness raising workshops.

51. The LADA project also produced two global products. The **Global land degradation assessment and improvement (GLADA)** was developed by ISRIC and analysed remote sensing data to identify degrading areas and areas where degradation has been stopped or reversed based on vegetation greenness. GLADA estimated that 22% of agricultural land was undergoing degradation between 1981 and 2006 equal to 17.6% of total land degradation observed.

52. In addition, FAO developed the innovative **Global Land Degradation Information System (GLADIS)** which shows that more than 30% of the global land area, and an even larger area of the inhabitable or productive land area, are subject to significant degradation processes (i.e. strongly or moderately degraded and degrading). As expected, the drylands are most prone to land degradation as a result of vegetation degradation and reduced land cover; however, also humid areas, and especially rainforests, are fragile environments prone to rapid degradation if not properly managed. GLADIS also confirms the positive correlation between poverty and land degradation (more poor people in degraded areas than in areas with stable or improving land resources). GLADIS confirms the premise that impact assessment, in terms of human wellbeing, livelihoods and vulnerability, as well as in terms of natural resources/ ecosystem health, sustained provisioning of ecosystem services and resilience (to change, shocks and extreme events), is required to justify investment in SLM.

53. As a follow up of the LADA project, the GEF recently approved a USD 6 million project called "**Decision Support for Mainstreaming and Scaling up of Sustainable Land Management**". Compared to LADA, this project put more emphasis on (i) SLM mainstreaming into national agricultural and environmental plans and investment frameworks, policies and programs and (ii) scaling out of SLM best practices from local to national level. The main partner of this project is the CDE (Center for Development and Environment)/WOCAT Secretariat and the project will be implemented in 15 pilot countries.

54. The FAO, in collaboration with numerous contributors in the context of on-going GEF financed climate change projects, has contributed to the development of the **Self-evaluation and Holistic Assessment of climate Resilience of farmers and Pastoralists (SHARP) tool**. This tool addresses the need to better understand and incorporate the situations, concerns and interests of family farmers and pastoralists with regards to climate resilience. The tool is the only participatory assessment of climate resilience of farmers and pastoralists at the individual household and community level. Resilience is a key concept when it comes to land degradation, food security and improved livelihood for the rural poor. SHARP is a holistic and participatory resilience assessment tool that addresses the current lack of resilience participatory assessments at the household level. The assessment is undertaken through an iterative participatory survey that takes into account the situations, concerns and interests of family farmers and pastoralists regarding climate resilience. Since May 2013, more than 450 farmers have tested SHARP though projects implemented in Mali, Angola, Mozambique, Niger, Burkina Faso, Uganda and Senegal[29]. The 52 survey questions encompass the four following areas: agricultural practices; natural resources and environmental conditions; social aspects; and economic variables.

55. SHARP is implemented through 3 different phases. The first phase is the participatory self-assessment survey. The second phase consists in a gap analysis and assessment of the survey at both the local level and through a cross-sectional review of multiple assessments. The third phase aims at using the results of the assessment to guide farmers and agro-pastoralists' practices, and at integrating the results into government policies and upcoming projects. The participatory and holistic characteristic of SHARP will be guiding the development of the future LD assessment and monitoring method for pastoral areas.

56. WOCAT has also developed standardized tools to enable the global documentation, assessment and monitoring of soil and water conservation knowledge. A set of three comprehensive questionnaires

[29] FAO. 2014. *Self-evaluation and Holistic Assessment of climate Resilience of farmers and Pastoralists*

and corresponding databases were developed to document all relevant aspects of soil and water approaches, and map their area coverage. The database focuses on case studies that describe the technology and its human and natural environment, where it is used, and which approach was used for its implementation. The questionnaire and database of soil and water conservation map aims at providing a spatial overview of soil degradation and conservation. **The mapping methodology covers assessment of land use, soil degradation, soil and water technologies and aspects of soil productivity**. Data are collected through a "Participatory Expert Assessment" method which includes both expert knowledge and existing documents and which reflects the current state of knowledge. Ideally several experts who know the status of the land sit together and fill in the data in a process of negotiation and consultation of existing documents. By using the base map in the country or region, information on land use, soil degradation, soil and water conservation, and productivity issues need to be entered into the matrix table.

57. The mapping methodology comprises of an interactive mapping tool for data entry and map viewing. The maps generated from this process can be at any scale from local to global levels and are aimed at supporting planners and decision makers to make informed decisions related to future investments. They also help identify knowledge gaps and research priorities.

58. **Collect Earth**[30]. In the context of its Drylands foresty Programme and in particular the Great Green Wall for the Sahara and the Sahel Initiative, FAO is building a monitoring system in collaboration with its partners using a multi-phase sampling design with the aim of synergistically combining satellite remote sensing and field data. The monitoring system will be able to track land use, land-use change, and changes in forests, trees outside forests, shrubs, grasslands and rangeland, and permanent and ephemeral water bodies.

59. Collect Earth is a tool that enables data collection through Google Earth and allows geo-links with Bing Maps and Google Earth Engine to access freely available satellite imagery. The data collection is done through an area or point sampling approach, and satellite data are evaluated by visual interpretation. Collect Earth allows users to simultaneously visualize very-high-resolution satellite imagery and the entire Landsat satellite data archive. The Landsat archive is visualized and analysed through Google Earth Engine, which allows the users to go back as far as 1975 and can provide high-resolution data at a monthly frequency dating from 2001. Collect Earth includes an open source statistical tool, Saiku, which facilitates data aggregation, analysis and visualization.

60. The tool is being used to complete a first Global Drylands Assessment. Field data collection will be guided by the results of the remote sensing data analysis, and its scope will be to collect detailed biophysical land information. The first results of this global assessment will be published in 2016.

61. In both the Global Drylands Assessment and the Great Green Wall for the Sahara and the Sahel Initiative monitoring system, historical satellite data will be used to set up a baseline starting in 2001. Future full land assessments will be repeated every two years, and project results will be assessed relative to the historical baseline.

62. To effectively monitor ecosystem resilience, the Commonwealth Scientific and Industrial Research Organization (CSIRO) in partnership with the Scientific and Technical Advisory Panel of the Global Environmental Facility (STAP/GEF) have developed the **Resilience, Adaptation Pathways and Transformation Assessment (RAPTA) Framework** in 2015. This framework is intended to meet common objectives across the three Rio Conventions (UNFCCC, UNCCD and CBD), the SDG and the GEF land degradation strategy. The development of this assessment framework to resilience, adaptation and transformation represents an opportunity to align approaches and monitoring towards common objectives, contribute to integrated strategies, and pursue synergies in reporting between the Conventions. The procedure of the RAPTA framework is an iterative method for assessment. It is to be conducted at focal scale with a multi-stakeholder engagement, and following a 4 step process: a) system description; b) assessing the system; c) adaptive governance and management;

[30] http://www.openforis.org/tools/collect-earth.html

and d) multi-stakeholder engagement[31]. The RAPTA framework is flexible and will lay the ground for the assessment and monitoring system to be developed under the proposed project.

1.1.2 Status, threats and drivers of land degradation in the pilot countries

63. The objective of the project aims at strengthening the capacity of local and national stakeholders to assess LD in grassland and pastoral areas and make informed decisions promoting SLM in a way that preserves the diverse ecosystem services that grasslands and rangelands provide.

64. For that purpose, the project encompasses five pilot countries: Burkina Faso, Kenya, Kirghizstan, Niger and Uruguay with a diverse range of grasslands and rangelands and pastoralists ethnic groups and practices. Despite the diversity of situations between these countries, common features of land degradation emerge from all of them.

65. Common threats posed by LD include a decrease in soil fertility leading to the increase of poverty, food insecurity and outmigration in some instances. LD also has adverse impacts on biodiversity and genetic resources, and can lead to resources shortages which foster conflicts over land resources.

66. LD is driven by a multiplicity of factors, some of which can be found in several pilot countries. LD drivers can include: the clearing of land for agriculture, overgrazing, urban expansion, increasing flood, droughts and other extreme climate events as a result of climate change, fire and overexploitation of land due to poverty.

67. The table below is based on the background country reports realized during the PPG and summarizes the LD status, main threats and drivers in each pilot country.

[31] CSIRO. 2015. The Resilience, Adaptation and Transformation Assessment Framework: from theory to application.

Table 1: Status, threats and drivers of land degradation in the five pilot countries

Countries	Status	Threats	Drivers
Burkina Faso	About 40% of Burkina Faso is degraded translating into reduction of productive capacity of between 25-50% and making it the most degraded country in West Africa. Major problems include loss of top soil containing nutrients due to wind and water erosion especially in the Northern part of the country where there is low vegetation cover as well as salinity from inappropriate irrigation practices. Nutrient depletion is also attributed to reduced fertilizer use and shortening of fallow periods. Burkina Faso is part of the Great Green Wall for the Sahara and the Sahel Initiative (GGWSSI), the initiative aims to support the efforts of local communities in the restoration, sustainable management and use of forests, rangelands and other natural resources in drylands. The overall goal of the GGWSSI is to strengthen the resilience of the region's people and natural systems with sound ecosystems' management, sustainable development of land resources, the protection of rural heritage and the improvement of the living conditions of the local population.	- The various forms of land degradation result in loss of productive land both arable and pasture lands critical for food, feed, water and air quality. LD is negatively affecting food security and thus threatening livelihoods. The population is also under pressure to move to more productive areas resulting in resource pressure and potential conflicts from scarcity. The Southern part, initially lowly inhabited has seen growing populations and deforestation of its tropical dry forests as people from arid zones of the country try to get away from reeling impacts of drought and clearing of forests for crop production. Loss of vegetation cover results in erosion, desertification and reduced fertility but also loss of biodiversity above and below ground.	- Increasing livestock and human populations exert pressures on natural resources leading to degradation and desertification - Enhanced recurrence of dry years, prolonged droughts and extreme weather events as a result of climate change - Distortion of land tenure rights contributing to unfavorable practices and LD.
Kenya	Kenya has been trying to combat desertification and reduce drought effects since 1940s. Erosion is very high in the Drylands where rainfall intensity is usually high, yet very short, with high evapotranspiration rates. However, government policies in the Drylands have often been inadequate in spite of their social, cultural and economic importance.	- Land degradation has indirectly triggered and increased conflict risk in Kenya especially among rural communities - LD is responsible for the loss of genetic diversity within and among species - Degraded land losses its productive value and threatens sectors such as agriculture that earns direct and indirect income to the country. - LD, coupled with climate change, is undermining food production and therefore food security - Invasive species that have been introduced to reverse degradation have led to further degradation - Reduced fertility of land, loss of livestock from poisoning by invasive species, inability to purchase fertilizers, devastating drought effects all conspire to	- Population pressure where rising demand for land is causing people to overexploit and carry out unsustainable practices in fragile areas - The rising economic growth in Kenya has led to inflation of land and increasingly changing of ownerships and land use (more rural people selling and leasing to new comers) - Agriculture expansion and intensification are accelerating LD - Influential individuals have corruptly acquired lands, initially held in trust by communities, for private and commercial purposes - Increasing droughts and flooding as a result of climate change are exacerbating LD

Countries	Status	Threats	Drivers
		worsen vulnerable livelihoods of the rural communities reliant on natural resources such as land.	- Poverty leads to the continued tilling of already degraded areas and forces further expansion into fragile areas with no proper incentive for SLM - Insecurity due to ethnic conflicts with neighboring communities has pushed pastoralists to marginal and drier areas leading to their degradation.
Kyrgyzstan	Land degradation problems in Kyrgyzstan include (i) soil degradation; fertility depletion, soil erosion, loss of vegetative cover, and salinity; (ii) deteriorated irrigation systems, water loss and inefficient water utilization; (iii) degraded pasturelands; (iv) deforestation and inadequate regeneration and afforestation; (v) loss of genetic and biodiversity resources; (vi) floods and landslides; and (vii) deterioration in water and air quality and pollution. Kyrgyzstan is located in the Aral Sea Basin. an arid to semi-arid region, where the majority of the area (68%) is occupied by sparsely vegetated deserts and grass/scrublands. Over the past thirty years, desertification, land degradation and droughts have severly impacted Central Asia and had significant economic and social impacts on agriculture and related sectors. Agricultural yields are reported to have declined by 20–30% across the Central Asian region since independence, causing annual losses of agricultural production. Desertification processes, degradation of natural resources and land use change and fragmentation have also caused biodiversity loss and rendered extensive areas incapable of fulfilling important ecosystem functions such as carbon storage / sequestration[32].	- LD threatens to worsen pasture quality and to lead to resource shortages which contributes to disputes that eventually turn into conflicts - Economic losses of individual incomes and state level fall in GDP contributions - Pastures are important sources of native habitat of various sorts of flora and fauna and without proper management and sustainable use of pastures biodiversity will be lost - Deforestation to meet local energy needs contributes to a significant loss of irreplaceable ecosystem services - Out migration reduces available rural labor for herding livestock on distant pastures and eventually leads to scarcity in new areas which can result into conflicts - Kyrgyzstan is vulnerable to climate threats such as landslides and mudslides in case of high precipitation, LD threatens to increase these risks.	- Disruption of transhumance herding during the period of state regulation - Concentration of herds near villages and areas near road infrastructure is leading to overgrazing and subsequent LD in these areas. - Change in livestock composition, as the number of goats is increasing and the number of sheep decreasing - Climate change has contributed to degradation through events such as landslides, avalanches and mudflows and also rising natural disasters. The result is rapid loss of top soils reducing soil fertility and subsequent LD. - Over-exploitation and deterioration of the natural resource base, particularly through inefficient irrigation and unsustainable agricultural practices (e.g. mono-cropping of cotton, inappropriate use of fertilizers and pesticides, inadequate soil management, overgrazing of pastoral lands) - Significant environmental stresses on agricultural lands are leading to declining productivity of agro-ecosystems and reduced livelihood security in production landscapes - Demographic trends, rising demand for energy and food, and economic development are increasing pressure on all the region's finite common property resources (e.g. water, soil and forestry).
Niger	Niger suffers from the encroachment of the desert. The sand is blown over from the Sahara desert and covering most areas of the country. Niger lost 26%	- As the land gets degraded, many people in the country face food insecurity	- Niger's population has been increasing rapidly, putting pressure on resources

[32] FAO. *CACILM 2. Drough-prone and Salt affected Agricultural Landscapes in Central Asia and Turkey*.

Countries	Status	Threats	Drivers
	of its forest cover and woodlands between 1990 and 2005[33]. Frequency of droughts has increased, leading to further LD and depletion of natural resources and soil nutrients. Recent efforts have been focused on "re-greening" the country and positive results have been recorded. As part of the GGWSSI initiative, various partners are working in the country to achieve the goal of strengthening the resilience of the people and natural systems with sound ecosystems' management, sustainable development of land resources, the protection of rural heritage and the improvement of the living conditions of the local population.	- LD negatively impacts the agricultural sector which is a hindering factor to poverty reduction in the country and achievement of globally agreed sustainable development goals - Degradation of soil, water and forest resources threatens the survival of most species - As more land gets degraded and unable to support livelihoods, migration is common with potential conflicts arising over use and ownership of scarce resources.	- The increasing population has led to overexploitation of resources to meet rising needs - Conflict associated to natural resource use, such as those experienced between herders and farmers - Climate change factors such as high temperatures, drought, rainfall variability and flash floods lead directly to land degradation - Land degradation worsen poverty, which also exacerbate land degradation, creating a vicious circle of poverty.
Uruguay	It is considered that 30.1 per cent (almost 5 million ha) of the pasture land is degraded, and 400,000 ha are considered severely degraded[34]. Weathering is advanced in some areas and many soils have undergone a relatively intense leaching.	- Soil degradation in the country has contributed to a loss in soil productivity and related ecosystems. - Other indirect costs of degradation includes costs of replenishing lost nutrients and depreciation of land in affected areas.	- The unsuitable use of resource in grasslands and rangelands has led to pasture degradation - Inflation in prices of land has led to increased herd sizes with disregard for investment in soil, vegetation and land. Continuous stocking, high stocking rates and high cattle/sheep ratios has led to compaction, loss of fertility, erosion and loss of some native species. - Uruguay is also undergoing agricultural expansion and intensification. Total grain production quadrupled on last 15 years as agriculture expanded into new frontiers. Agricultural expansion continues to occur in marginal areas where soil quality is not adequate in supporting intensive agriculture leading to soil erosion[35].

[33] Source: Butler, R. A. 2006. A Place Out of Time: Tropical Rainforests and the Perils They Face.

[34] FAO, 2006 (ibid).

[35] Hill, M and Clérici, C. (2013). Avances en políticas de manejo y conservación de suelos en Uruguay

1.1.3 Institutional framework and International Cooperation

The United Nations Convention to Combat Desertification (UNCCD)

68. During the Rio Earth Summit, held in 1992, climate change, biodiversity loss and desertification were declared the greatest threats impeding progress to achieving sustainable development. To address the desertification challenge, the UNCCD was established in 1994; it is the sole legally binding international agreement linking environment and development to SLM. The conventions' core mandate has been placed on securing land productivity and resilience for the wellbeing of dryland inhabitants. The aim of the strategy is to mainstream SLM practices into policy, specifically in the arid, semi-arid and dry sub-humid areas, known as the drylands.

69. After a decade of implementation, the UNCCD adopted a 10-Year Strategy (2008-2018) to enhance the implementation of the Convention at its 8th Conference of the Parties (COP) in 2007. The UNCCD ten year strategy aims at: *"to forg[ing] a global partnership to reverse and prevent desertification/land degradation and to mitigate the effects of drought in affected areas in order to support poverty reduction and environmental sustainability"* (UNCCD 2012). The Strategy recognizes that limiting factors have prevented optimal deployment of the Convention and that chief among these factors are insufficient financing, a weak scientific basis, insufficient advocacy and awareness among various constituencies, institutional weaknesses and difficulties in reaching consensus among parties. COP8 invited the GEF to take the Strategy into consideration when planning and programming for the 5th replenishment period. Since 1996 the UNCCD has tried to identify a set of indicators to monitor desertification and degradation, but with no success. Finally, COP9 of the UNCCD (Buenos Aires, 2009), as a result of its first Scientific Conference, invited the Committee on Science and Technology to consult with LADA and WOCAT on LD and SLM impact indicators and related methodologies for assessment and monitoring, emphasizing the demand for the LADA and WOCAT tools and methods in the implementation of the UNCCD.

70. The major outcome of UNCCD-COP12 was the adoption of land neutrality (LDN) target. Within the LDN framework, countries have committed to ensuring that the amount of healthy and productive land stabilize starting in 2030. The parties also agreed on the indicators they will use to measure progress, strengthen measures to make the land resilient to climate change and to halt the biodiversity loss that follows the destruction of ecosystems. Countries are expected to formulate voluntary targets to achieve LDN according to their specific national circumstances and development priorities. LDN targets directly responds to countries achieving SDG 15- Life on Land and specifically meeting target 15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land-degradation-neutral world.

71. All Rio Conventions (UNCCD, Convention on Biological Diversity (CBD), the United Nations Framework Convention on Climate Change – UNFCCC), together with the Sustainable Development Goals (SDG) and the Bonn Challenge, ask that countries and partners track and report progress. Effective monitoring increases visibility and is a pre-condition for greater investments in drylands.

The Rome Promise on Monitoring and Assessment of Drylands for Sustainable Management and Restoration

72. FAO's Committee on Forestry recommended, during its 22nd session in 2014 that a global assessment of the extent and status of dryland forests, rangelands, trees outside forests and agro-sylvo-pastoral systems be included in the FAO Global Forest Resources Assessment, contingent upon the availability of extra-budgetary funding. In this context, FAO and partners such as the World Resources Institute and IUCN, with funding support from GEF and EU-ACP, held back-to-back workshops on dryland monitoring and assessment for sustainable management and livelihoods in Rome on January 19th – 23rd, 2015.

73. The objectives of the monitoring and assessment of drylands workshop were to (i) assess the gap between the need and the current state of drylands monitoring; (ii) explore the opportunities offered

by new technology and policy commitment; and (iii) initiate a collaborative process to promote large-scale, comprehensive monitoring of drylands, grasslands and rangelands.

74. Many recommendations and lessons learned were drawn from the joint organization of the Drylands Monitoring Week. There was a general recognition of the significant gap between data needs and availability to perform quality assessment and monitoring. The workshop also highlighted a growing political interest to expand dryland monitoring systems. The rapid growth in new monitoring systems technologies, including new user-generated data, was considered as an opportunity. However, it was noted that the integration and compilation of existing monitoring tools are still weak and could be strengthened. Mechanisms for sharing data and information also need to be expanded, in particular to reinforce the use of existing monitoring systems into global level policy processes. During the week, it was recognized that one of the targets of an appropriate monitoring system is the sustainability over the time, which is to be based on the interest that stakeholders show to use the system for planning, management and investments.

75. One of the major outputs of the Dryland Monitoring Week is the "Rome Promise on Monitoring and Assessment of Drylands for Sustainable Management and Restoration" to which participants subscribed to. The promise includes the following commitments:

    (i) Form an open-ended collaborative network (or community of practice) to advance assessment and monitoring of drylands, including understanding of their users;
    (ii) Communicate the value and importance of drylands monitoring to relevant stakeholders, including policy makers and resource partners;
    (iii) Develop a dynamic roadmap for collaborative action.

    The Rome promise also promotes the need for collaboration between processes, programmes, and projects.

    The project will contribute to the UNCCD and associates efforts and partnerships by supporting countries in assessing the status of land degradation in their drylands and to form adequate decisions in order to revert negative trends in a participatory manner. At the same time the results will contribute to the national reporting on implementation of the Convention to the Conference of the Parties (COP).

1.2 RATIONALE

1.2.1 Baseline Situation

76. The baseline situation of this project is characterized by a number of existing tools to assess and monitor LD, each of them presenting different characteristics, strengths and weaknesses. These tools, presented in the background report prepared by IUCN as part of the PPG study, are summarised in the table in Appendix 4. The global GEF/FAO project will build upon the strengths of these tools.

77. The project will be embedded into the work programme of the **IUCN Global Drylands Initiative (GDI)**, in collaboration with the FAO programme on the Global drylands assessment (forests, trees, shrubs and grasslands) and the FAO Multi-partner program support mechanism. The GDI supports the sustainable management of dryland ecosystems and the conservation of dryland biodiversity. The GDI generates evidence of dryland condition and trends through adapted assessment approaches that operationalize current understanding on non-equilibrium dryland ecology. The Initiative strengthens natural resource governance in drylands through strengthening of resource rights, establishment of institutional mechanisms for ecosystem management, and development of enabling conditions for policy implementation and revision. The GDI supports countries to meet their obligations to the UNCCD through revision of Action Programmes and supporting progress towards Land Degradation Neutrality.

78. This project will be integrated into the first priority area of the IUCN GDI, e.g. Strengthening Evidence for Targeting and Monitoring in Dryland Ecosystem. Under this priority area, IUCN is developing adapted and scalable methodologies for assessing non-equilibrium dryland ecology, to provide stronger evidence for policy and investment decisions from local to global levels. This includes current work in Kenya, Burkina Faso and Jordan to link participatory rangeland assessments with national monitoring mechanisms. The proposed approach under that project is based on lessons learned from GDI's interventions in the countries.

79. In each of the selected pilot countries of the current project, initiatives related to grassland, LD and SLM have been taking place. The section below gives an overview of the on-going initiatives at national level for each of the five pilot countries – initiatives upon which the proposed GEF project will build upon and collaborate with.

- **Burkina Faso**

80. FAO has a number of initiatives already on-going or set to take off in Burkina Faso. FAO Forestry Department is continuing its support to the Great Green Wall for the Sahara and Sahel Initiative (GGWSSI) through the project "**Action against desertification in support of the implementation of the Great Green Wall for the Sahara and the Sahel initiative and South-South Cooperation in ACP countries"** (GCP/INT/157/EC). The project has a total budget of around EUR 34 million and was started in August 2014 for a duration of 55 months. This European Union (EU)/ African, Caribbean and Pacific Group of States (ACP) funded project is implemented by FAO in collaboration with the African Union Commission (AUC), GM/ UNCCD, Walloon region Belgium and Royal Botanic Gardens of Kew. The objective is to improve the condition and productivity of the agro-silvo-pastoral landscapes affected by Desertification, Land Degradation and Drought (DLDD) in 8 ACP countries[36], one of them being Burkina Faso. Expected outcomes of this project are very closely related to those of the GEF project including: 1) Enabling environment and capacity of relevant stakeholders for cross-sectoral planning, financing and M&E for SLM and forest landscape restoration and sustainable management; 2) Adoption and implementation of sustainable land/forest management practices and technologies in one landscape unit per country; 3) Knowledge management, awareness and communications on DLDD and resilience to climate change. The present GEF/FAO project will closely collaborate with this EU/ACP project, developing and testing the participatory LD and SLM assessment and monitoring system, including a framework of indicators, in the same pilot site and with the beneficiaries of the EU/ACP project for sustainable land/forest management practices and technologies.

81. In Burkina Faso, the EU/ACP "Action Against desertification" project is contributing to the implementation of the Great Green Wall national action plan. The project covers a 15,501 km^2 area encompassing 12 communes from the Sahel region, including Dori which will also be a pilot site for the proposed GEF project (see Section 1.7). The EU/ACP project focuses in particular on:

- Setting up a Great Green Wall regional partnership platform to ensure coordination between the various interventions;
- The restoration of 10,000 ha of degraded land. The objective is that communities restore 500 to 1,000 ha/year and restore 1,500 to 2,000 ha/year. Restoration interventions will be monitored based on the assessment of biophysical characteristics and land use with the Collect Earth tool developed by FAO (see below);
- Integrated community-based protection of 3,000 ha through the recovery of degraded land by using Delfino ploughs, and land restoration by species diversification;
- The production of woody and herbacesous species (useful for food, fodder, etc) seedlings with local species selected by communities;
- The diversification of underprivileged population's sources of income through the promotion of new income generating activities; and

[36] Burkina Faso, Niger, Nigeria Senegal, Ethiopia, Gambia, Fiji and Haiti

- Capacity development for the planning,implementation and monitoring of SLM and income generating activities.

82. In Burkina Faso, the project will collaborate with the General Directorate of pastoral resources management.

83. IUCN is implementing an International Livestock Research Institute (ILRI) funded project: Enhancing the value of ecosystem services in pastoral system in Burkina Faso and Kenya. This USD 100,000 project aims to assist policymakers, planners and pastoralists in using insights on the role of ecosystem services to support the livelihoods of pastoralists and to identify grazing and rangeland management options that will strengthen livelihood support over the long-term.

84. The Collect Earth tool will be used by the Action against Desertification project in addition tomulti-phase National Forest Inventories; and Land Use, Land Use Change and Forestry (LULUCF) assessments. Application also includes monitoring agricultural land and urban areas. In early 2015 several workshops have been held including in Rome and in Niamey in collaboration with Agrhymet regional Center, allowing representatives from various countries in the Sahel including from Burkina Faso to be trained on the use of Collect Earth. Further training and assessment were also followed by the teams trained. The Biophysical baseline assessment is now completed for the Action Against Desertification project intervention area which is the same area as the pilot sites proposed in Burkina Faso and Niger (see section 1.7 below). Collect Earth will be useful to the project for proposed Activity 1.2 which aims at consolidating secondary data on target districts/sites on latest assessment approaches, indicators, sampling techniques and remote sensing.

- **Kenya**

85. In Kenya, IUCN-Kenya is implementing a project on **Building drought resilience through land and water management**. The specific objective of the project is to improve the resilience of dryland communities, to the impacts of increasingly severe and frequent drought and floods, within well-managed river catchment ecosystems. This project has components of resource mapping and tracking of rangeland healthy status as a result of project interventions. It will be implemented over the 2015-2018 period, in Garissa and Tana River Counties. Garissa County will be one of the two pilot sites in Kenya under this GEF project.

86. The project will closely collaborate with the Directorate of Livestock Production in Kenya. It is involved in the Resilience and Economic Growth in Arid Lands – Improving Resilience (REGAL-IR) project, which is implemented in Garissa, Isiolo, Marsabit, Wajir and Turkana counties. Isiolo County will be the second pilot site in Kenya. This project aims at reducing hunger and poverty, increasing resilience and social stability, and building a foundation for economic growth among pastoral communities in northern Kenya's arid and semi-arid lands. It will be implemented over the 2012-2017 period.

87. As mentioned above under Burkina Faso, IUCN is also implementing the ILRI funded project Enhancing the value of ecosystem services in pastoral system in Kenya.

- **Kyrgyzstan**

88. The **Mountain Partnership Secretariat** (MPS), hosted at FAO is a UN alliance of partners dedicated to improve the lives of mountain people and protecting mountain environments. MPS has some on-going activities in Kyrgyzstan supporting pasture management. For instance, one of its joint projects has produced a herder manual as a tool to facilitate capacity development of village institutions, herders and other relevant stakeholders for the sustainable management of pastures. The MPS will play a prominent role as a baseline project in the implementation of the second component of the GEF project regarding pastoral advocacy networks to influence policies.

89. The Department of Pasture will be the main national partner in Kyrgyzstan.

- **Niger**

90. There are a number of FAO initiatives underway in Niger. FAO Forestry Department is continuing its support to the GGWSSI through the project "**Action against desertification in support of the implementation of the Great Green Wall for the Sahara and the Sahel initiative and South-South Cooperation in ACP countries"** (GCP/INT/157/EC). This EU/ACP project is implemented in eight ACP countries[37], including Niger and Burkina Faso. The project is described in more details above, as a baseline initiative in Burkina Faso.

91. In Niger, the EU/ACP project will focus on:

    - Creating an enabling environment for the coordination and collaboration between stakeholders, and building capacities;
    - Improving the SLM of 12,000ha through: restoring 5,000ha of degraded land; rehabilitating 1,500ha of degraded land for agriculture and another 1,500ha for pastoral use; afforesting 2,000ha of agriculture land with fertilising forest species; adapting 1,000ha of natural forest for fuelwood production; and creating 2,000ha of new plantations with fast growing tree species.
    - Establish a biophysical (through the use of Collect Earth) and socio economic baseline and monitoring system for the intervention zone; and
    - Improve rural populations' resilience to climate change.

92. Ministry of Livestock will be the main national partner in Niger.

93. Similar to Burkina Faso, Collect Earth is being used in Niger in the FAO's Action against desertification project. It will support multi-phase National Forest Inventories; and Land Use, Land Use Change and Forestry (LULUCF) assessments. This will also include monitoring agricultural land and urban areas. Early 2015, representatives from Niger were trained on the use of Collect Earth during workshops that were held in Rome and in Niamey. The Baseline assessment is now completed for the Action Against Desertification project intervention area which is the same area as the pilot site proposed in Niger (see section 1.7 below). Representatives from Niger and Burkina were also trained in LADA in a workshop in Niamey in 2012.

- **Uruguay**

94. The Ministry Of Agriculture, Livestock and Fisheries (MGAP) in Uruguay will be the main national partner.

95. Some maps of the entire country exist but are insufficient to land use planning at farm level. In response to this, the National Agriculture Commission for Study of Earth Sciences, under MGAP, is developing new maps at scale of 1: 40,000 for the whole country expected to generate better land use planning tools for practitioners, technicians, companies and producers. Within this framework, the development of a GIS map of natural grasslands of geomorphological regions is on-going. The areas covered include Sandstone, Basalt, Lens Central, Eastern and North eastern Cristalino. The aim of the initiative is to characterise the heterogeneity of natural grassland ecosystems to enable better management of this resource. The specific objectives include: i) Updating and complementing the classification of natural grassland communities of the regions; ii) Generating maps of natural grassland communities described for each geomorphological unit selected; iii) Characterize the temporal Aerial net primary productivity of each of the described communities and their spatial variability; iv) Analyse the temporal behaviour and trends of indicators of Aerial net primary productivity (ANPP) and its dynamics at the regional scale for the period 1981-2013 and correlate the information generated with descriptions of land use, soil and climate data based on the available information and v) ANPP monitoring at farm level through Forage Tracking System (SEGF) in at least100 properties. These maps and GIS data will be made available to the GEF project.

[37] Burkina Faso, Niger, Nigeria Senegal, Ethiopia, Gambia, Fiji and Haiti

96. Other initiatives are on-going such the development of sustainable patterns of production and consumption of goods and services in protected areas. This project is funded by the French Global Environment Facility (FFEM) with a budget of EUR 1 milion for 4 years beginning 2015. The purpose of the project is to ensure adoption of sustainable modes of production and consumption of goods and services produced in protected areas and their local environments, which contribute to the protection of natural and cultural heritage, improving the economic capacities in value chains and conditions life of the inhabitants while strengthening governance in these territories. The GEF project outputs such as the assessment of LD and the tools developed to monitor will feed into informing the development and adoption of such sustainable production modes.

97. The **Pastoralist knowledge hub (PKH)** is an FAO initiative through which information can be developed, shared and used among pastoralists. The PKH is active in Latin America, where it collaborates with different pastoral networks such as the "Pastoramericas" network, and will be a key platform for dissemination of lessons learned and best practices collected as part of this project. The objective of the Pastoralist Knowledge Hub is to fill the gaps identified over the past years, especially the lack of global policy discussions on pastoralism and the need to bring the challenges faced by pastoral communities to attention. By systematizing available information, literature and knowledge as well as technical tools, assessments and research results, the Hub also aims to better inform evidence-based decision making at all levels[38]. Through its three pillars – (i) a knowledge repository, (ii) a forum for pastoralist networks, and (iii) fostering alliances among key partners – the Pastoralist Knowledge Hub acts as a bridge between pastoralist communities and policy makers with the objective to incorporate pastoral issues into key policy discussions. As per its mission of better informing evidence-based decision making at all levels, through systematization of available information among others, the Hub will be closely involved in all the steps of this project and will be very valuable in disseminating the assessment and monitoring method to be developed.

1.2.2 Remaining barriers to monitor and assess grasslands and rangelands LD and SLM

98. Multiple assessment and monitoring systems have been developed and proposed by various non-governmental organisations and scientists, many of them being presented above and in the table presented in Appendix 4.

99. However, despite the high importance placed on evaluating the drivers, current state, trends and impact of LD, there is yet to be a global standard protocol defined for monitoring and assessing LD in grasslands and rangelands to upscale SLM, which is what the proposed project is aiming at.

100. Tools and methods are already available regarding LD and SLM assessment. However, these tools do not deal in particular with the link between pastoralism and LD in grasslands and rangelands. No global participatory and holistic method and process is available yet to monitor LD and SLM practices, and assess multiple benefits and monitor the trends of ecosystem services related to pastoralism in grassland and rangeland areas, and to make informed decision promoting SLM in these areas.

Lack of global comprehensive assessment and monitoring system for grasslands and rangelands

101. The review of existing tools to assess LD shows that there are currently no global and comprehensive tools to monitor and assess LD in pastoral areas comprising of grasslands and rangelands in order to improve pastoralists' land management around the world. It is this gap that the GEF/FAO project proposes to address. For instance, the final report of the LADA project[39]

[38] http://www.fao.org/pastoralist-knowledge-hub/background/why-a-hub/en/

[39] UNEP Evaluation Office. *Terminal Evaluation of the UNEP/FAO/GEF Project LADA*.

mentions that methods and approaches developed deserve a wider and more systematic application to streamline assessments and reporting on LD and SLM.

102. The five pilot countries lack a comprehensive, robust and integrated approach to deal with LD and SLM assessment and monitoring. When tools exist to monitor LD, other challenges can appear such as issues with the scale of implementation. The majority of the pilot countries suffers from a lack of capacity from the national to the local level (depending on the country) to capture and capitalize on the local herders' knowledge, good practices and innovation. This lack of technical capacity is manifested by poor managerial capability to implement various complex assessment and monitoring methods.

Holistic indicators

103. Indicator selection for assessment and monitoring systems, as featured frequently in the literature, advise the integration of biophysical and socio-economic indicators into one framework. This integration appears to be lacking for instance in the examples from Riginos and Herrick, 2009 and Local Level Monitoring – Desert Margins Programme guide, 2009, but is present in examples from Oba et al, 2008 and LADA. Biophysical and socio-economic indicator integration provides a holistic picture of the state of ecosystems, the underlying drivers or causes of LD as well as the trends. Although the assessment of the state of grasslands and rangelands does not necessarily require an assessment of socio-economic indicators, they may be helpful in interpreting biophysical assessment. This holistic approach has however to remain low-cost, practical and adoptable to ensure its implementation in the long term.

104. Regarding the biophysical indicator selection processes, individual indicators should be selected to represent each of the three ecosystem characteristics which are soil, water, and biota. Thus providing a more comprehensive and holistic view of the ecological health. In the proposed project, the framework of global domain indicators, complemented with more specific local indicators, will allow to have a holistic set of indicators to be used in the assessment and monitoring system.

Lack of participatory approaches

105. The design of assessment and monitoring systems has been crafted by scientists, academics and extension workers with little to no space for input from the land-users which should essentially be the beneficiaries of such systems. Frameworks that were developed also incorporated complex indicators that communities were unable to relate to. Specific training was also required to analyse and interpret results from assessments, making them often inaccessible. In this project the indicator selection will be conducted through a participatory process based on indicator domains that will be homogeneous across countries to ensure comparability.

1.2.3 Incremental/additional reasoning (added value of the GEF resources)

106. With the incremental GEF financing, the proposed project will strengthen the capacity of local and national stakeholders in pastoral areas comprising of grasslands and rangelands to assess LD and make informed decision and promote SLM in a way that preserves the ecosystem services grasslands and rangelands provides at global scale. To achieve this objective, the project will work at addressing the different barriers presented in the previous section. In light of this, GEF financing will support the implementation of the following two components.

Component 1: Participatory assessment and monitoring system for pastoral areas comprising of grasslands and rangelands

107. In the current baseline situation, several tools already exist to monitor and assess LD and SLM. However, none of these tools currently have a specific and detailed replicable method to monitor LD and SLM practices in grasslands and rangelands, nor a coherent framework of indicators developed in a participatory manner and focussing on assessing the multiple ecosystem benefits grasslands and rangelands do provide. The GEF incremental support will address the current lack of framework of holistic indicators to assess and monitor grasslands and rangelands.

108. GEF funding will allow the proposed project to build upon numerous previous initiatives, taking into account their advantages and drawbacks. The final assessment and monitoring method to be created by the project will therefore include a procedural and operational manual to conduct the assessment through a framework of comparable indicators by domain of assessment. For each pilot country, these indicators by domain of assessment will be tested and then specified in local specific indicators, to be defined together with local communities, tested on the field and then aggregated at a broader level. On the one hand, the framework will aim to be holistic, encompassing the wide range of bio-physical, socio-economic, institutional and policy conditions that relate to grassland and rangeland SLM. On the other hand, the framework will aim to link information across multiple scales ranging from the local to the national and global scale and relevant policy frameworks. One of the major challenges will be to select indicators that can be assessed by local herders and agro-pastoralists based on perception, experience and are relevant to local cultural and indigenous knowledge. Finally, this set of indicators will be based on existing experience using LD and SLM indicators to ensure a robust scientific validity and future replication.

109. Under the first component of the project, in each pilot country, a project assessment team will be put together and trained, including staff from the partner organisations. This will be of crucial importance to address the current lack of capacities that countries face globally to perform assessment and monitoring of LD. Furthermore, the project will develop, test and refine the participatory assessment and monitoring methodology and tools with pastoral communities involved in initiatives supported by these organisations since many years, ensuring a good ownership by these communities and contributing to sustain the use of the assessment and monitoring methodology that will be developed.

110. The expected outcome of Component 1 is that a participatory assessment and monitoring system for pastoral areas comprising of grasslands and rangelands, is developed and tested. The IUCN will implement this project Component.

Component 2: Inform international and national agro-pastoral decision making processes

111. As the description of the baseline shows, a variety of LD assessment tools exist. However to gather and compile LD and SLM data in grasslands and rangelands, no holistic assessment system exist in order to inform policy making. Component 2 of the project will work at contributing to address this challenge by ensuring that the international and national agro-pastoral decision making processes benefit from the assessment and monitoring system.

112. GEF incremental funding will allow to feed the results of the assessment and monitoring performed at the local level into local, national and global decision making processes. At the local level, the result of the assessment and monitoring will provide an opportunity to identify and scale up SLM best practices.

113. At the national and sub-national levels, GEF funding will enable the project to feed the result of the assessment into existing national and sub-national processes including national and local planning, and into existing knowledge sharing and pastoral advocacy networks such as the Pastoral Knowledge Hub and the Mountain Partnership. These networks are already contributing to influence policy at the national and regional and the project will back their advocacy on evidence based data provided by the LD and SLM assessment of grasslands and rangelands at local level. Component 2 of the project aims to link the locally relevant information to a national level policy environment that addresses and facilitates SLM in pastoral areas. Under this component, the project will seek to compile SLM local best practices and measures identified during the first assessment performed under Component 1 and to use these to influence tangible national policies. This will form one of the basis for national governments, with further support and follow-up from the national organisations that will be involved in the project, to properly address the lack of governance mechanism that the pastoral sector currently faces in many countries.

114. At the global level, through the GEF incremental funding, the operational and procedural method produced through the proposed project, including the framework of global comparable indicators, will be disseminated to relevant global mechanisms such as the UNCCD and other

scientific panels. The project should enable the uptake of the holistic assessment framework, applicable worldwide from the global to the local scale, as a commonly agreed baseline that will enable comparability and replicability between countries.

Component 3: Knowledge management, monitoring and evaluation

115. GEF funding will allow to monitor and evaluate project's outcome and output targets, and to capture and disseminate lessons learned and best practices to facilitate future operations.

1.3 FAO's comparative advantage

116. The project is part of FAO's strategy to improve the governance of food security and is aligned to ensure the achievement of FAO's strategic objectives. This will be done by increasing the knowledge base on pastoralism, exploring innovative tools and promoting the participation and role of pastoralists in the formulation and implementation of public policies.

117. The FAO is a critical partner for pastoralists, not only as an interlocutor with governments, but also as a provider of normative advice and technical expertise in the field where it designs and implements its country programming frameworks and the Voluntary Guidelines on the Responsible Governance of Tenure of Land, Forests and Fisheries. FAO's Global Plan of Action for Animal Genetic Resources makes references to pastoralists, their management of breeds and ecosystems, their traditional knowledge; and the Commission on Genetic Resources for Food and Agriculture has a standing agenda item on small-scale livestock keepers and pastoralists. For these reasons, and based on civil society's request, the FAO has established the Pastoral Knowledge Hub.

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

119. FAO has considerable technical experience and many field projects in a number of areas covered under this project (agricultural production and food security, CC, LD, agrobiodiversity, capacity building, development of community-based capabilities and rural development, forage production and grassland management).

120. FAO has a comparative advantage in global grassland and rangeland management and assessment that has been endorsed by various donors and Governments in various regions. FAO's Department of Agriculture and Consumer Protection, Agricultural Plant Production and Protection Division (FAO-AGP) has a long experience managing grassland and rangeland management projects using agro-ecosystem management and landscape approaches in all world regions. FAO-AGP is now completing the implementation of a tool for climate resilient self-monitoring system for farmers and herders (SHARP) to facilitate grassroots technical options prioritization in GEF projects.

121. As per GEF expertise, FAO-AGP is implementing or planning to implement five GEF CCA projects in rehabilitating pastoral areas of Africa (Mali, Niger, Burkina Faso, Mozambique, Senegal) one LD GEF project in pastoral areas of Angola, eight national POPs projects (one ended), and four regional POPs projects (one ended) and is therefore managing approximately USD 71 M approved portfolio from LDCF or GEFTF, representing the 21% of FAO total GEF portfolio. Further to that, other AGP projects are under preparation in Chad, Uganda, Angola, Burundi, Central Africa Republic, and Mauritania. The proposed GEF project will be supported by a task force that will include the i)Natural Resources Department, Land and Water division, leading LD/SLM assessment in FAO through the experience of the LADA project and other global activities under development; ii) the Commission on Genetic Resources for Food and Agriculture and the Animal Production and Health Division that leads the Pastoral Knowledge Hub and supports assessment of animal genetic

resources through the Domestic Animal Diversity Information System (DAD-IS); and iii) various teams within the FAO Forestry Department focusing on landscape management and restoration of agro-sylvo-pastoral system in the framework of the drylands, Great Green Wall, Mountain areas Initiative, and global forest and drylands monitoring and assessment system.

122. FAO is implementing projects to protect ecosystem services and biodiversity as they are essential to life. In that regard, FAO's has initiated a major area of work on ecosystem services, biodiversity and agroecology across the globe. FAO's on-going work is to maintain and restore ecosystem services and biodiversity by promoting dialogue, building capacities, improving knowledge and understanding and providing guidance to include ecosystems in national and international policies on agriculture.

1.4 PARTICIPANT AND STAKEHOLDER ANALYSIS

The proposed project will be implemented at global, national and local scales. Therefore, the project will involve global stakeholders and, in each of the five pilot countries, national and local stakeholders. The table below summarizes key stakeholders groups that are relevant for each level.

Table 2: Relevant Stakeholder groups

Stakeholder	Mandate	Role in project implementation
Global level		
FAO	• UN and GEF implementing Agency • Knowledge management technical support and policy advice/advocacy for sustainable agriculture, NRM and food security • Coordinator and host of the Global Soil Partnership • Technical agency supporting land resources planning and management • Field programmes development and implementation • Sustainable land management and restoration • Mountains partnerships Secretariat • Tools and methods (LADA, Geonetwork, Global Land Cover Network (GLCN), Global Terrestrial Observing System (GTOS), Agro-Maps, Collect Earth, etc.) • Assessments, databases and maps; NR, land use systems, SLM practices documentation, application of tools in projects (LADA, Kagera, GGWSSI/Action Against desertification, global drylands assessments, Forest and landscape restoration monitoring and reporting tool, etc) • Policy legal and institutional development in food and agriculture sectors • Knowledge management and dissemination • Capacity development • Communications • Farmer and pastoral field schools	Project Implementing Agency (see detailed roles and responsibilities in Section 4 below)
IUCN	• International Environmental Organisation • "helps the world find pragmatic solutions to our most pressing environment and development challenges" • Neutral forum for governments, NGOs, scientists, businesses and local communities on conservation issues	Project Executing Agency (see detailed roles and responsibilities in Section 4 below)

	• State membership to IUCN allow dialogue at the government level • Network and partnership with other organizations • Information sources on LD and SLM • Experience with local communities • Participatory assessments • Field experience in several countries • Global dryland initiative • Awareness raising • Advocacy	
UNCCD	• UN Convention • Established in 1994; sole legally binding international agreement linking environment and development to SLM • Core mandate has been placed on securing land productivity and resilience for the wellbeing of dryland inhabitants. • 10-Year Strategy (2008-2018) • SLM practices mainstreaming into policy, specifically in the arid, semi-arid and dry sub-humid areas, known as the drylands.	Global partner that will be involved during the two international brainstorming workshops. Will also be closely associated as a platform for policy discussion
Pastoralist Knowledge Hub	• Consultative platform for the pastoralist community • Training and capacity development • Learning exchange • Regional workshops • Community dialogue • Communication model to raise awareness • Advocacy to influence policies on behalf of pastoralists	Will be closely involved in all the steps of the project and especially in disseminating the monitoring and assessment method under Component 2 of the project
Mountain Partnership	• UN voluntary alliance of partners to improve the lives of mountain people and protecting mountains and environment • Hosted by FAO • Knowledge sharing network • Source of information, expertise and resources • Activities in Central Asia and the Andes	Will be involved in the project essentially for dissemination aspects amongst various networks (Component 2)
Great Green Wall for the Sahara and the Sahel Initiative	• African Union Flagship programme that contributes to "a LD neutral world" • Many global, regional and sub-regional partners spporting and implementing projects: UNCCD (Secretariat and Global Mechanism) European Union (EU), FAO, United Nations Development Program (UNDP), UNEP, WorldBank (WB), GEF, IUCN, African Union Commission (AUC), CILSS-Aghrymet, OSS, IUCN, Intergovernmental Authority on Development (IGAD), Economic Community Of West African States (ECOWAS), World Agroforestry Center, WOCAT Secretariat, the New Partnership for Africa's Development (NEPAD), etc. • Provision of technical and organizational Decision Support for SLM upscaling in selected countries • Partnership and knowledge Management hosted at the Africa Special Hub (AUC) Platform and supported by FAO and GM-UNCCD	Project team will closely be associated to the development and testing of the participatory LD and SLM assessment and monitoring system (component 1) in the same pilot sites in Burkina Faso and Niger and with the beneficiaries of the EU/ACP Action Against desertification (AAD) project for sustainable land/forest management and restoration practices and technologies, and monitoring
CILSS-Agrhymet (Niger and Burkina Faso)	• Regional research centre (of the CILSS) providing information and training on Sahelian food security, desertification control, and water control and management	Partner of FAO in the project action against desertification, supported the development of capacity

		Provision of technical and organizational decision support in Niger and Burkina Faso as well as policy support in the region Provides training in the use of Collect Earth Supports the development of biophysical baseline assessments In charge of the monitoring and evaluation of biophysical elements as well as the socio-economic aspects for the action against desertification project in Burkina Faso and Niger in collaboration with FAO, the Institut of Sahel of CILSS based in Bamako, FAO and Tuscia University
National level		
Ministries and national departments: • BF: General Directorate of pastoral resources management • Kenya: Directorate of Livestock Production • Kyrgyzstan: Department of Pasture • Niger: Ministry of Livestock • Uruguay: Ministry of Agriculture, Livestock and Fisheries	Operationalize national and regional policies on LD	• Has endorsed the proposed project sites • Ensure national buy-in and ownership • Be informed of and associated to the development of the assessment and monitoring method • Consider opportunities to i) harmonise approaches with existing methods; ii) integrate to international reporting requirement; and iii) institutionalize the proposed method • Support access data (such as secondary data) to the project • Be closely involved in the policy aspects as part of Component 2 • Be part of the project steering committee
Local level		
Local government (Dori in Burkina Faso, Marsabit in Kenya, Jumgal district in Kyrgyzstan, Tillabéri in Niger, Basaltic Cuesta and East Hills Eco-Regions Governments in Uruguay)	• Decision making process at local level in terms of land use management • Implementation of good practices • Source of investment for implementation e.g. personnel • Source of information on state of LD • Capacity building and technical advice • Conflict mitigation • Foster engagement with higher level government offices and other local authorities	• Be closely associated in all project steps, and especially policy influence aspects
Civil society	• Representing community interests • Influences policies at various levels	• Will be identified at the national level before the

	• Community mobilization and awareness raising	national consultations as part of Output 1.1 • Be associated to the consultations organised at the district level
Local herders Communities (Communities already supported by the baseline projects)	Grasslands and rangelands as their main livelihoods Additional information on indigenous people is provided below, in the dedicated paragraph below this table.	• Source of information on LD status • Implement land management practices on a day-to-day basis • Source of indigenous knowledge on LD, SLM, landscapes and pastoralists' practices • Direct impact on grasslands and rangelands • Dissemination of information to other communities • Land monitoring
Women groups	Representing pastoral women	• Provide information on how women's interaction with their natural resources • Ensure participation of women in planning processes
Youths	Representing young groups	• Provide information on natural resource use and motivations for migration into cities • Youth mobilization • Involvement of young people in training and uptake of SLM solutions • Training young people on various approaches and integration with local practices

During the inception phase, the project will still carry out a rapit assessment of additional national platforms and potential partners in the pilot countries that focus on related issues such as land degradation, environment, food security etc.).

Indigenous peoples[40]

123. In accordance with international consensus[41], FAO considers the following criteria to identify indigenous peoples: priority in time with respect to occupation and use of a specific territory; the voluntary perpetuation of cultural distinctiveness (e.g. languages, laws and institutions); self-identification; an experience of subjugation, marginalization, dispossession, exclusion or discrimination (whether or not these conditions persist).

[40] Indigenous peoples is the internationally agreed term (United Nations Declaration on the Rights of Indigenous Peoples) and it encompasses tribal peoples, natives, First Nations, pueblos originarios, pueblos autóctonos, nomadic and pastoralists, aboriginal and traditional peoples.

[41] Including ILO Convention 169 (Indigenous and Tribal Peoples Convention, 1989), the UN Declaration on the Rights of Indigenous Peoples (2007), UNDG Guidelines on Indigenous Peoples' Issues, the UN Permanent Forum on Indigenous Issues and the Inter-Agency Support Group on Indigenous Issues.

124. The project takes into account the needs and priorities expressed by the indigenous communities involved and build upon their knowledge, cultural systems and institutions.

125. Pastoralism is a sophisticated production system and a land management strategy particularly in marginal areas. However, a lack of understanding on importance of pastoralism has often resulted in policies that undermine pastoralism as a livelihood source and a cultural activity of certain indigenous groups. Some of these policies and production pressures in pastoral areas have increased land degradation and threaten livelihoods of millions of pastoralists worldwide.

126. The project acknowledges that traditional and indigenous knowledge held by local people will benefit the design of a participatory tool/ approach for the management of pastoral areas. The innovative participatory approach will involve working closely with local communities harnessing the traditional knowledge base. This will include identifying specific pilot sites, indicators, testing of identified indicators, decision making based on monitoring and assessment of rangelands while building the capacity of local communities to carry out continued monitoring and assessment. Previously developed tools have failed to adequately connect the local indigenous knowledge with scientific rangeland monitoring and assessment. The project aims to bridge this gap. To achieve this, the project will work closely with pastoral organizations, committees and associations in respective pilot sites, taking into account traditional governance systems and institutions in decision making and rangeland resource management. The participatory aspect of the project will aim to ensure representation and participation of other sub-groups such as women and youth.

127. The learning points from the monitoring and assessment is supposed to build the capacity of local communities to carry out continuous monitoring of their rangelands and also use these assessments to influence decisions on issues affecting their resources from local, national, regional and international levels. Component 2 of the project is dedicated to policy support. The improved capability and the decision making of local communities will enhance food security, resilient and resilience to climate change, as well as to improve the conservation of biodiversity.

1.5 LESSONS LEARNED FROM PAST AND RELATED WORK (INCLUDING EVALUATIONS)

Lessons learned

- **Linkages between LD and socioeconomic factors**

128. LD assessment should be considered part of the broader assessment of natural resources, which in turn should be seen as the basis for land use planning, rural development and SLM.

129. As mentioned in the final evaluation of the LADA project, LD cannot be properly assessed and understood without taking into consideration the risks and trade-offs between different modalities of land use and management, that is the socio-economic choices that land users and managers have to make between different ecosystem services potentially provided by the land. Particularly at national and local level, those choices can explain the motivations that lie behind LD, and understanding those choices can provide valuable insights for the identification of remedial actions. If properly applied, the Sustainable Livelihoods Approach and DPSIR frameworks could provide a better picture and more depth in terms of socio-economic analysis of risks and trade-offs in land use choices, but need to be applied by experts and with the same scientific rigor as the collection and analysis of biophysical data[42].

- **Participatory approach**

130. A participatory approach allows the wide acceptance of results obtained from the assessment and monitoring, as experienced with LADA. Such acceptance is important for the adoption of the

[42] UNEP Evaluation Office. *Terminal Evaluation of the UNEP/FAO/GEF Project LADA*.

assessment and monitoring system at national level, as well as for influencing changes in land use practices by communities to reduce LD at local level.

131. The participation of local communities during conception, inception and implementation is also crucial to ensure that local knowledge is fully integrated into the framework. The combination of scientific and local knowledge is the best way to generate robust knowledge to combat LD. From experiences of Oba et al. 2008 and Kellner and Moussa 2009, at local level, involvement of communities in indicator selection using their local knowledge and experiences, as well as scientists and experts, ensures both relevance and accuracy of the assessment and monitoring results. These results, given their appropriateness to the end users and local context, can then be more easily incorporated into district and national level assessments to guide government policy and interventions. Therefore, local participation in assessment and monitoring processes proved to be necessary for their relevance and uptake at multiple levels.

132. Participatory approaches should give a particular attention to women as they often hold an unrecognized intricate knowledge on grasslands and rangelands.

General Considerations for Developing Assessment and Monitoring Approaches

133. Based on the examples described above, several factors should be taken into consideration while designing an appropriate assessment and monitoring approach. These factors are presented below, they provide the basis of the methodology that is outlined in the activities of the first component of the project (see Section 2).

- **Use a Participatory Approach**

134. Numerous reasons have been outlined for adopting participatory approaches to grassland and rangeland assessment and monitoring. These include:

1. To base assessments on locally-defined management objectives;
2. To draw on local knowledge in selecting appropriate local-level indicators by domain of assessment;
3. To strengthen the interpretation of data and management responses;
4. To develop a better understanding of historical trends and transitions; and
5. To ensure greater local ownership and sustainability of both the approach (for further adoption) and the assessment results (for use in decision making).

135. Participatory approaches do not only have to focus on one end-user. If data is primarily for use by local and national governments, it is relevant to include the participation of representatives from these institutions as well as representatives of herders, since the assessment will ultimately influence decisions that impact at the local level.

- **Ensure National and Global Comparability**

136. This project faces the challenge of developing an assessment approach that is both participatory and globally applicable. Participatory assessments could produce information at a level of local detail that confounds the effort to develop globally comparable data. The overall method therefore has to combine an approach to local indicator selection and analysis with the use of common indicators (or indicator sets: domains) and tools as far as possible.

- **Defining End Users**

137. This is the most critical consideration for any assessment and is easily overlooked in preference of deploying a given tool or methodology, sometimes leading to inappropriate approaches or irrelevant information. End users could be individual herders, a Community Based Organisation or other NGO, a local government department, a national government ministry, or a number of other stakeholders. Each group is likely to require different information for different purposes. The first question to answer in establishing an assessment is the type of information that the selected end user requires. This also has implications for institutionalisation of approaches since it may be unrealistic for one stakeholder to invest significant time and effort in an assessment that is for the use of a different stakeholder.

- **Usability of Information**

138. Selection of a suitable monitoring or assessment approach should be guided by the usability of the end product, which depends to a large extent on the capacity of the end users. For example, what kind of information does the monitoring provide, how does this information relate to management objectives, and how do new techniques fit with existing knowledge and approaches (Karl et al., 2009). This should be considered not only in the method for assessment but also in data analysis and reporting. Participatory approaches can produce information that is highly relevant to local land managers, but is not adequate to support decision making by government departments. Similarly scientific data that could satisfy a government department may be impractical for application by herders in their day to day management.

- **Relevant Scale**

139. The scale of monitoring will be influenced by the end user and by the intended use of the assessment. Scale will also be influenced by the scale at which land management takes place, which in the case of some pastoral communities can be vast and may even cross into more than one country. In such cases practical considerations may need to be applied, including the consideration of cost, or physical access to the terrain, and of data ownership and rights. Information needs and availability can change with scale and different methods may need to be combined in order to get a complete picture of rangeland conditions at any scale. The scale of monitoring will be guided by practicalities and cost, with coarse-grain observations more suited for national or regional level monitoring and more focused observations suited for local-level decision making.

1.6 LINKS TO NATIONAL DEVELOPMENT GOALS, STRATEGIES, PLANS, POLICY AND LEGISLATION, GEF and FAO Strategic Objectives

1.6.1 Alignment with national development goals and policies

The table below gives an overview of the national policy framework of each pilot country regarding LD and SLM and pastoralism, which are of interest for the proposed project.

Table 3: Alignment with national policy frameworks

Country	Relevant national development goals, strategies, plans policy and legislations
Burkina Faso	- **Vision 2025**: attempts to streamline livestock as a major economic sector. - **La Loi sur la Réorganisation agraire et foncière** (1984) governs management of untitled land by the state combined with customary management by land owners such as smallholders and pastoralists. The state of confusion, in rural areas, over communal land governance contributed to the creation of a new rule, the rural land policy. - **Rural Development Strategy** (2004) provides new strategic guidelines for rural development and aims at a "sustained growth of the rural sector to contribute to the fight against poverty, enhancing food security and promoting sustainable development". - **Rural Land Policy** (2009), was created to allow legal recognition of rights legitimized by customary rules and practices. This law has provided windows for engaging vulnerable customary actors such as women, pastoralist, forest users and youths. - **The Accelerated Growth and Sustainable Development Strategy** (2010) is the principal document for guiding development in Burkina Faso. It aims at achieving accelerated growth, promotion of sustainable development and supporting the creation of a modern and secure state. - **The National Rural Sector Programme** (2010) has been developed as a tool to implement the Accelerated Growth and Sustainable Development Strategy. - **National policy for sustainable development of livestock** (2010) is aimed at improving the contributions of the livestock sector to economic growth, food security and better living standards. - **Action plan and investment in the livestock sub-sector** (2010) is an operational tool for investment in the livestock until the end of 2015, and a contribution to the objectives of the

	National policy for sustainable development of livestock. The policy aims to address factors limiting livestock development in the country namely; technical constraints, institutional, legal and policy constraints, socio-economic constraints and environmental constraints. - **Transhumance decree** governs transhumance at national and regional level. - **The National Gender Policy** (2009): the overall goal is to promote participatory and equitable development for men and women, ensuring their access to and equal control and equitable access to resources and decision-making spheres, respecting their fundamentals rights. - **The National strategy and action plan for the Great Green Wall in Burkina Faso, adopted in 2012.**
Kenya	- **Agriculture Sector Development Strategy** (2010-2020): is aimed at food and nutritional security for all Kenyans and generating higher incomes and employments particularly in rural areas. The policy notes that livestock contribution to poverty reduction has not been tapped into, being attributed to challenges such as weak policy, legal frameworks, low livestock productivity and erratic weather which in turn affects water and feed availability. The proposed interventions aim to tackle the challenges afore mentioned through policy reviews, integrated rangeland development, market access, flagship projects, improved animal health and having a centrally coordinated livestock database. - The **Vision 2030** (2007) is a long-term development blueprint for the country aiming to transform Kenya into "a newly industrializing, middle-income country providing a high quality of life to all its citizens in a clean and secure environment". The policy states that agriculture is a key sector to ensure economic growth, and that ASAL in the country remain largely unexploited. It also aims at transforming the current state of livestock production by implementing disease free zones, establishing livestock processing facilities to enable livestock products such as hides, skins and meat reach international markets. - **National Policy for the Sustainable Development of Northern Kenya and other Arid Lands**, 2012: climaxed historical marginalization of the ASAL in Kenya by previous administrations. It focuses on an enabling environment for accelerated investments as essential to reducing poverty and building resilience and growth in these areas. - **National Land Policy**, 2009: on pastoralism, the policy acknowledges its tenacity as an appropriate production system while confirming the failures of pre-colonial and post-colonial government. It promises to ensure security of long-held rights, facilitate land access and secure livelihoods of rural communities. - **Wildlife Bill** (2013) aims at soften human-wildlife conflicts, especially with pastoralists. - **National Climate Change action Plan** (2013) is aimed at taking the climate change agenda forward and implementing the National Climate Change Response Strategy (2010), which was the first document acknowledging the impacts of climate change. - **The National Disaster Management Policy** (2012) institutionalizes disaster management and mainstreams disaster risk reduction in the country's development initiatives. - **Poverty Reduction Strategy Paper** (2001) outlines the priorities and measures necessary for poverty reduction and economic growth. - **Nomadic Education**, adopted in 2010 to boost access to school for pastoral communities. - The **Draft Community Land Bill** (2011) provides for the allocation, management and administration of community land; and establishes Community Land Boards to make provision for incidental matter. - **Gender policy** (2011) aims to address gender disparities such as women's under representation in decision making, access and control of resources as well as in socio-economic activities.
Kyrgyzstan	- **National Poverty Reduction Strategy** (2002) aims at: i) promoting sustainable economic growth; ii) formation of an effective state and iii) building a fair society providing protection and human development. - **Sustainable Development Program** 2013-2017 aims at transitioning to the new sustainable development model and acknowledges LD as a current challenge. - **Land Code** (1999) governs agricultural land; settlement areas (towns, urban areas and rural settlements); industrial land; forests; and specially protected natural territories and reserve land. Pasture management, improvement and use is regulated by the land Code, which states that all pastures are the property of the State. - **New law On Pastures** (2009) elaborates that while pastures are state property, administration and responsibility were transferred from Aiyl Okmoty to Pasture Users Union through their executive bodies; the Pasture Committees.

	- **Forest Code** (1999) establishes legal rules for efficient use, protection, conservation and reproduction of forests, and building their ecological and resource capacities. The Code gives forest resources an exceptional conservation status. - **Protection of Traditional Knowledge** (2007). This law covers the protection of the rights of the indigenous and local communities on their traditional knowledge, innovations and practice.
Niger	- **Strategy for development and poverty reduction** (2007) aims at reducing the incidences of national poverty and decreasing rural poverty from 66% (in 2002) to 55% (in 2015). - The **Poverty Reduction and Acceleration Strategy** is to be implemented up until 2020 to accelerate the implementation of the Strategy for development and poverty reduction. - The **Plan for Social and Economic Development** 2012-2015 sets the framework under which national sustainable development will take place. - **Strategic Programme for Climate Resilience** (2010) seeks to strengthen the population's resilience to climate change by mainstreaming climate information in the planning and implementation of development actions. - **The National Strategy and action plan for the GGW for Niger (adopted in 2012).**
Uruguay	- **Soil Conservation Law**: In Article 1, Law No. 15,239 it is stated: "it is the interest national government to promote and regulate the use and conservation of soils and surface waters used for purposes agricultural. The State is assigned the duty of taking care to prevent and control erosion and degradation of soils, flooding and sedimentation of water courses and lakes including natural and artificial lakes, among others." In 2009, Law No. 18,564 was approved which provides for among other things, that holders of land under any title, are obliged to apply the techniques of MGAP with the land owner being responsible in all cases. - **Protected Areas Strategic Plan (2015-2020)**: The Ministry of Housing, Spatial Planning and Environment (MVOTMA), developed a new legal framework based on the principles of sustainable development that created the National System of Protected Areas (SNAP). SNAP was established in 2000 and its implementation started in 2005. The country currently has 13 protected areas (PAs) now incorporated into the system, representing a variety of sites in terms of biodiversity and landscapes that also covers grasslands and rangelands. Within these PAs, there are pilot sites that aim to integrate communal tenure systems in natural grasslands and rangelands. The National Biodiversity Strategy 2015 - 2020, aligned on Aichi, is in final stages of preparation reaffirms the importance of SNAP as a policy instrument for the protection of biodiversity and sustainable development.

1.6.2 Alignment with UNCCD National Action Plans (NAP)

140. At global level, the proposed project is closely linked to the objective of the UNCCD, as described in Section 1.1.3 above. In particular, the proposed project is alignment with the UNCCD National Action Plan (NAP). The NAP-UNCCD is a key guiding document which provides the structures and guides the process and defines the elements to strengthen environmental capacities, enhance public awareness and mobilize active participation in order to better manage the natural resources, combat land degradation and desertification and mitigate the effects of drought. In general the country UNCCD NAPs have 4 main strategic objectives:

1. To improve the living conditions of affected population;
2. To improve the condition of affected ecosystem;
3. To generate global benefits through effective implementation of the Convention; and
4. To mobilize resources to support implementation of the Convention through building effective partnerships between national and international actors.

141. The table below summarizes the objectives and status of the NAPs in the 5 pilot countries.

Table 4: Overview of the 5 pilot countries' NAP

Country	NAP Status
Burkina Faso	**Ratification of UNCCD in 1996; Finalization of NAP in 1996**

	NAP objective: contribute to the achievement of sustainable development of the country by strengthening local authorities' capacity and ensuring active participation by local communities and local groups in fight against desertification and mitigating drought effects. The NAP has influenced the harmonization of the country's policies and strategies aimed at combating desertification, and at mainstreaming sustainable use of natural resources. In accordance with needs for participatory implementation of the convention, tools and participatory procedures have been defined by the NAP to ensure full participation of the whole community in the struggle against desertification. **Current status in NAP**: the country will be exploring stakeholder contributions and reviews on its draft NAP report to inform the new document and the proposed project feeds directly into this process. The new document consists of 13 sectorial plans, including one for agriculture, one for the environment and natural resources, and one for livestock raising/animal husbandry.
Kenya	**Ratification of UNCCD in 1997; Finalization of NAP in 2002** **NAP objective**: past efforts by the government to combat desertification had not been effective due to sectoral approach in implementation, weak institutional linkages, inefficient resource use and lack of project ownership by local communities. Thus the NAP was aimed at addressing previous shortcomings through effective elaboration and implementation. Regarding agriculture and pastoralism, the proposed actions include: formulation of policies and enacting legislation to provide for appropriate land use and tenure; strengthening social and legal mechanisms for conflict resolution; promoting adoption of livestock, crops and trees in drylands e.g. drought and pest resistant and early maturing crops and trees; creating public awareness on research findings on alternative income generating activities and providing an enabling environment for trade in drylands products e.g. marketing of livestock and non-timber forest products. **Current status in NAP**: Kenya has started aligning its NAP with the UNCCD 10 Year strategy and participated in a capacity building workshop organized by UNCCD in 2013 in Nairobi for the East African region. The recommendations included a need for more stakeholder participation, support to build on successes recorded so far and the need to align the NAPs in the shortest time possible.
Kyrgyzstan	**Ratification of UNCCD in 1997; Finalization of NAP in 2000** **NAP objective**: (i) increase the role and potential of local communities in combating desertification and poverty alleviation; (ii) conserve mountain ecosystems and biodiversity; develop ecotourism; (iii) optimize irrigated agriculture including control over erosion processes, salinization and waterlogging; (iv) increase forest areas as a prerequisite for water resources conservation and the prevention of processes of erosion and landslides; (v) integrated natural resources management in watershed areas; and (vi) rangeland management.
Niger	**Ratification of UNCCD in 1996; Finalization of NAP in 2000** **NAP objective**: (i) To identify factors which contribute to desertification and concrete measures to be taken to combat it and alleviate drought effects; and (ii) to create favorable conditions to the improvement of food security, the solution to domestic energy crisis, the economic development of the population, and their empowerment in the management of natural resources.

	The NAP emphasizes on a participative approach involving the local population and relevant stakeholders hence creating a partnership between the different parties. The participatory process of the proposed project can generate knowledge to feed directly into the on-going development of the NAP with LD monitoring and uptake of SLM incorporated in the national frameworks to help in the fight against desertification.
Uruguay	**Ratification of UNCCD in 1999; finalisation of NAP in 2002** **NAP objective**: The elaboration of the country's NAP took into account consultations of actors at various level-local, national and regional. In that regard, the document also recommends that local producers be taken into account in decision making. The NAP covers policies, plans and actions to be taken to stop LD. The activities are elaborated as: i) protecting and conserving the natural resources and increasing productivity; ii) obtain high quality agricultural products that are produced in a sustainable way; iii) improve current policies and their application; iv) support small and medium farmers on need-based basis and v) improve the sharing and accessibility of natural resources. NAP implementation has not really progressed in the last ten years. The last activity conducted was an FAO supported report produced in 2004 on the fulfilment of Urugay's obligation to the Convention.

142. The analysis on the status of the NAPs above shows that countries have not always made good progress in implementation of the NAPs. The newly signed SDGs offer a better roadmap with specific targets for member countries to achieve. The project will focus on working with countries and partners in contributing to the assistance needed by countries in meeting obligations to the SDG particularly Goal 15, target 15.3.

1.6.3 Alignment with GEF Focal Area

143. The project has been developed in line with the GEF 5 Land Degradation Focal Area. In particular, the project is aligned to:

- Objective LD-4: Adaptive Management and Learning: increase capacity to apply adaptive management tools in SLM/SFM/INRM by GEF and UNCCD Parties.
    - Outcome 4.2: Improved GEF portfolio monitoring using new and adapted tools and methodologies.
        - Output 4.2: GEF-financed projects contribute to SLM/SFM/INRM knowledge base.

1.6.4 FAO Strategic Framework and Objectives

144. The project addresses FAO's Strategic Objective (SO) 2: Increase and improve provision of goods and services from agriculture, forestry and fisheries in a sustainable manner, in particular to Organizational Outcome 1: Producers and natural resource managers adopt practices that increase and improve the provision of goods and services in agricultural sector production systems in a sustainable manner, Output 1.2: Innovative approaches for ecosystem valuation, management and restoration are identified, assessed, disseminated and their adoption by stakeholders is facilitated.

145. It also addresses FAO's SO3 - Reducing Rural poverty. Under SO3 the project is aligned to Output 3.1 - Empower the rural poor gaining access to resources and services, contributing in particular to an improved access of the rural poor to natural resources and the sustainable management of those resources.

1.7 PROJECT INTERVENTION AREAS AND PROJECT SITES

146. The project will be implemented in five pilot countries: Burkina Faso, Kenya, Kyrgyzstan, Niger and Uruguay to ensure that geographically, a broad range of pastoral areas and communities from different ecological zones are represented in the assessments.

147. The districts of interventions (or equivalent political delineation) have been selected in collaboration with stakeholders in each country, and taking into account the target areas of relevant baseline initiatives that will also provide co-financing to this project. The selected areas are the following:

- Dori in Burkina Faso,
- Isiolo/Garissa counties in Kenya,
- Jumgal district, Naryn Oblast in Kyrgyzstan,
- Tillabéri in Niger,
- Basaltic Cuesta/East Hills Eco-Regions

148. They are presented in more details in the following paragraphs. For each of the areas listed above, a sampling exercice will be undertaken at the country level to identify relevant project sites. This will be done through an activity under Output 2.1.

Burkina Faso – Dori

149. The proposed GEF project will have pilot sites in the commune of Dori, in the Seno Province, part of the Sahel region in the North East of Burkina Faso. Dori is located in a low lying and sandy plain, characterized by a Sudano-Sahelien climate with an 8-9 months dry season from October to June.

Figure 8: Map of Burkina Faso locating Dori

150. According to the 2006 census, Dori had a population of 98,006 inhabitants, with 79% living in rural areas and 21% in urban areas.

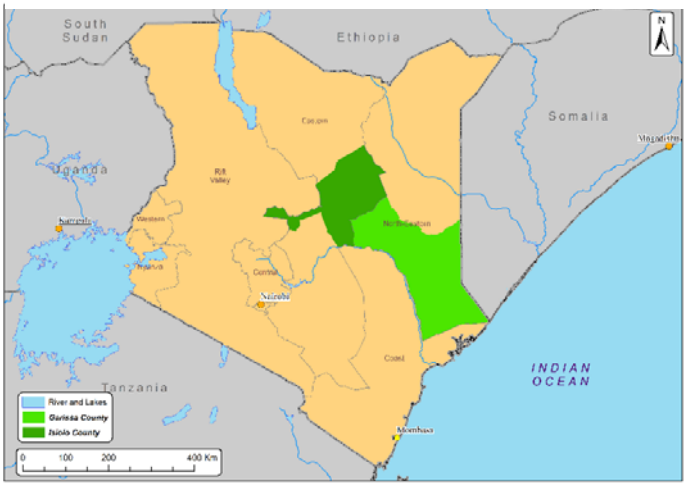
151. Dori's agriculture is mostly for subsistence through the cultivation of cereal crops (mil, sorghum, maize), oilseed crops (niébé and voandzou), horticultural crops (onions, eggplant, lettuce, tomatoes, cabbage and potatoes), as well as some cash crops (sesame and peanuts). The major parts of farmers have limited access to agricultural equipment and input. The forestry sector is quite developed in Dori where many afforestation activities have been implemented to restore degraded land, fix dunes, and protect riverbanks. The livestock sector is the most important socio-economic activity in Dori. Two major types of livestock raising occur: extensive with the mobility of herds on pasture lands; and semi-intensive for beef and sheep fattening as well as milk production[43].

152. As stated in the presentation of the baseline above, the EU/ACP "Action against Diversification" project is being implemented in Dori. The EU/ACP and the proposed GEF projects will therefore work in close collaboration in their pilot sites in Dori.

[43] http://www.anciveneto.it/documenti/documenti/PCD%20Dori%20final_07[1].10.08.pdf

Kenya – Isiolo and Garissa counties

Figure 9: Map of Kenya locating Isiolo and Garissa counties



153. The proposed GEF project will have pilot sites in Isiolo and Garissa counties. They are located in arid and semi-arid lands of northern Kenya. The two counties form part of a region marginalized and disadvantaged from development for decades. Currently, the over 143,000 and 669,000 mainly rural populations in Isiolo and Garissa respectively practice pastoralism covering 70-80% of the land (GoK 2009, GoK 2013a, GoK 2013b, GoK 2013c) under communal land ownership and in trusteeship of the county governments. The two counties are lowlands with altitude of 200-400m above sea level. They are endowed with bounty of natural resources including Ewaso Nyiro North River and River Tana, varied geology (metamorphic, sediments and volcanic in Isiolo and alluvial sediments in Garissa) with diverse unexploited minerals (blue and yellow sapphire, ruby, limestone, gas, gravel, sand in Isiolo and oil, gypsum, gas, gravel, sand in Garissa). Acacia – Commiphora bush grasslands dominate the range yielding assorted bio-products. They are also home to rich flora and fauna with over 50 indigenous tree families and over 300 species of birds and animals including endangered and endemic species such as Hirola antelope, rhino, giraffes, African wild dog, leopards, buffalo, Grevy's zebra and elephants found in communal rangelands in both counties. The wildlife is also found in Buffalo Springs, Shaba and Bisanadhi Game Reserves in Isiolo, and Rahole and Arawale Game Reserves plus Boni Forest and Ishaqbini conservancy, Garissa.

154. Rainfall in the two counties is unreliable and erratic with most areas receiving less than 300 mm per annum. People of the two counties frequently *cry* for water (drought times) and *cry* from water (rainy seasons). Mean annual temperature is 29^0C and the counties have over nine hours of sunshine per day.

155. Over 80% of inhabitants in Isiolo and Garissa rely on livestock for their livelihoods including indigenous Boran and Zebu cattle, Galla goats, black head Persian sheep and dromedary camels (Somali, Turkana and Rendille varieties). Live animals are mainly marketed in Nairobi, Mombasa, Isiolo, Garissa and Dadaab Refugee Camps. 20-30% of the land supports settlements and dryland farming (with maize, beans, cowpeas and onions) in rainy seasons, and irrigation farming with fruits (pawpaw, mangoes, guavas, avocados, lemon), pastures (mainly Sudan grass), onions, tomatoes, capsicum, melons, green grams, sesame along the Rivers Ewaso Nyiro North in Isiolo and Tana in Garissa. The percentage of land with title deeds in both counties is up to 1% and in Isiolo, 20% of the land is under government and private ownership. Lack of title deed poses great challenge as communities cannot use their land as collateral in acquiring loans for development and are unable to get compensation when land is purchased for investment. Issuance of title deeds to the right owners including communal lands will encourage willing and potential partners to invest.

156. The counties are experiencing rapid population growth estimated at 3.7% and 3.96% annual increase in Isiolo and Garissa respectively due to intrinsic and influx attracted by loss of livestock to recurrent droughts and planned capital investments identified for Isiolo such as Lamu Port-South Sudan-Ethiopia Transport (LAPSSET) Corridor and refugees from Somalia and Ethiopia. The increase in population and the start of large development projects are expected to impact natural resources through deforestation, rangeland degradation, habitat destruction, spread of solid waste such as polythene bags, hunting and poaching and overuse. Additionally, although the impacts of

LAPPSET on natural resources are anticipated to be high the residents and leaders of the counties are yet to be fully involved in its planning and implementation.

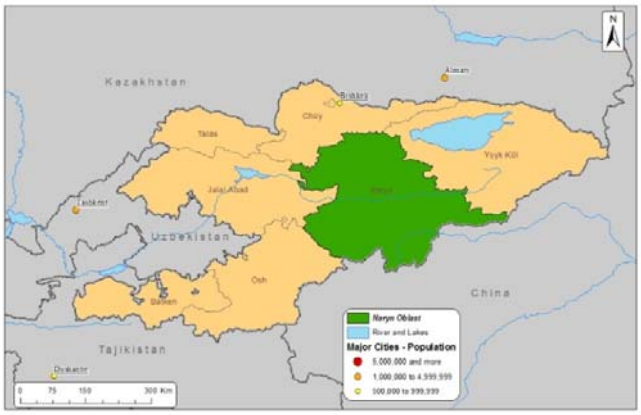
157. Communal resource management based on traditional rules and regulation is the main governance systems in rangelands of counties of Isiolo and Garissa counties for years although the introduction of the modern rules which undermines the authority of local communities are leading to increased land fragmentation and degradation.

Kyrgyzstan – Jumgal district

158. The proposed GEF project will have pilot sites in Jumgal, a rural district part of the mountainous Naryn region. Naryn oblast covers 45,000 square kilometres with a population of 35,000 people. Many of the population live at or above 2000 meters above sea level as the oblast is 70% covered in by mountains.

159. Kyrgyzstan has a continental climate with cold winters and warm summers. In Naryn oblast; winters tend to be long and cold with average temperatures of -15°C in winter. Average annual amount of precipitation is between 200mm to 300mm with the agricultural season being relatively short. Thus, under the current climate parameters of temperature ranges and precipitation patterns create preconditions for lowland irrigated agriculture and distant pasture cattle rearing.

Figure 10: Map or Kyrgyzstan locating Naryn oblast



160. Agriculture and animal husbandry are the main income generating activities in the area. However, livestock keeping which is largely nomadic is the most dominant economic activity with over 85% rural residents owning horses, cows, sheep and goat[44].

Niger – Tillaberi

161. The proposed GEF project will have pilot sites in the Tillaberi region in Niger. The region is a plateau at an elevation of 250m, crossed by the Niger River. The region covers an area of 97,251 km^2 and its population is estimated at 2,572,125 inhabitants (2010).

Figure 11: Map of Niger locating the Tillaberi region

162. The average temperatures ranging between 24.4°C and 37.8°C, the level of precipitations and the presence of the Niger River and other effluents, make the region suitable for agriculture, especially in its southwest part. Tillaberi produces 75% of the country's rice, and

[44] Source: 2014. University of Central Asia. Quality of Life in Naryn Oblast, Kyrgyz Republic

18% of its millet, sorghum and vegetable crops. Livestock in the region covers 21% of the country's cattle, 19% of its donkeys, 14% of its sheep and 13% of its goats. Tillaberi was recorded the first producer of livestock in the country in 2011 with 2,087,000 cattle heads[45]. The region is also the largest producer of fish in the country, given the proximity with the Niger River, but production remain irregular.

Uruguay - <u>Basaltic Cuesta/East Hills Eco-Regions</u>

163. The Basaltic Cuesta covers 4.1 million ha and the East Hills 2.4 million ha, both regions together representing 39% of national territory. These eco-regions are also vulnerable to drought and water stress. In Basaltic Cuesta, the areas are: Artigas, Salto, Paysandú and Tacuarembó while in East Hills they are: Treinta y Tres, Lavalleja, Maldonado and Rocha.

Figure 12 – Basaltic Cuesta and East Hills Eco-Regions

Source: Convenio MGAP/PPR – CIEDUR: "Mapa de ambientes de Uruguay y distribución potencial de especies", Montevideo, Marzo 2011

164. Livestock sector in Uruguay is mainly concentrated in these two ecoregions and based on grazing by cattle and sheep of temperate native grasslands and rangelands, part of the Pampa Biome with great biodiversity. Natural dry matter production of these grasslands and rangelands is not only the basis for the international competitiveness of the sector, but also provides a highly valuable source of resilience to the impacts of climate change.

165. In the two ecoregions, two thirds of grass is produced during spring and summer. The management and use of pastures during this time is critical as climatic variables such as lack of adequate rainfall and high evapotranspiration rates can drastically affect the amount of forage available.

166. Both eco-regions concentrate 30% of national livestock farmers, 42% of total land, 55% of sheep and 43% of total cattle. Smallholders (0 to 750 ha) account for 85% of livestock farmers, 35% of land, 38% of sheep and 41% of cattle. Basaltic Cuesta- is the one with higher poverty incidence in dispersed rural areas, being the only region with higher concentration of rural poor than villages. Poverty levels increase among rearing farmers in comparison to other activities within livestock farming. The challenge with this is inability by the poor farmers to lease more grazing land in periods of forage stress as they are priced out of market by high land prices inadvertently leading to pasture exhaustion and subsequent degradation.

167. The variability in annual grass production is very high, with variability coefficients ranging from 33 to 51 per cent. As a result, overstocking and overgrazing are usual and become a major source of risk as animals rapidly exhaust the forage capacity leading to critical situations. Overgrazing modifies the structure of grasslands and rangelands, decreasing aboveground biomass, grass height, canopy cover and proportion of winter grasses.

[45] http://www.stat-niger.org/statistique/file/Annuaires_Statistiques/INS_2012/AS2007-2011ELEVAGE.pdf

168. In Basaltic Cuesta, SNAP has officially incorporated Lunarejo Valley Protected Landscape its management plan to be officially approved. The management plan includes a program of conservation of grasslands and rangelands, and livestock use. Also the protected Areas of Laureles – Cañas has also been incorporated into the 2015-2020 strategic plan of SNAP. In south, Pampa Biosphere biome has officially been approved by UNESCO with possible expansion to the South and coordinating cross-border links with Rio Grande do Sul, Brazil.

SECTION 2 – PROJECT FRAMEWORK AND EXPECTED RESULTS

2.1 PROJECT OBJECTIVE

169. In line with the GEF-5 Land Degradation Strategy, the goal of the project is to contribute to reducing and reversing current global trends in LD in pastoral areas.

170. The overall objective of the project is to strengthen the capacity of local and national stakeholders in pastoral areas comprising of grasslands and rangelands to assess LD and make informed decisions to promote SLM in a way that preserves the diverse ecosystem goods and services that are provided by rangelands and grasslands.

2.2 PROJECT STRATEGY

171. The proposed project is being designed to address the lack of harmonized participatory assessment and monitoring systems for LD and SLM in pastoral areas comprising of grasslands and rangelands that can comprehensively inform pastoral, livestock and land policy makers.

172. In order to achieve the above, the project will develop a methodology to assess and monitor LD and SLM in pastoral areas comprising of grasslands and rangelands - through a globally comparable and participatory approach.

173. To address the current challenges, and building on lessons learned from past initiatives, the proposed project is developed around two main components. The first component aims at designing a participatory and holistic system to assess and monitor LD and SLM in pastoral areas, while the second component aims at systematically feeding the findings of the assessment and monitoring system into policy making processes for decision-makers to make informed decisions on pastoral areas management.

174. The core of the strategy of the proposed project comprises of:

- A participatory approach encompassing all level of stakeholders involvement from the international to the national and the community level;
- The development of a holistic framework of indicators with specific indicators that are precise and adapted enough to be used at the local level by pastoralists, and that categorized into a broader global set of domain indicators that allow comparison at the global level; and
- A systematic feedback loop mechanism to mainstream the findings of the assessment and monitoring systems into policies and to make informed decisions to address LD and SLM in pastoral areas.

175. The specific outcomes, outputs and activities of the project strategy are described in the following section.

2.3 EXPECTED OUTCOMES, INDICATORS AND TARGETS

176. In order to deliver the above-mentioned objective, and in line with the three components, the project includes the three following outcomes:

177. **<u>Outcome 1</u>: A participatory assessment and monitoring system for pastoral areas comprising of grasslands and rangelands, is developed and tested**

- **Outcome Indicator 1.1:** Standardized procedural and operational manual available

(i) The baseline for this indicator is that there are no standardize procedures for monitoring and assessing LD in grasslands and rangelands; and

(ii) The target is that the procedural and operational manual is developed based on feedback and lessons learned, and then published.

- **Outcome Indicator 1.2**: Number of international and national consultations organised to discuss, test and revise the assessment and monitoring procedures

(i) The baseline is that there is little common understanding and views on the global indicators by domain of assessment to be defined for monitoring and assessing LD in grasslands and rangelands; and

(ii) The target is to gather a technical consortium of experts, organize 5 national level workshops and an international consultation.

- **Outcome Indicator 1.3**: Level of involvement of local pastoral communities in defining and testing the domains of indicators, specific indicators and the assessment and monitoring operational and procedural framework

(i) The baseline is that the design of assessment and monitoring systems has been crafted by scientists, academics and extension workers with little to no space for input from the land-users; and

(ii) The target is that the final version of the assessment and monitoring operational and procedural framework is done taking into account feedbacks received from local communities.

178. **Outcome 2: National and international agro-sylvo-pastoral decision making processes benefit from the assessment and monitoring procedural and operational manual and the participatory national grassland and rangeland assessments.**

- **Outcome Indicator 2.1:** Number of action plans for mainstreaming SLM best practices

(i) The baseline is that no action plans for mainstreaming SLM best practices is in place; and

(ii) The target is that a national workshop is organised in each country to present and discuss the action plan and identify SLM best practices and measures that are best fit to influence policy making regarding pastoral areas.

- **Outcome Indicator 2.2:** Recognition of the assessment and monitoring method in at least 2 relevant international fora

(i) The baseline is that there is no standardize procedures for monitoring and assessing LD in grasslands and rangelands; and

(ii) The target is that the new standardize assessment and monitoring method for LD and SLM in grasslands and rangelands is recognized by at least 2 international fora.

179. **Outcome 3: Project's outcome and output targets are monitored and evaluated, and lessons learned and best practices are captured and disseminated to facilitate future operations.**

- **Outcome Indicator 3.1:** Fulfilment of planned M&E activities including establishing baseline values for all project indicators, yearly updating of indicators, a mid-term evaluation/review and a final project evaluation

(i) The baseline is not applicable; and

(ii) The target is that project outcomes are achieved and showing sustainability.

2.4 PROJECT OUTPUTS AND ACTIVITIES

180. Project activities are presented per component below. They are also summarized in a diagram below (Figure 13 Chronological Logic of Project Activities) highlighting the chronological logic of proposed project activities, in the project results matrix presented in Appendix 1 and in the project work plan presented in Appendix 2.

COMPONENT 1: Participatory assessment and monitoring system for pastoral areas comprising of grasslands and rangelands

181. The main outcome of Component 1 (Outcome 1) will be that a participatory assessment and monitoring system for pastoral areas comprising of grasslands and rangelands, is developed and tested.

182. GEF incremental financing of USD 1 591 526 will be invested in : Output 1.1, Output 1.2 and Output 1.3.

183. Co-financing amounting to USD 2,530,000 will be provided by FAO-FOA EU-ACP action against desertification project/GGWSSI, IUCN, FAO AGPM and the Government of Uruguay to Output 1.1 and Output 1.2.

184. The execution of the implementation of Component 1 will be under the responsibility of the Project Coordination Unit (PCU) hosted at IUCN/GDI, with support from the Policy Expert which will provide technical support to the initial national workshop and local consultations, the development of the procedural manual, and the baseline assessment work at the local level.

185. In the baseline, several tools already exist to monitor and assess LD and SLM. However, none of these tools have a replicable method to monitor LD and SLM practices in grasslands and rangelands, nor a coherent framework of indicators developed in a participatory manner and focussing on assessing the multiple ecosystem benefits grasslands and rangelands do provide.

186. With GEF incremental funding, the final assessment and monitoring method to be created by the project will include a procedural and operational manual to conduct the assessment through a framework of comparable indicators by domain of assessment. In each pilot country, a project assessment team will be put together and trained, which will be of crucial importance to address the current lack of capacities that countries face to perform assessment and monitoring of LD. Furthermore, the project will develop, test and refine the participatory assessment and monitoring methodology and tools with pastoral communities, ensuring a good ownership and contributing to sustain the use of the assessment and monitoring methodology to be developed.

187. **Output 1.1:** A Monitoring and assessment procedural and operational manual is developed

- *Activity 1.1.1: In PY1, an international technical meeting with experts will meet to identify, define and review a minimum number of global indicators by domain of assessment.*

  This international meeting will be organized with specific target groups of pastoralists and technical experts to present the project objectives and strategy, develop and approve indicator domains, list possible specific indicators and data collection techniques under each domain, and feed this information into the framework of an operational manual to be developed as part of Activity 1.1.5. The experts will be drawn from SHARP, LADA, IUCN, SDGs, Collect Earth, UNCCD, the European Space Agency, UNEP, the CBD, the NASA, research institutions like the university of Arizona and Colorado State University, policy makers and key pastoralist representatives from the target countries. This meeting will use as background the work that was

conducted in each country as part of this PPG process, and relevant existing tools[46] to ensure the proposed methodology incorporates existing work and takes advantage of existing capacities. An initial review of existing tools will be prepared prior to the meeting. The identification of indicators must take into account the linkages between; (a) pressures exerted on the environment by human activities, (b) changes in quality of the environmental components, and (c) societal responses to these changes that can be a useful and valuable tool for land-users and policy makers.

Based on the literature review conducted during the PPG, the assessment of pastoral areas comprising of rangelands and grasslands requires attention to a number of distinct indicator domains that could form part of a framework of global indicators[47]. Within these domains some indicator classes or sub-domains have to be defined as well. The identification of the latter will be done jointly by the participants during this first international meeting, taking into account the STAP's Resilience Adaptation Transformation Assessment Learning Framework and the DPSIR approach. Among others, the four following domains could be taken into consideration while identifying the global indicator domain (additional potential domains are presented in the previous footnote):

Within the **Soil Domain**, the assessment could consider both physical degradation and biological/chemical soil degradation processes. Physical changes in soil include soil erosion, such as gully erosion and sheet erosion, as well as phenomena like sealing, compaction, salination, reduction in aeration and reduced permeability. Biological and chemical degradation include loss in soil hummus and soil organic carbon and declines in minerals content (particularly Nitrogen).

Within the **Hydrology Domain** the assessment could consider the total water level retained in the system, for example measured through the depth, number and distance of aquifers, as well as the extent of run off, flood and drought. Assessment of water quality may also be a relevant indicator in some cases.

Within the **Biota Domain** the assessment could consider both the quantity and 'quality' of biota, particularly focusing on vegetation. Overall vegetative ground-cover is an important quantitative indicator. Species composition, including species richness, is an important 'qualitative' indicator and can be complemented with locally-specific indicators of high or low value plant species: for example, high-palatability grasses, high-value trees and shrubs, or presence of invasive species. Additionally, in some locations the presence of wildlife may be considered a valuable indicator, particularly where pasture managers derive income from wildlife as well as from livestock.

Within the **Socioeconomic** category it is more challenging to define domains and sub-domains. It is recommended to include all five indicator groups as required by the UNCCD (water availability per capita, change in land use, proportion of the population living above the poverty line, childhood malnutrition and/or food consumption and/or calorie intake per capita, and Human Development Index) in addition to locally-relevant indicators of production and

[46] The tools to be reviewed include LADA, SHARP and Collect Earth and others if required.

[47] Domains of indicator could include: Soil; Hydrology; Biota; Water availability per capita; Change in land use; Land management; Proportion of the population living above the poverty line; Childhood malnutrition and/or food consumption and/or calorie intake per capita; Human Development Index; Livestock productivity; Livestock health; Livestock management sustainable practices; Household income and diversity; and Governance.

livelihood outcomes. The different scales at which each of these domains will be assessed will be considered during implementation and interpretation of the outcomes.

Further, in preparation of the country activities described in the following a rapid assessment of broader platforms and potential partners at national level will be conducted. This will include an analysis of existing country investment frameworks and existing suitable partner platforms (such as 3N in Niger).

- *Activity 1.1.2: Organization of a national level workshop in the respective pilot country to (i) introduce the project objective, and the framework of global indicators by domain of assessment; (ii) identify key national and local resource people to support the assessment; and (iii) assess relevant policy entry points.*

  This two-day multi-stakeholder workshop in each pilot country will introduce the project's objectives and global domain of indicators to key national stakeholders. During these workshops, participants will validate selected districts/sites[48] (or equivalent administrative division) to be covered. The national workshop will also be the opportunity to strengthen institutional ownership and fine-tune the action plan for district/site-level assessment. Preliminary planning for the first district/site level field work (see Activity 1.2.3 part ii) will also be carried out at this national level workshop. Agreements regarding data storage and analysis will also be discussed during this workshop and first mission.

  During this national workshop, key experts will be identified to create part of a local assessment team. The assessment team will be comprised of experts with knowledge and skills in three main areas including: (i) expertise on rangeland science and ecology; (ii) rich local knowledge (herders); and (iii) high local influence (elders or government officials). Some of these experts will be from the local partner organisation, which implements baseline activities on the ground with pastoral and agro-pastoral communities. This assessment team will also include pastoralists. This assessment team will be involved in all field test steps planned under Output 1.2.

  This activity will also contribute to identifying relevant policies and key policy mainstreaming entry points that could benefit from an assessment and monitoring method in pastoral areas (cf. Component 2).

- *Activity 1.1.3: Initial consultations with communities*
  Following the international and the national workshops, an initial 4 months will be dedicated to consolidate community engagement in project activities and enable communities to gain familiarity with the project including project objectives, goals and activities. The dialogue process will also ensure communities and other stakeholders gain a sense of ownership over the adopted approach and the data generated through the project.

  These initial consultations, part of the entire assessment, will also give the opportunity for first field testing of selected domains of indicators in pilot sites with local communities. Global indicators will be linked to local knowledge. In addition, this exercise will support a better understanding how pastoralists gauge LD and SLM using specified indicators. During this

[48] The administrative divisions in the five pilot countries are different from each other. For ease of reference, the term « site » is used throughout the description of the project strategy. The 'site' encompasses the equivalent administrative division to a district as is found in Kenya where the equivalent is a department in Niger, a province in Burkina Faso and a district or raion in Kyrgyzstan.

exercise, the domains of indicators will be tested, revised and tested again based on inputs from community members, with the aim of informing the development of a general operational and procedural manual to monitor and assess LD and SLM (see Activity 1.1.5).

- *Activity 1.1.4*: *Secondary data consolidation on target districts/sites on latest assessment approaches, indicators, sampling techniques and remote sensing.*

  Based on the data collected and compiled per country and targeted pilot sites during the PPG process, additional secondary data will be collected and consolidated, to inform the development of the draft operational and procedural manual (to be developed in Activity 1.1.5) on the following:

  - Latest assessment and monitoring approaches developed and adopted in each pilot country;
  - Ecological indicators used to assess LD and SLM, and the types of data collection techniques used for each indicator;
  - Socio-economic data which will not be gathered as part of the field assessment but will be compiled from secondary data. Baseline data collected for socio-economic indicators from existing assessments and monitoring studies to interpret drivers and outcomes of LD and SLM on but not limited to:
    - Basis of the pastoral economy: livestock species and breeds products, management practices, market / value chains, mobility, etc. (note, these are not comprehensive lists but an indication of broad areas to review);
    - Cultural aspects of grassland and rangeland management: governance, institutions, norms, reciprocity etc.;
    - Land rights: tenure security, protection of seasonal zones, corridors etc.;
    - Gender roles, responsibilities and challenges;
    - Social indicators: school enrolment, literacy rates, child and maternal mortality, malnutrition etc.;
    - Political issues: marginalisation, quality of representation, conflicts; and
    - Overview of the local environmental context, including documented historical trends and assessments.
  - Existing remote-sensing imagery and systems for each pilot country at national level and at the selected sites (for land-cover and land-use). Integrating Remote Sensing (RS) into the initial assessment will enable:
    - Improved and cross-examined local assessments;
    - Improved spatial analysis of field data; and
    - Scale-up of assessment to the national level.

  It is proposed to use RS at two levels in each pilot country: national and district/site levels, based on data availability. Five national level RS maps will be compiled from geo-referenced digital maps available to inform the national level workshop and district/site validation. District/site available remote sensing maps will also be compiled.

- *Activity 1.1.5: Development of an operational and procedural manual to monitor and assess LD and SLM based on the framework of indicators domains.*

  Following the initial consultations with communities and the feedback received and compiled across the five countries, an operational and procedural manual to monitor and assess LD and SLM will be developed by the project team. This first draft will be tested in the field during district/site level consultations under Activity 1.2.1 part ii. The procedural manual will later be refined and finalized after field survey has been completed (see Activities 1.3.1 and 1.3.3).

The first draft manual will integrate the refined framework of global indicators developed during Activity 1.1.1 and revised following the initial consultations conducted under Activity 1.1.3, explaining how to conduct the participatory assessment and monitoring.

It could be structured as follow:

- Logical steps in implementing the assessment and monitoring method;
- Resources required;
- Framework of global domains of indicator;
- Sources of baseline information and data collection techniques;
- Monitoring time and frequency;
- Roles and responsibilities and required staff in collecting data;
- Logistical organization; and
- Reporting processes and templates.

188. **Output 1.2:** The Monitoring and assessment procedural and operational manual is tested at local level and the global indicators are further adapted while assessing policies.

- *Activity 1.2.1*: *Adaptation and contextualization of the framework of global indicators to the district/local level in each of the pilot countries while linking it to sustainable land management.* This will be done through*:*

  (i) Training of the assessment team

  The assessment team identified during the national workshop (Activity 1.1.2. above) will be trained during a one day event at the district/site level (in advance of the first district/site level workshop). Additional on-the-job training will be conducted as well during the work to be conducted at the local level. The assessment teams in their entirety (including the herders) will comprise approximately 15 individuals, and will include staff from the local partner organisation (from baseline initiative in each country), herders and few key national experts from national organisations involved at the local level.

  The session will aim at presenting and discussing: challenges in assessing pastoral areas comprising of grasslands and rangelands, the operational and procedural manual including the framework of global indicators, specific indicators and data collection techniques, and providing guidance on approaches and skills needed to facilitate community engagements paying particular attention to participation processes. The manual and data collection tools would have been previously translated into local languages.

  During the district/site level training, at least four herders will be selected to join the assessment team on the field survey (Activity 1.2.1 (iii)). Training will take place over one day and will include:

  - A review of the information on indicators that should be generated through the field survey (Activity 1.2.1 (iii)) ;
  - Training on how to conduct the data collection in the field and guidance on filling out the data collection sheets;
  - Training on helping herders to self-assess LD and SLM; and
  - Discussion on logistical aspects of the rapid validation process.

  (ii) Preliminary district/site consultation, selecting sampling sites by classifying the landscape within each district/site, identifying specific indicators per global indicator domains, and presenting the assessment work.

This continued district/site level discussion is a critical process that will allow further community understanding of the objectives, goals and activities of the project. Through this consultative process the assessment team will refine global indicators within district/site sampling selection and adapt logistical arrangements to the field context.

Communities will classify their landscape and map natural resources through a participatory mapping exercise[49] (using large maps of the community site/district, taken directly from Google Earth).

The assessment team will present the concept of assessment and monitoring indicators, and participants will share information and knowledge on how they identify healthy or degraded pastoral area comprising of grasslands and rangelands. This consultation will also set the ground for the mainstreaming work to be promoted as part of Component 2 and Output 2.1. Participants will be asked, to the extent possible, to identify key local policies and strategies that might benefit from this assessment and monitoring system and that could be further assessed as part of Output 2.1, following the preliminary assessment (see (iii) below), in order to identify key entry points for mainstreaming LD/SLM assessment findings.

A minimum number of specific indicators for each indicator domain are to be selected by the community with the support of the assessment team. In addition, best SLM practices will be identified by the community regarding existing SLM practices, follow the WOCAT methodology to gather and assess SLM best practices. Detailed information regarding these existing best practices will be collected at that stage.

Community participants will then be asked to qualitatively delineate (within each marked landscape units/polygons) where they perceive LD (trends and as a current status) to occur and where they perceive land to be in a healthy state or identify trends in restoration/regeneration.

(iii) Rapid validation of indicators selected by the communities, testing of proposed data collection technique(s) for each indicator, data compilation and reflection

The assessment team will then conduct a specific assessment/field survey with pastoral communities involved in baseline initiatives, in order to:

- Test the accuracy of the landscape classification and selected indicators, and to evaluate their feasibility;
- Test the quantitative and qualitative data collection techniques for each specific indicator that will be based on the draft operational and procedural manual;
- Record the time taken to collect data and associated costs; and
- Record any unforeseen adverse events that arise from the field survey, which will later need to be accounted for during the actual assessment.

Data collected will then be compiled, and some feedback and reflection on the community dialogue, field survey, operational and procedural manual and next steps will be provided. A second district/site level consultation involving communities will be organised for compiling all validated and verified local district/site level indicators into the global domain of indicators framework. This activity is the preliminary feedback to the local community at the district/site level after the field surveys for the baseline assessment have been conducted. It involves feedback on adequacy of specific indicators selected per domain and their respective data

[49] A method for classifying the landscape should be discussed during the first technical meeting (see Activity 1.1.1) so that it is standardized between all five pilot countries

collection techniques, feedback on qualitative observations and quantitative analyses of the state of LD or land health, and initiating dialogue and discussions around drivers of LD or examples of SLM and restoration. This consultation will also aim at presenting the LD/SLM assessment findings to the participants, discuss and analyze district level strategies, policies and investments plans for the agro-sylvo-pastoral sector. As part of Output 2.1 below, options to insert these findings into the current strategies, policies and plans will be discussed and an action plan developed.

- *Activity 1.2.2: Data compilation, storage, analysis, and production of an assessment report at the district (or equivalent administrative division) and national levels.*

  Data analysis will be conducted post field visit. Digitisation of maps and sampling points recorded during community consultations will be developed using the GPS coordinates collected in the field during field sampling.

  Through the LD and SLM assessment, the raw data collected through data collection sheets will be replicated and organized into a database. Agreements regarding data storage and analysis would have to be defined and discussed in early stage of project implementation as part of the first national workshop.

  The data organisation will be standardised between pilot countries for easy consolidation and comparison at the global level.

  A national assessment report detailing the background of the project, the assessment process and the results of that process will be produced for each pilot country.

- *Activity 1.2.3: Compilation of feedback and lessons learned from the testing of the method and procedures for each district/site.*

  Lessons from the feedback consultation and from all preceding activities will be routinely captured through mission reports and project progress reports and evaluations. All feedback including lessons learned and recommendations on the framework of global indicators, the procedural and operational manual and the findings of the assessment report will be captured, collated, and reviewed by the assessment team.

189. **Output 1.3**: The assessment and monitoring method is refined, validated and finalised based on lessons learned from the district/site tests.

- *Activity 1.3.1: Revision of the procedural and operational manual based on feedback and lessons learned compiled under 1.2.3.*

  The recommendations and lessons from Activity 1.2.3 will be used to revise and update the refined procedural and operational manual. All lessons and recommendations will be incorporated into one draft global consolidated report, which will be presented during final national consultations (see activity Activity 2.1.2 below), together with the results of the five specific participatory national grassland and rangeland assessments, linking the results of this assessment with policy influence aspects.

- *Activity 1.3.2: Organization of a second international consultation with key relevant scientists, technicians, decision makers and key representatives from pastoral communities to present and discuss the final framework of global indicators and the finalised assessment and monitoring method.*

There are two options to carry out this activity; the first will be through a two day e-consultation and then a final meeting. Alternatively, together with the project co-financing partners, a suitable meeting or workshop organized by one of the co-financing partner will provide a platform for discussion. The first day will be focused on presenting the assessment methodology with emphasis on the operational and procedural manual component of the global consolidated report. The second day will examine lessons for improvement and opportunities for strengthening the framework of global indicators and the assessment methodology, opportunities for integrating lessons with other initiatives, and any need to modify the approach. The third day will be focused on using the feedback from the previous day to begin compiling the framework of global indicators from each of the pilot country indicators, which will be completed during Activity 1.3.3 below.

- *Activity 1.3.3: Compilation, analysis and publication of the framework of globally relevant local level indicators defined by domain of assessment and the finalized assessment and monitoring operational and procedural manual.*

  This activity will consist in:

  - Revising and finalizing the framework of global indicators;
  - Revising and finalizing the procedural and operational manual; and
  - Publishing the final Assessment and Monitoring Method including the framework of global indicators, and the results of the five specific participatory national grassland and rangeland assessments conducted in pilot sites.

COMPONENT 2: Inform international and national agro-sylvo-pastoral decision making process

190. The main outcome of Component 2 (**Outcome 2**) will be that the national and international agro-sylvo-pastoral decision making process benefits from the assessment and monitoring procedural and operational manual and participatory national grassland and rangeland assessments.

191. GEF incremental financing of USD 733 738 will be invested in : Output 2.1, and Output 2.2.

192. Co-financing amounting to USD 2,732,270 will be provided by GGW-ACP, IUCN-GDI, PKH; MPS and the Government of Uruguay to Output 2.1 and Output 2.2.

193. The execution of the implementation of Component 2 will be under the responsibility of the PCU for Output 2.1 with the close involvement of the Policy Expert for the execution of Activity 2.1.3, and under the responsibility of the policy expert for Output 2.2.

194. In the baseline, no holistic assessment system exist to gather and compile LD and SLM data in grasslands and rangelands, in order to inform policy making. Component 2 of the project will work at contributing to address this challenge by ensuring that the international and national agro-pastoral decision making processes benefit from the assessment and monitoring system.

195. With GEF incremental funding, the results of the assessment and monitoring performed at the local level will be fed into local, national and global decision making processes. The project will seek to compile SLM local best practices and measures identified during the first assessment performed under Component 1 to influence tangible national policies. At the global level, the operational and procedural method will be disseminated to relevant global fora such as the UNCCD and other scientific panels. The project should enable the uptake of the holistic assessment framework, applicable worldwide from the global to the local scale, as a commonly agreed baseline that will enable comparability and replicability between countries.

196. **Output 2.1**: participatory national grassland and rangeland assessment results are linked to national and local decision-making processes.

197. The implementation of this output will be under the responsibility of the PCU, with the close involvement of the Policy Expert for the execution of Activity 2.1.3.

- *Activity 2.1.1: Analysis of options to support local level political decision and investment based on the assessment results.*

  Key policy mainstreaming entry points will have been identified during the preliminary national and local consultations organised under activities 1.1.2 and 1.1.3, and be further assessed and identified during the local assessment steps implemented under activities 1.2.1 and 1.2.2. Immediately after the field assessment, a district/site (or equivalent administrative division) level consultation (see Activity 1.2.1 (iii)) in each of the pilot countries will be organized to present the preliminary LD/SLM assessment findings to the participants, discuss and analyze district level strategies, policies and investments plans for the agro-sylvo-pastoral sector. This consultation will also aim at (i) discussing options to insert the assessment findings into the current strategies, policies and plans; and (ii) developing an action plan.

  Through this consultation strong linkages should be made between the participatory grassland assessment findings (see above) and the need for trend analysis through a monitoring system to help communities make informed decisions on management and planning. This consultation should also act as a platform to engage communities in the use of planning tools informed by the assessment, as the basis for a more detailed discussion around SLM. For that purpose, SLM best practices identified during the field survey will be compiled and discussed and an action plan to insert the assessment findings into the current strategies, policies and plans will be developed. This plan will be developed hand in hand with the pastoral communities, district level authorities and the national partner organisations which will then follow-up on its implementation, preferably through the associate baseline programmes/projects.

- *Activity 2.1.2: Organization of a workshop at the national level to (i) present the finalized assessment and monitoring method; and (ii) discuss SLM best practices identified through the assessments that could influence tangible policy practices.*

  In each pilot country, a workshop will be organized at the national level following the finalisation of the procedural and operational manual under Activity 1.3.1. One of the objectives of these workshops will be to present the finalized assessment and monitoring methods and the findings of the assessment conducted at the local level. This will be of crucial importance to help each country build ownership over the assessment and monitoring method proposed, in order to ensure that they will keep using it after the end of the project in close collaboration with the national partner organisations. Further collaboration opportunities between national stakeholders and the national partner organisations (including the assessment team trained throughout the project) will be explored so as to ensure they will further support the implementation of the assessment and monitoring method proposed after the project ends.

  The second objective of the workshops will be to discuss and select best SLM practices and approaches identified through the assessments that could be promoted by governmental organisations.

  One report per country will be drafted after the workshops and will summarize the main results and discussion, as well as the SLM best practices and measures that are best fit to influence policy making regarding pastoral areas comprising of grassland and rangelands.

- *Activity 2.1.3: Facilitation of mainstreaming of SLM best practices and measures into national and international partner organisations advocacy policies.*

  Based on SLM best practices and measures identified and compiled after the national workshops, the project will liaise with the national partner insitutions and any other organisations identified during the course of project implementation to ensure that in each country, these best practices and lessons learned, are mainstreamed into their advocacy policies. This will allow them to influence targeted national agro-sylvo-pastoral programmes in an efficient way, being backed by the results of the assessment and monitoring realized on the ground.

  Furthermore, the mainstreaming of SLM best practices will be fed continuously into pastoralist networks such as the Pastoralist Knowledge Hub and the Mountain Partnership. This continuous feedback loop into policy making from the early stages of the project will ensure a strong continuity between (i) the LD and SLM assessment process itself (Component 1) and (ii) the policy implications and the consequences and impacts of the assessment for policy making and programming in pastoral areas comprising of grasslands and rangelands (Component 2).

198. **Output 2.2**: Assessment and monitoring method shared with relevant international mechanisms in order to integrate/align with existing frameworks

199. The implementation of this output will be under the responsibility of the Policy Expert.

- *Activity 2.2.1: Analysis of potential integration between the present framework and other relevant international methods (i.e. UNCCD PRAIS indicators).*

  In order to ensure the uptake of the assessment and monitoring method at the global level, a study on the potential integration between the project's method and other relevant international ones for rangelands will be undertaken.

  This study will briefly review existing relevant international frameworks through a literature review and interviews with relevant stakeholders, and will look at how to combine the procedural and operational manual developed during the project with existing frameworks. This will address the current lack of a global harmonized framework to assess LD for rangelands.

- *Activity 2.2.2: Facilitation of the diffusion of information about the new method and indicator framework in UNCCD and other relevant technical panels or scientific conference.*

  The results and the assessment and monitoring method developed by the project and published under Activity 1.3.3 will be disseminated to the UNCCD and other relevant fora according to a dissemination strategy in order to ensure its uptake at the global level. The relevant fora and panels will be further identified on the basis of the study realized in Activity 2.2.1, whose results will also be disseminated to explain in practical terms how the integration of the project methods into other existing framework at the global level can be achieved. Some side events will also be organised in the margins of international fora and negotiations in order to present and disseminate the method developed and the results of the national assessments.

COMPONENT 3: Knowledge management, monitoring and evaluation

200. The main outcome of Component 3 (**Outcome 3**) will be that project's outcome and output targets are monitored and evaluated, and lessons learned and best practices are captured and disseminated to facilitate future operations.

201. GEF incremental financing of USD 188 761 will be invested in : Output 3.1, Output 3.2 and Output 3.3.

202. Co-financing amounting to USD 400,000 will be provided by GGW-ACP, IUCN-GDI, PKH; and MPS to Output 3.1 and Output 3.3.

203. The execution of the implementation of Component 3 will be under the responsibility of the PCU for Output 3.1, and under the responsibility of the FAO for Outputs 3.2 and 3.3.

204. The baseline is not applicanle for outcome 3.

205. With GEF incremental funding, planned M&E activities including establishing baseline values for all project indicators, yearly updating of indicators, a mid-term evaluation/review and a final project evaluation will be fulfilled.

206. **Output 3.1:** a project monitoring system providing systematic information on progress towards the project outcome and output targets is set-up and implemented.

207. The implementation of this output will be under the responsibility of the PCU.

- *Activity 3.1.1: Development of a performance framework (M&E plan) defining roles, responsibilities, and frequency for collecting and compiling data to assess project performance.*

- *Activity 3.1.2: Implementation of the project monitoring system throughout the duration of the project.*

208. **Output 3.2**: midterm evaluation/review and final evaluation conducted.

209. The implementation of this output will be under the responsibility of the FAO LTO (Lead Technical Officer) in consultation with FAO's OED (Office of Evaluation).

- *Activity 3.2.1: After 18 months of project implementation, a mid-term project evaluation/review will be conducted by an external consultant, who will be selected by FAO with approval of the Project Steering Committee. The expert will work in consultation with the project team including FAO-GEF Coordination Unit, the LTO, and other partners.*

- *Activity 3.2.2: At the end of project implementation a final project evaluation will be conducted under the supervision of FAO Office of Evaluation, OED, in consultation with the project team including FAO-GEF Coordination Unit, the LTO, and other partners.*

210. **Output 3.3:** project related best practices and lessons learned are documented and published.

211. The implementation of this output will be under the responsibility of FAO with support by the Policy Expert.

- *Activity 3.3.1: Collection of best practices and lessons learned throughout the implementation of the project.*

- Activity 3.3.2: Publication of a report compiling project's best practices and lessons learned, and dissemination through the Pastoralist Knowledge Hub, the World Initiative for Sustainable Pastoralism, the knowledge management platform for the Great Green Wall, and through networks like the World Alliance of Mobile Indigenous People (WAMIP), the

Coalition of European Lobbies for Eastern African Pastoralism (CELEP), PastoAmericas, etc.

The below diagram summarises the chronological logic of proposed project activities under components 1 and 2.

Figure 13: Chronological Logic of Project Activities

2.5 GLOBAL ENVIRONMENTAL BENEFITS

212. The project will develop a procedure manual with a framework of indicators to enable the participatory assessment and monitoring of LD and SLM in pastoral areas comprising of grasslands and rangelands at a global scale. A long term benefit of this assessment and monitoring tool for LD

and SLM in grasslands and rangelands would be to provide information on pastoral area management and allow local communities and policy makers to make informed decisions, better fit to reverse LD and promote SLM in pastoral areas.

2.6 COSTS EFFECTIVENESS

213. Selection of a suitable method must be guided by realistic cost limitations. This does not mean the budget available in the project, but the likely resources that a government will allocate for adoption, scale-up and sustaining of assessment and monitoring approaches. A major factor in the current weak state of information on grassland and rangeland health is the cost of establishing and maintaining monitoring and assessment systems. Whilst the first impulse may be to gather the widest array of data possible, such approaches may be too costly to be scaled up and decisions may be needed over the minimum set of indicators to use. Indicators that are relevant for national level decision making may be unhelpful for the day-to-day management of grasslands and rangelands. Similarly, local-level indicators that can guide effective management decisions may be context-specific or simply too detailed and cumbersome to be useful for guiding national level decisions. The solution proposed by the project is an integrated, scalable approach within which appropriate indicators are chosen for different scales, but within a framework that allows a degree of comparison between sites and also that allows information at different scales to be cross-checked for cross-validation. The proposed project is considered cost effective in the sense that it aims at developing one holistic participatory tool to assess LD and SLM in pastoral areas that can be used at the global scale to allow comparison of assessments made at the local level.

2.7 INNOVATIVENESS

214. The innovativeness of the proposed GEF project lays in three main aspects:

- The development of a **holistic tool** for the assessment and monitoring of LD and SLM in pastoral areas. As described above, there is no holistic tool available at the global scale to assess LD and SLM in pastoral areas. Through the proposed GEF project, such tool will be developed with a set of specific indicators that are precise and adapted enough to be used at the local level by pastoralists. These specific indicators will be integrated into a broader set of global indicator domains that will allow comparison between assessments at the global level. The development of such assessment and monitoring tool is particularly innovative.
- A **participatory approach**. The assessment and monitoring procedure to be developed under the project will involve a variety of stakeholders. Global level stakeholders will be involved in the identification of global indicator domains, national level stakeholders will be involved at different stages in the development of the assessment and monitoring methodology and in the policy mainstreaming processes, and pastoralist communities will be closely involved in the validation of global indicator domains as well as specific local indicators. There is no participatory assessment tool at this stage that allow local communities to assess LD in their pastoral areas while also allowing comparison at a global scale between the various local assessments.
- A **feedback loop** mechanism that systematically feeds the finding of the assessment and monitoring process into decision making processes. Such mechanism is innovative in the sense that it will allow the result of the assessment and monitoring on the field to be directly fed into policy making at the local, national and global scales. The assessment and monitoring methodology will therefore directly inform policies and decision-making so informed decisions can be taken in the medium to long term to reverse LD and improve SLM in pastoral areas.

2.8 LEARNING QUESTIONS

215. The project will develop an assessment methodology which will be partially based on an established approach, but which will inevitably also include innovative aspects. Some key questions arise that should guide the development of the methodology, but which will also require learning during implementation in order to refine our overall understanding. Several of these questions will need to be broached at the inception meeting of the project in order to adopt a working approach that will be further tested through the project, including contrasting approaches between countries. Questions include:

- How do we define grasslands and rangelands? Should we focus on ecological (natural) grasslands and rangelands or current grasslands and rangelands? For example, do we exclude grasslands and rangelands that have been converted to other uses like crop farming or settlements? Do we include non-native grasslands and rangelands, such as forests that have been converted to pasture?
- What is an appropriate scale on which to monitor? Do we assess grasslands and rangelands landscapes, in which patches may have been lost to other uses, and therefore assess the overall landscape health? Or do we focus on more distinct grassland and rangeland ecosystems?
- How do we select sites and plots for assessment? Do we deliberately identify degraded areas for assessment or does this introduce bias? Keeping in mind the need to be cost effective, what is an appropriate level of granularity for decision making at different scales?
- What is the best season in which to carry out grassland and rangeland assessment?
- What is unique about grasslands and rangelands that renders existing indicators unsuitable? How do we account for Non-equilibrium systems and shifting baselines? How do we determine competing management objectives and the desirable state against which health is measured?
- Are the indicators of grassland and rangeland health any different from those used under LADA, or do we address the uniqueness of grasslands and rangelands through the way we interpret those indicators?
- What is the difference between monitoring and assessment in relation to our approach? Are the indicators the same?
- What are indicators of Sustainable Land Management in grasslands and rangelands? How are these different?
- Can we identify tipping points (linked to collapse and transformation) in grassland and rangeland ecosystems?
- How do we link local (community) indicators based in an entirely different epistemology with scientifically derived indicators?
- What are the minimum globally comparable indicators?
- How do we measure Soil Organic Carbon (a key indicator) in the most cost-effective manner taking local capacities into account?
- How do we respect Free Prior and Informed Consent in grassland and rangeland assessment? How do we respected community rights over information, government rights over information, and overall data access vs. risk of mis-use?

SECTION 3: FEASIBILITY

3.1 ENVIRONMENTAL IMPACT ASSESSMENT

216. Based on the project objective, outcomes and outputs, adverse environmental or social impacts are not likely, and the project conforms to FAO's pre-approved list of projects excluded from a detailed environmental assessment (i.e. Category 'C'). To the contrary, the project and the GEF resources invested are expected to have positive environmental and social impacts, contributing to improve the management of pastoral areas, promoting SLM best practices and reducing LD. The project is therefore expected to create global environmental and social benefits.

3.2 RISK MANAGEMENT

3.2.1 Risks and mitigation measures

217. A detailed risk table including potential risks to the project, estimated levels of risks and proposed mitigation measures for each risk is provided in Appendix 5.

3.2.2 Fiduciary risk analysis and mitigation measures

218. The project execution agency, IUCN, is an accredited GEF agency and has passed the fiduciary risk assessment conducted for the GEF accreditation with high marks.

Risk level is low

219. IUCN as the lead executing partner for this project is an international organisation working on environment conservation, effective and equitable governance of its use and nature-based solutions to global challenges in climate, food, and development. IUCN support scientific research, manages field projects and brings government, NGOs, the UN and private companies together to develop policy, laws and best practices. IUCN is subject to all rules of public management, which includes adhering to the system of public procurement, being subject to independent external audits and independent internal audits, submitting quarterly report to resources partners and complying with public standards for managing financial resources. The IUCN received in 2014 about 111.6 million CHF[50] for its operations, from 6 main income sources, including Governments, multilaterals and Conventions, Members, Foundations and Institutions, NGOs, and Corporations.

220. A fiduciary risk assessment of IUCN was conducted as part of its accreditation as GEF implementing agency in March 2014 by an external auditor and the overall fiduciary risk was rated as low. IUCN has a procurement policy and procedure for goods and services which includes an adequate procurement procedures and standards to be followed by executing agencies. IUCN contracts are consistent with widely accepted international standards. The agency has its own requirements for monitoring and reporting, which are rigorous and comprehensive and which adhere to international best practices. Guidelines are available at IUCN headquarters to monitor and verify in the field project performance. Finally, IUCN has a very comprehensive environmental policy as articulated in IUCN statement of Vision and Mission.

221. In 2014 during the assessment, a risk laid in the fact that in its project portfolio, IUCN often performs both implementation and execution functions, without systematically segregating them.

[50] IUCN. *2014 IUCN Annual Report*. 2014

However the GEF requires that project implementation and execution duties are separated, through a satisfactory institutional arrangement for the separation of the two functions in different departments of the agency, or through the establishment of clear lines of responsibility, reporting and accountability within the agency between implementation and execution. In this case, IUCN will solely act as executing partner, the FAO remains the GEF implementing and executing agency. Fee resources will be used by FAO to ensure appropriate technical backstopping throughout the entire project cycle.

Risk mitigation measures

222. There will be outsourcing of procurement for a total amount of USD 849,125. This includes expendable procurement for an amount of USD 278,000, non-expendable procurement for an amount of USD 53,125 and contracts for personnel or services for an amount of USD 518,000. Regarding contracts, the total amount includes 4 small contracts and one letter of agreement with the national institution in each country. Procurement and contracting will be done under IUCN rules in compliance with generally accepted international standards for public sector procurement. Nonetheless, FAO clearance will need to be obtained for issuing purchase orders/contracts exceeding USD 15 000 for consultants/firms/NGOs services contracts and procurement of goods. IUCN will complete a procurement plan to be reviewed at project inception and cleared by the FAO BH and LTO. The procurement plan will be updated every six months and submitted to FAO for clearance.

223. The national institutions with which letters of agreements will be signed by IUCN are: the General Directorate of pastoral resources management in Burkina Faso, the Directorate of Livestock Production in Kenya, the Department of Pasture in Kyrgyzstan, Ministry of Livestock in Niger and the Ministry of Agriculture, Livestock and Fisheries in Uruguay. The transfer of resources to national ministries and organizations will be done under the standard agreement that the IUCN uses to transfer resources to other organizations. The funds will be disbursed annually by IUCN in accordance to the Project's budget and the Annual Work Plans that will be developed by the project Coordination Unit and approved by the Steering Committee. Report on the use of expenses will also be included in IUCN reports to FAO before the disbursement of the next tranche, as established in the executing agreement.

SECTION 4 – IMPLEMENTATION MANAGEMENT AND ARRANGEMENTS

4.1 INSTITUTIONAL ARRANGEMENTS

4.1.1 General institutional context and responsibilities

225. The Food and Agriculture Organisation (FAO) will be the GEF Agency for the Project and responsible for project oversight and for ensuring that the project is implemented in accordance with FAO and GEF policies, meets its objectives and achieves expected outcomes and outputs as described in the Results Framework, FAO-GEF Project Document, and in accordance with the results-based work plan and budget, 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 monitor the project and provide technical support (through FAO's Forestry Department and the Agricultural Plant Production and Protection Division).

226. IUCN will be the primary project partner and responsible for the day-to-day management. As environmental organization, IUCN focuses on valuing and conserving nature, ensuring effective and equitable governance of its use, and deploying nature based solutions to global challenges in climate, food and development. IUCN has a unique structure which combines its three main institutional pillars; its members (across 140 countries), commissions (comprised of 11,000 experts) and the secretariat (1200 staff). Through this structure, IUCN can bring together states, government agencies, and non-governmental organisations for the benefit of this project. The project is embedded in IUCN's Global Dryland Initiative (GDI), and is integrated into the first GDI priority area, e.g. Strengthening Evidence for Targeting and Monitoring in Dryland Ecosystems. In order to achieve the project's overall objective, IUCN will work with a variety of stakeholders including the national and local governments in the pilot countries, pastoral networks such as the Pastoralist Knowledge Hub and Mountain Partnership, civil society organizations, research institutions such as Agrhymet and local herders and communities.

227. IUCN will carry out activities related to: outputs 1.1, 1.2, 1.3, 2.1 and 3.1.

228. FAO will be responsible for: outputs 2.2 and 3.2 and 3.3

4.1.2 Coordination with other ongoing and planned related initiatives

229. The project will be implemented in close collaboration with existing initiatives in the pilot sites. These initiatives include the following:

230. Burkina Faso:

- The Great Green Wall for the Sahara and Sahel Initiative (GGWSSI) through the project Action against desertification for sustainable livelihoods and resilient and productive landscapes (GCP/INT/157/EC) (see above for a detailed description)
- Food security and nutrition programme in Burkina Faso: Component 1-Improved availability and access to food and money. Implemented by FAO through funding from the European Union, this project aims at improving food and nutrition for people's resilience to climate shocks and food crises. Recognizing the populations' continued vulnerability, this project takes an integrated approach encompassing different types of livelihoods, constraints to sustainable improvement of food security and the general standard of living. The multi-sectoral approach to food and nutrition security will be achieved by increased availability and access to food by rural poor, especially women and youth. The expected outcomes include: 1) Increased access to productive agro-pastoral and Non-timber Forest

Products (NTFPs); and 2) Improved marketing and accessibility of agricultural production. This project can provide important socio-economic data to the GEF/FAO global project and help with identifying and mainstreaming the needs of vulnerable groups, youth and women.

- The project Enhancing the Value of Ecosystem Services in Pastoral Systems funded by ILRI and implemented by IUCN (see baseline Section for detailed description).
- Integrating Climate Resilience into Agricultural and Pastoral Production for Food Security in Vulnerable Rural Areas in Burkina Faso through the Farmer Field School Approach (FAO/LDCF).

231. Kenya:

- Building drought resilience through land and water management. Funded by the Austrian Development Cooperation, this projet implemented by IUCN Kenya aimed at improving the resilience of dryland communities to the impacts of increasingly severe and frequent drought and floods.
- Resilience and Economic Growth in Arid Lands – Improving Resilience (REGAL-IR). Funded by USAID and implemented by IUCN Kenya, this project aims ar reducing hunger and poverty, increasing resilience and social stability, and building a foundation for economic growth among pastoral communities in northern Kenya's arid and semi-arid lands.
- FAO has several on-going programmes in Kenya. A SIDA macro-grant with the thematic subject, "Improved food security and resilience for vulnerable communities in Kenya", is on-going having begun from 2014 to run until 2017. The project, with a budget of $ 1,360,000 aims to build resilience of the vulnerable communities in ASALs and improve their food security through increased adaptive capacity, increased access to productive assets and improvement of land, water and other natural resources.
- The project Enhancing the Value of Ecosystem Services in Pastoral Systems funded by ILRI and implemented by IUCN (see baseline Section for detailed description)

232. Kyrgyzstan:

- FAO through GEF implements an on-going project; Sustainable Management of Mountainous Forest and Land Resources under Climate Change Conditions, which is in line with the GEF-5 Land Degradation and REDD+ strategies. The project has a goal of an enhanced enabling environment in the forestry and agricultural sectors and sustained flow of ecosystem services, including enhancement of carbon stocks in forests and agro-ecosystems. The project's specific objective is to contribute to the sustainable management and enhanced productivity of mountainous agro-sylvo-pastoral ecosystems and improved mountain livelihoods in the Kyrgyz Republic. The project started in 2014 and will end in 2018.
- Sustainable Land Management in High Pamir and Pamir-Alai Mountains (PALM) project aims to address the interlinked problems of LD and poverty within one of Central Asia's crucial fresh water sources and biodiversity hotspots. The overall goal of the project is to restore, sustain, and enhance, the productive and protective functions of the transboundary ecosystems of the High Pamir and Pamir-Alai Mountains, of Tajikistan and Kyrgyzstan, so as to improve the social and economic well-being of the rural communities and households. One of the project outputs includes developing an operational management decision support/monitoring and evaluation system providing those responsible for promoting SLM within the High Pamir and Pamir-Alai Mountains.

233. Niger:

- There are a number of FAO initiatives underway in Niger. FAO Forestry Department is continuing its support to the GGWSSI through the project Action against desertification for

sustainable livelihoods and resilient and productive landscapes (GCP/INT/157/EC). This EU/ACP project is implemented in eight ACP countries , including Niger and Burkina Faso. The project is described in more details above, as a baseline initiative in Burkina Faso.

- A joint Word Food Programme (WFP)/FAO programme Operationalizing Partnerships for Resilience Building in Niger has a budget of $3 million to be carried out from 2014 to 2016. FAO and WFP will leverage each other's strengths, experience, and capabilities to strengthen the capacities of vulnerable communities and the institutions that support them in preparing for and facing recurrent droughts and food and nutrition crises. This project will build upon existing FAO and WFP programmes that aim to restore, build, or improve specific community assets to reduce the impacts of shocks, increase household income, and reduce early or abnormal out-migration. The project objectives include: i) Increasing the access of vulnerable households to productive assets; ii) Improving operational coordination and strengthening partnerships; and iii) Improving food consumption for targeted households.
- Integrating climate resilience into agricultural and pastoral production for food security in vulnerable rural areas in Niger through the Farmers Field School approach (FAO/LDCF)

234. Uruguay:

- Building Resilience to Climate Change and Variability in Vulnerable Smallholders: This project will be implemented by the Ministry Of Agriculture, Livestock and Fisheries (MGAP) with funding from the Adaptation Fund. The project will be implemented in two ecoregions- Basaltic Cuesta and East Hills Eco-Regions. The overall objective of the project is to contribute to building national capacity to adapt to CC and variability focusing on critical sectors for the national economy, employment and exports. The specific objectives include: a) Reducing vulnerability and building resilience to climate change and variability in small farms engaged in livestock production located in extremely drought-sensitive Landscape Units of the Basaltic Cuesta and East Hills eco-regions; b) Strengthening local institutional networks at the selected Land Use level targeting climate change adaptation (prevention) and response to extreme events (emergency) in highly drought-sensitive areas; and c) Developing mechanisms for a better understanding and monitoring of the impacts and variability of CC, anticipating and assessing negative events and eliciting lessons learned and identifying and validating best practices and toolkits for adapting to increasing variability of CC. The total budget for the project is USD 10million. The project began in 2010 and will be completed end 2016.
- National Program of Technology Transfer and Diffusion (NPTTD): This is a new initiative of the MGAP that aims to reinforce the process of technology transfer and diffusion among cattle and sheep farmers. It is a public-private effort that will articulate actions carried on by the MGAP, the public institutions (National Research Institute INIA, National Meats Institute INAC, the Agrarian Plan IPA, and the Wool Secretariat SUL) and private local farmers' organizations. The goal is to introduce technologies that are already available that would improve the farm´s general productivity by increasing the use efficiency of natural grasslands, and the strategic use of feed-supplements. The programme is partly funded by the central government and partly by national institutions. Implementation will begin in 2016 with a total budget of USD 6million.
- Climate-smart livestock production and land restoration in the Uruguayan rangelands: FAO together with the Ministry of Agriculture, National Institute of Agricultural Research (INIA); Uruguayan Federation of Regional Centres of Agricultural Experimentation (FUCREA) is developing a GEF project planned for 4 years of implementation. The requested amount is USD 12million. The project objective is to mitigate climate change and to restore degraded lands through the promotion of climate smart practices in the livestock sector, with focus in family farming.

- Strengthening the effectiveness of SNAP including landscape approach to management: This project is funded by the GEF with a budget of USD 6million from 2014-2018. The aim of the project is to present new land management policies of the country to harmonize, at central and local level, policies related to environmental protection, so as to incorporate the landscape approach to management, strengthening effectiveness of PAs as a nucleus for the conservation of species and ecosystems local and global significance.

4.2 IMPLEMENTATION ARRANGEMENTS

a) Roles and responsibilities of the executing partners

235. **Executing partner**. The IUCN Global Drylands Initiative (GDI) will be the coordinating body for the implementation of project Components 1 and 2. National relevant ministries and national partners in the pilot countries will be closely associated to the implementation of the action on the ground, with the technical support of IUCN GDI. FAO will be the GEF Agency responsible for project oversight, supervision and the provision of technical support and guidance. In particular IUCN will be responsible for the following:

- The technical implementation of project activities under Component 1 and 2 (except for Output 2.2 which will be under the responsibility of the Policy Expert based at FAO HQ);
- The daily management and coordination of the project;
- Financial, contracting and procurement planning; and
- Preparing and sending to FAO six-monthly Project Progress Reports (PPR), financial reports, Annual Work Plan and Budget (AWP/B), and all the necessary documentation for the Project Implementation Review (PIR).

236. FAO will transfer the funds to IUCN in the terms established in the Operational Partner Agreement to be signed between the two institutions. The project financial controls will be managed by IUCN Financial Services Unit, responsible for all project-related financial transactions, records and reporting to donors. IUCN is substantively and fiduciary accountable for all expected project results assigned for its implementation. IUCN will purchase goods and services following its own internationally acceptable rules and procedures.

237. **Other partners**. The project will closely work with the following national institutions, according to terms defined in letters of agreement signed during the project inception phase: the General Directorate of pastoral resources management in Burkina Faso, the Directorate of Livestock Production in Kenya, the Department of Pasture in Kyrgyzstan, the Ministry of Livestock in Niger and the Ministry of Agriculture, Livestock and Fisheries in Uruguay.

The national partners will implement activities on the ground in close collaboration with IUCN and FAO, through the signature of letter of agreements with IUCN. The IUCN is accountable for the agreements which will require performance and expenditure reporting consistent with overall project reporting. The specific roles and responsibilities of each partner will be agreed upon mutually during the inception stage of the project.

238. A Project Steering Committee (PSC) will be set up and will include representatives of FAO, IUCN/GDI, GGW/Action Against desertification, MP Secretariat, PKH Secretariat and project beneficiary countries. Detailed PSC membership will be defined at project inception. The PSC will monitor and coordinate the planning of the implementation of the project. The PSC members will meet face to face once a year. PSC responsibilities include:

- Provide guidance to the Project Coordination Unit (PCU) to ensure project implementation is in accordance with the project document;
- Review and approve any proposed revisions to the project results framework and implementation arrangements;

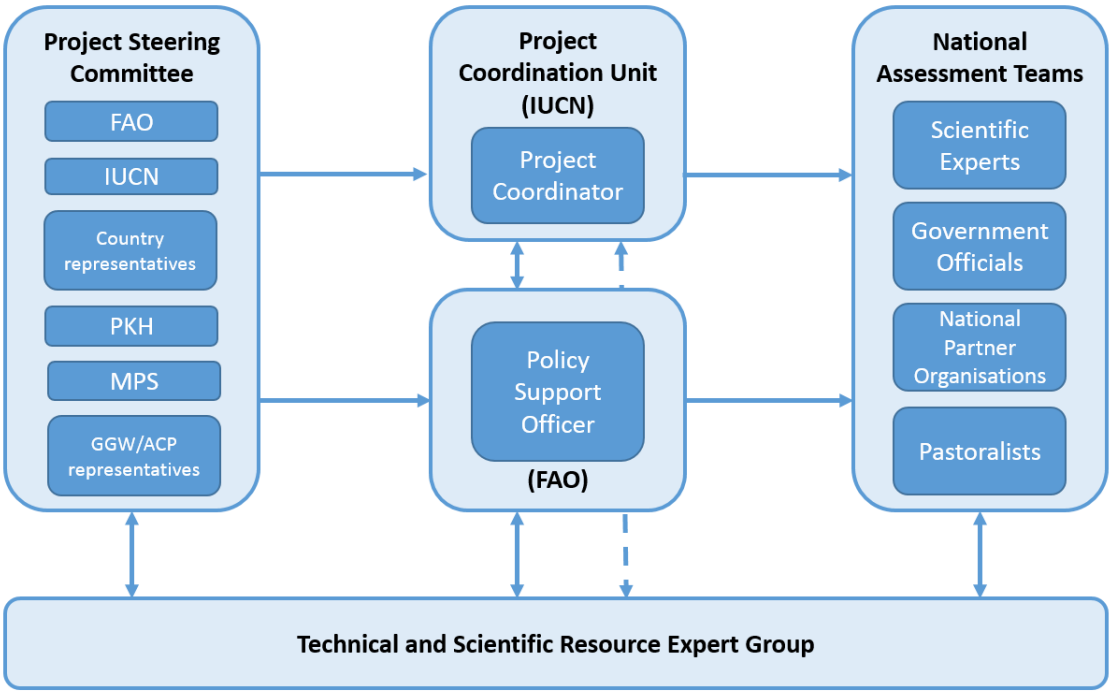
- Review, amend (if appropriate) and endorse all Annual Work Plans and Budgets;
- Review project progress and achievement of planned results as presented in six-monthly Project Progress Reports, Project Implementation Reviews (PIRs) and Financial Reports;
- Ensure that co-financing support will be available on time;
- Advise on issues and problems arising during project implementation;
- Facilitate cooperation between all project partners and facilitate collaboration between the Project and other relevant programmes, projects and initiatives in the country; and
- Approve ToR for midterm and final evaluations

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

240. A Technical and scientific resource experts group will be set-up as well, and convened for international workshops in year 1 and 3 and consulted as needed in year 2 and along project implementation. It will provide scientific advise in defining domains of indicators, developing assessment procedures and manuals.

241. The day-to-day implementation of the project will be carried out through the Project Coordination Unit (PCU) and the Project Coordinator. The project's organizational structure is shown in the figure below.

Figure 14: Project organizational structure



242. **Project Coordination Unit (PCU)**. The Project Coordination Unit will be hosted by IUCN/GDI in Nairobi, Kenya. The PCU will be responsible for day-to-day project operations and to ensure the effective and efficient coordination and execution of the project through the implementation of the annual work plans and budgets (AWP/Bs). The PCU will comprise of one full time Project

Coordinator (PC) supported by a part time policy expert (PE) based in Rome to ensure linkages with key pastoral networks that are hosted by FAO. The PC's and PE's respective roles and responsibilities are described below. Technical backstopping and overall guidance will be provided by a Senior technical backstopping expert from IUCN and FAO LTO. The PCU roles and responsibilities include:

- Technically identify, plan, design and support all activities;
- Liaise with government agencies and regularly advocate on behalf of the project;
- Prepare the Annual Work Plan and Budget (AWP/B) and monitoring plan;
- Be responsible for day-to-day implementation of the project in line with the AWP;
- Ensure a results-based approach to project implementation, including maintaining a focus on project results and impacts as defined by the results framework indicators;
- Coordinate project interventions with other ongoing activities;
- Monitor project progress;
- Be responsible for the elaboration of FAO Project Progress Reports (PPR) and the annual Project Implementation Review (PIR); and
- Facilitate and support the mid-term evaluation/review and final evaluation of the project.

243. PMU staff will be supported by national and international consultants who will be recruited during project implementation as needed. The list and ToR of required consultants are presented in Appendix 6.

244. The **Project Coordinator (PC)** will be in charge of daily project management and technical supervision including: (i) coordinating and closely monitoring the implementation of project activities; (ii) day-to-day management; (iii) coordination with related initiatives; (iv) ensuring a high level of collaboration among participating institutions and organizations at the global, national and local levels; (v) tracking the project's progress and ensuring timely delivery of inputs and outputs; (vi) implementing and managing the project's monitoring and communications plans; (vii) organizing annual project workshops and meetings to monitor progress and preparing the Annual Budget and Work Plan (AWP/B); vii) submitting the PPR with the AWP/B to the Project Steering Committee and FAO; (viii) acting as Secretary of the Project Steering Committee; and ix) preparing the PIR, and supporting the organization of the mid-term evaluation/review and final evaluation.

245. A part time Policy Expert (PE) will be recruited within the AGP Division in Rome in order to support key project activities. The Policy Expert will be in charge of (i) Facilitating the mainstreaming of SLM best practices and measures into national and international partner organisations advocacy policy. She/he will ensure in particular a close collaboration between the Mountain Partnership Secretariat and the Pastoral Knowledge Hub and the GGW/ACP project team which are based at FAO HQ; (ii)facilitating the recognition and adoption of the assessment and monitoring method in relevant international mechanisms, closely coordinating and working with the UNCCD Secretariat, among others;(iii) the documentation and publishing of project related best practices and lessons learned; (iv) taking part to the initial national workshop and local consultations, the development of the procedural manual, the baseline assessment work at the local level, and all further consultations to be organised at district and national levels in relation to policy aspects; and (v)contributing to the publication of the final Assessment and Monitoring Method and the results of the five specific participatory national grassland and rangeland assessments conducted in the pilot sites.

246. Draft Terms of Reference (TOR) for the National Project Coordinator and Project Team are listed in Appendix 6.

b) FAO's role and responsibility as the GEF Agency

247. FAO will serve as both the GEF Agency and an executing partner of the project, contributing to all activities executed by IUCN as part of Component 1 and 2, and being responsible for executing Activity 2.1.3 under Output 2.1, as well as Outputs 2.2 and 3.3 as describe below. FAO will provide supervision and technical guidance services during the project execution. Administration of the GEF grant will be in compliance with the rules and procedures of FAO, and in accordance with the agreement between FAO and the GEF Trustee.

248. As the GEF agency for the project, FAO will:

- Manage and disburse funds from GEF in accordance with the rules and procedures of FAO;
- Enter into an Operational Partner Agreement with IUCN as the Executing Partner for this project;
- Oversee project implementation in accordance with the project document, work plans, budgets, agreements with co-financiers and the rules and procedures of FAO;
- Provide technical guidance to ensure that appropriate technical quality is applied to all project activities;
- Carry out at least one supervision mission per year; and
- Report to the GEF Secretariat and Evaluation Office, through the annual Project Implementation Review, on project progress and provide financial reports to the GEF Trustee.

249. **Co-executing agency role**. As a co-executing agency of the project, the FAO will designate a Lead Technical Officer (LTO) and Budget Holder (BH) to coordinate the implementation of the project. The LTO will maintain primary accountability for the timeliness and quality of technical services rendered for project execution. The BH will be responsible for administrative functions, and in this capacity will authorize the disbursement of funds. Together, they would be responsible, *inter alia*, for facilitating the coordination of project activities together with IUCN, including the identification and recruitment of international and national project staff, and for facilitating the establishment of the Project Steering Committee.

250. **Budget Holder (BH).** The Team leader of the Ecosystem Management team of the FAO's Agricultural Plant Production and Protection Division (AGPME) will be the BH of this project. The BH, working in close consultation with the FAO Lead Technical Officer (LTO, see below), will be responsible for the timely operational, administrative and financial management of the project. The BH will set up and head the multidisciplinary Project Task Force (see below) that will be established to support the implementation of the project 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.

251. Specifically, working in close collaboration with the LTO, the BH will: (i) clear and monitor annual work plans and budgets; (ii) upload the Project Progress Reports (PPRs) into FPMIS after the LTO's approval; (iii) schedule technical backstopping and monitoring missions; (iv) authorize the disbursement of the project's GEF resources; (v) give final approval of procurement, project staff recruitment, LoAs, and financial transactions in accordance with FAO's clearance/approval procedures; (vi) review procurement and subcontracting material and documentation of processes and obtain internal approvals; (vii) be responsible for the management of project resources and all aspects in the agreements between FAO and the various executing partners; (viii) provide operational oversight of activities to be carried out by project partners; (ix) monitor all areas of work and suggest corrective measures as required; (x) provide six-monthly financial reports including a statement of project expenditures prepared by IUCN to the PSC; (xi) be accountable for safeguarding resources from inappropriate use, loss, or damage; (xii) be responsible for addressing recommendations from oversight offices, such as Audit and Evaluation.

252. Within FAO, 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 is composed of a Budget Holder, a Lead Technical Officer (LTO), the Funding Liaison Officer (FLO) and one or more technical officers based on FAO Headquaters (HQ Technical Officer).

253. **FAO Lead Technical Officer (LTO**). The LTO for the project will be the Forestry officer for Drylands who is also the Officer having the oversight role of the implementation of the the Action Against Desertification project. The role of the LTO is central to FAO's comparative advantage for projects. The LTO will oversee and carry out technical backstopping to the project implementation. The LTO is responsible and accountable for providing or obtaining technical clearance of technical inputs and services procured by the Organization.

254. In addition, the LTO will provide technical backstopping to the PTF to ensure the delivery of quality technical outputs. The LTO will coordinate the provision of appropriate technical support from PTF to respond to requests from the PSC. The LTO will be responsible for:

- Represent FAO in the PSC;
- Develop, together with IUCN, TCS, the BH and the GEF Coordination Unit the executing agreement that will govern the co-execution of project activities by IUCN;
- Review and give no-objection to TORs for consultancies and contracts to be performed under the project, and to CVs and technical proposals short-listed by the PCU for key project positions, goods, minor works, and services to be financed by GEF resources;
- Supported by the BH, review and clear final technical products delivered by consultants and contract holders financed by GEF resources before the final payment can be processed;
- Assist with review and provision of technical comments to draft technical products/reports during project execution;
- Review and approve project progress reports submitted by the PC, in cooperation with the BH;
- Support the BH in examining, reviewing and giving no-objection to AWP/B submitted by the PC, for their approval by the Project Steering Committee;
- Ensure the technical quality of the six-monthly Project Progress Reports (PPRs).
- Support the BH in the preparation of the annual Project Implementation Reviews (PIR) and ensure the technical quality;
- Conduct annual (or as needed) supervision missions;
- Review the TORs for the mid-term evaluation/review, participate in the mid-term workshop with all key project stakeholders, development of an eventual agreed adjustment plan in project execution approach, and supervise its implementation; and
- Provide inputs for the TORs of the final evaluation as requested by FAO Office of Evaluation;

255. The **HQ Officer** is a member of the PTF, as a mandatory requirement of the FAO Guide to the Project Cycle. The HQ Officer has most relevant technical expertise - within FAO technical departments - related to the thematic of the project. The HQ Technical Officer will provide effective functional advice to the LTO to ensure adherence to FAO corporate technical standards during project implementation, in particular:

- Supports the LTO in monitoring and reporting on implementation of environmental and social commitment plans for moderate projects.

- Provides technical backstopping for the project work plan.
- Clears technical reports, contributes to and oversees the quality of Project Progress Report(s) (PPRs).
- May be requested to support the LTO and PTF for implementation and monitoring.
- Supports the LTO and BH in providing inputs to the TOR of the Final Evaluation as requested by OED.

256. The FAO-GEF Coordination Unit will act as **Funding Liaison Officer (FLO).** The FAO/GEF Coordination Unit will review the PPRs and financial reports, and will review budget revisions based on the approved Project Budget and AWP/Bs. This FAO/GEF Coordination Unit will review and provide a rating in the annual PIR(s) and will undertake supervision missions as necessary. The PIRs will be included in the FAO GEF Annual Monitoring Review submitted to GEF by the FAO GEF Coordination Unit. The FAO GEF Coordination Unit may also participate in the mid-term evaluation/review and final evaluation, and in the development of corrective actions in the project implementation strategy if needed to mitigate eventual risks affecting the timely and effective implementation of the project. The FAO GEF Coordination Unit will in collaboration with the FAO Finance Division request transfer of project funds from the GEF Trustee based on six-monthly projections of funds needed.

257. The FAO Financial Division will provide annual Financial Reports to the GEF Trustee and, in collaboration with the FAO-GEF Coordination Unit, request project funds on a six-monthly basis to the GEF Trustee.

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

4.3 FINANCIAL PLANNING AND MANAGEMENT

4.3.1 Financial plan (by sub-component, outputs and co-financer)

259. The total cost of the project will be USD 8,401,996, to be financed through a USD 2,639,726 GEF grant and USD 5,762,270 in cofinancing from (i) IUCN Kenya and Burkina Faso programming; (ii) IUCN GDI; (iii) FAO-FOA; (iv) Pastoral Knowledge Hub; (v) Mountain Partnership Secretariat, (vi) FAO-AGPM; and (vii) Uruguay MGAP. FAO will, as the GEF agency, only be responsible for the execution of the GEF resources and FAO co-financing. The table below shows the cost by component and outputs and by sources of financing.

Table 5: Summary of Financial Contribution per outputs and co-financing partners

Component/output	GGW-ACP	IUCN	PKH	MPS	FAO AGPM	Uruguay	Total Co-financing	% Co-financing	GEF	% GEF	Total
Component 1: Participatory assessment and monitoring system for pastoral areas comprising of grasslands and rangelands	**1 200 000**	**330 000**	**-**	**-**	**300 000**	**700 000**	**2 530 000**	**61%**	**1 591 526**	**39%**	**4 121 526**
O1.1. A Monitoring and assessment procedural and operational manual is developed	200 000	155 000	-	-	-	300 000	655 000	53%	578 488	47%	**1 233 488**
O1.2. The Monitoring and assessment procedural and operational manual is tested at local level and the global indicators are further adapted while assessing policies	1 000 000	175 000	-	-	300 000	400 000	1 875 000	78%	521 389	22%	**2 396 389**
O1.3.The assessment and monitoring method is refined and finalised based on lessons learned from the district/site tests	-	-	-	-	-	-	-	0%	491 649	100%	**491 649**
Component 2: Inform international and national agro-sylvo-pastoral decision making process	**600 000**	**770 000**	**462 270**	**400 000**	**-**	**500 000**	**2 732 270**	**79%**	**733 738**	**21%**	**3 466 008**
O 2.1. Participatory national grassland and rangeland assessments inform national and local decision-making processes	400 000	570 000	-	-	-	500 000	1 470 000	85%	266 644	15%	**1 736 644**
O 2.2. Assessment and monitoring method shared with relevant international mechanisms in order to integrate/align with existing frameworks	200 000	200 000	462 270	400 000	-	-	1 262 270	73%	467 094	27%	**1 729 364**
Component 3: Knowledge management, monitoring and evaluation	**200 000**	**-**	**100 000**	**100 000**	**-**	**-**	**400 000**	**68%**	**188 761**	**32%**	**588 761**
O 3.1 A project monitoring system providing systematic information on progress towards the project outcome and output targets is set-up and implemented	200 000	-	-	-	-	-	200 000	87%	30 254	13%	**230 254**
O 3.2 Midterm and final evaluation/review conducted	-	-	-	-	-	-	-	0%	95 254	100%	**95 254**
O 3.3 Project related best practices and lessons learned are documented and published	-	-	100 000	100 000	-	-	200 000	76%	63 253	24%	**263 253**
Project Management	**-**	**100 000**	**-**	**-**	**-**	**-**	**100 000**	**44%**	**125 701**	**56%**	**225 701**
Total Project	**2 000 000**	**1 200 000**	**562 270**	**500 000**	**300 000**	**1 200 000**	**5 762 270**	**3**	**2 639 726**	**1**	**8 401 996**

4.3.2 GEF input

260. The GEF funds will finance inputs needed to generate the outputs and outcomes under the project. These include: (i) local and international consultants for technical support and project management; (ii) LoA/contracts with technical institutions and service providers supporting the delivery of specific project activities on the ground; (iii) international flights and local transport and minor office equipment; and (iv) training and awareness raising material.

4.3.3 Government inputs

261. Governments will be associated to the entire assessment work. Work on the ground will be supported by core participating partners and governments. The details of these will be worked out at national workshops. This will also be defined based on identification and elaboration of pilot sites.

4.3.4 FAO inputs

262. The FAO will provide technical assistance, support, training and supervision in the execution of activities financed by GEF resources.

263. In addition the FAO-FOA will provide USD 1,000,000 in cash cofinancing and 1,000,000 in-kind cofinancing through the EU-ACP project "Action against desertification in support of the implementation of the Great Green Wall for the Sahara and the Sahel initiative" and and the "Global Drylands Assessment". This cofinancing will be used in support to activities implemented under Output 1.2.

264. FAO AGPM will also provide USD 300,000 in cash cofinancing which will support activities implemented under Output 1.2.

4.3.5 Other co-financers inputs

265. The Pastoralist Knowledge Hub will provide USD 562,270 in kind cofinancing to cover the costs of PKH staff, network and equipment to be used for project implementation, in particular in support to activities implemented under Output 2.2, and Output 3.3.

266. The Mountain Partnership Secretariat will provide a USD 500,000 in kind contribution to cover the costs of MPS staff, network and equipment to be used for the implementation of activities under Output 2.2 and Output 3.3.

267. IUCN will provide USD 1,100,000 in cash cofinancing for the implementation of activities under Component 1, and Component 2, as well as USD 100,000 in kind cofinancing to support the Project Management Costs (office desk, office space and stationery among others).

4.3.6 Financial management of and reporting on GEF resources

268. Financial management and reporting in relation to the GEF resources will be carried out in accordance with FAO's rules and procedures, and in accordance with the agreement between FAO and the GEF Trustee. IUCN shall provide project execution services in accordance with its own regulations, rules and procedures as established in the Operational Partner Agreement to ensure that the project funds are properly administered and expended. IUCN shall maintain a project account for the funds received from FAO in accordance with accepted accounting standards. **Note: the financial management and reporting requirements for IUCN are detailed in the Operational Partner Agreement between FAO and IUCN.**

269. **Financial records**. FAO shall maintain a separate account in United States dollars for the Project's GEF 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.

270. **Financial reports**. 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 outcome-by-outcome basis, reported in line with Project Budget (Appendix 3 of this Project document), as at 30 June and 31 December each year.

2. Final accounts on completion of the Project on a component-by-component and outcome-by-outcome basis, reported in line with the Project Budget (Appendix 3 of this 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.

271. **Financial statements:** Within 30 working days of the end of each semester, the FAO BH shall submit six-monthly statements of expenditure of GEF resources, to the Project Steering Committee. The purpose of the financial statement is to list the expenditures incurred on the project on a six monthly basis compared to the budget, so as to monitor project progress and to reconcile outstanding advances during the six-month period. The financial statement shall contain information that will serve as the basis for a periodic revision of the budget.

272. The BH will submit the above financial reports for review and monitoring by the LTO 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.

273. **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 sub-line provided the total cost of the annual budget is not exceeded.

274. Any cost overrun (expenditure in excess of the budgeted amount) on a specific budget sub-line over and above the 20 percent flexibility should be discussed with the 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.

275. Savings in one budget sub-line may not be applied to overruns of more than 20 percent in other sub-lines even if the total cost remains unchanged, unless this is specifically authorized by the 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.

276. 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.**

277. **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.

278. 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 FAO 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 imprest accounts,

records, bank reconciliation and asset verification take place at FAO field and liaison offices on a cyclical basis.

4.4 PROCUREMENT

279. Executing partner: Procurement will be carried out in accordance with IUCN regulations, rules and procedures, and terms specified in the Operational Partner Agreement between IUCN and FAO . Before the commencement of procurement, the Project Coordination Unit shall complete a procurement plan to be reviewed at the project inception and cleared by the FAO BH and LTO. The procurement plan shall be updated by PCU every six months and submitted to and cleared by the FAO Budget Holder and LTO with the six-monthly financial statement of expenditures report, Project Progress Reports and Cash Transfer Requests for the next instalment of funds. The Budget Holder, in close consultation with the Lead Technical Officer, will review the procurement plans to ensure that the procurement process is transparent and competitive and conducted in accordance with the terms of the agreements.

280. FAO: will procure the equipment and services foreseen in the budget (Appendix 3) and the AWP/Bs, in accordance with FAO rules and procedures.

281. Careful procurement planning is necessary for securing goods, services and works in a timely manner, on a "Best Value for Money" basis, and in accordance with the Rules and Regulations of FAO. It requires analysis of needs and constraints, including forecast of the reasonable timeframe required to execute the procurement process. Procurement and delivery of inputs in technical cooperation projects follow FAO's rules and regulations for the procurement of supplies, equipment and services (i.e. Manual Sections 502 and 507). Manual Section 502: "Procurement of Goods, Works and Services" establishes the principles and procedures that apply to procurement of all goods, works and services on behalf of the Organization, in all offices and in all locations, with the exception of the procurement actions described in Appendix A – Procurement Not Governed by Manual Section 502.

282. As per the guidance in FAO's Project Cycle Guide, the BH will draw up an annual procurement plan for major items, which will be the basis of requests for procurement actions during implementation. The first procurement plan will be prepared at the time of project start-up, if not sooner, in close consultation with the NPC and LTU. The plan will include a description of the goods, works, or services to be procured, estimated budget and source of funding, schedule of procurement activities and proposed method of procurement. In situations where exact information is not yet available, the procurement plan should at least contain reasonable projections that will be corrected as information becomes available.

283. The procurement plan shall be updated every 12 months and submitted to FAO BH and LTO for clearance, together with the AWP/B and annual financial statement of expenditures report for the next instalment of funds.

284. The BH, in close collaboration with the NPC, the LTO and the Finance Officer will procure the equipment and services provided for in the detailed budget in Appendix 3, in line with the AWP and Budget and in accordance with FAO's rules and regulations.

4.5 MONITORING AND REPORTING

4.5.1 Oversight and monitoring responsibilities

285. The M&E tasks and responsibilities clearly defined in the project's detailed Monitoring Plan (see below) will be achieved through: (i) day-to-day monitoring and supervision missions of project progress (PCU); (ii) technical monitoring of indicators (PCU); (iii) mid-term evaluation/review and final evaluation (independent consultants and FAO Office of Evaluation); and (iv) continual oversight, monitoring and supervision missions (FAO).

286. At the beginning of the implementation of the GEF project, the PCU will establish a system to monitor the project's progress. The system will be strictly coordinated with subsystems in each of the five countries. Participatory mechanisms and methodologies to support the monitoring and evaluation of performance indicators and outputs will be developed. During the project inception workshop, the tasks of monitoring and evaluation will include: (i) presentation and explanation (if needed) of the project's Results Framework with all project stakeholders; (ii) review of monitoring and evaluation indicators and their baselines; (iii) preparation of draft clauses that will be required for inclusion in consultant contracts, to ensure compliance with the monitoring and evaluation reporting functions (if applicable); and (iv) clarification of the division of monitoring and evaluation tasks among the different stakeholders in the project. The Project Coordinator with support of IUCN will prepare a draft monitoring and evaluation matrix that will be discussed and agreed upon by all stakeholders during the inception workshop. The **M&E plan and associated matrix** will be a management tool for the PC and the Project Partners to: i) bi-annually monitor the achievement of output indicators; ii) annually monitor the achievement of outcome indicators; iii) clearly define responsibilities and verification means; iv) select a method to process the indicators and data.

287. The **M&E Plan** will be prepared by the PC in the three first months of the PY1 and validated with the PSC. The M&E Plan will be based on the Summary of main monitoring and evaluation activities Table and the M&E Matrix and will include: i) the updated results framework, with clear indicators per year; ii) updated baseline, if needed, and selected tools for data collection (including sample definition); iii) narrative of the monitoring strategy, including roles and responsibilities for data collection and processing, reporting flows, monitoring matrix, and brief analysis of who, when and how will each indicator be measured. Responsibility of project activities may or may not coincide with data collection responsibility; iv) updated implementation arrangements, if needed; v) inclusion of the tracking tool indicators, data collection and monitoring strategy to be included in the mid-term evaluation/review and final evaluation; vi) calendar of evaluation workshops, including self-evaluation techniques.

288. The day-to-day monitoring of the project's implementation will be the responsibility of the PC and will be driven by the preparation and implementation of an AWP/B followed up through six-monthly PPRs. Other project partners responsible for or contributing to the achievement of outputs will be involved in the monitoring and evaluation activities related to the respective outputs. The preparation of the AWP/B and six-monthly PPRs will represent the product of a unified planning process between main project stakeholders. 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 and outcome targets to be achieved, and the PPRs will report on the monitoring of the implementation of actions and the achievement of output and outcome targets. Specific inputs to the AWP/B and the PPRs will be prepared based on participatory planning and progress review with all stakeholders and coordinated and facilitated through project planning and progress review workshops.These contributions will be consolidated by the PC in the draft AWP/B and the PPRs.

289. An annual project progress review and planning meeting should be held with the participation of the project partners to finalize the AWP/B and the PPRs. Once finalized, the AWP/B and the PPRs will be submitted to the FAO LTO for technical clearance, and to the Project Steering Committee for revision and approval. The AWP/B will be developed in a manner consistent with the Project Results Framework to ensure adequate fulfillment and monitoring of project outputs and outcomes.

290. Following the approval of the Project, the project's first year work plan and budget (AWP/B) will be adjusted (either reduced or expanded in time) to synchronize it with FAO financial reporting requirements. In subsequent years, the AWP/B 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

291. In order to monitor the outputs and outcomes of the project, including contributions to global environmental benefits, a set of indicators is set out in the Project Results Framework (Appendix 1). The Project Results Framework indicators and means of verification will be applied to monitor both project performance and impact. Following FAO monitoring procedures and progress reporting formats, data collected will be sufficiently detailed that can track specific outputs and outcomes, and flag project risks early on. Output target indicators will be monitored on a six-monthly basis, and outcome target indicators will be monitored on an annual basis, if possible, or as part of the mid-term and final evaluations..

292. The main sources of information to support the M&E programme will be: (i) participatory progress monitoring and workshops with beneficiaries; (ii) on-site monitoring; (iii) PPRs; (iv) consultants' reports; (v) mid-term evaluation/review and post-project impact and evaluation studies completed by independent consultants; (vi) financial reports and budget revisions; (vii) PIR; and (viii) FAO supervision mission reports.

4.5.3 Reporting schedule

293. Specific reports that will be prepared under the M&E program are: (i) Project inception report; (ii) AWP/B; (iii) PPRs; (iv) PIR; (v) Technical Reports; (vi) co-financing reports; and (vii) Final Report. In addition, assessment to inform the GEF LD tracking tool will be undertaken during mid-term evaluation/review and final project evaluation (against the baseline to be completed during project inception).

294. **Project Inception Report**. After approval of the project an inception workshop will be held. Immediately after the workshop, the PC will prepare a Project Inception Report in consultation with FAO LTO, BH and national 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 and the M&E Matrix (see above). The draft inception report will be circulated to FAO and the PSC for review and comments before its finalization, no later than three months after project start. The report will be cleared by FAO BH, LTO and FAO GEF Coordination Unit and uploaded in FPMIS by the BH.

295. **Results-Based Annual Work Plan and Budget** (AWP/B). The PC will present a draft AWP/B to the PSC no later than 10 December of each year. The AWP/B should include detailed activities to be implemented by project outcomes and outputs and divided into monthly timeframes and targets and milestone dates for output and outcome 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 FAO BH will circulate the draft AWP/B and the FAO Project Task Force and will consolidate and submit FAO and IUCN comments. The AWP/B will be reviewed by the PSC and the PCU will incorporate any comments. The final AWP/B will be sent to the PSC for approval and to FAO for final no-objection. The BH will upload the AWP/Bs in FPMIS.

296. **Project Progress Reports** (PPRs). PPRs will be prepared by the PCU based on the systematic monitoring of output and outcome indicators identified in the project's Results Framework (Annex 1).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 (Appendix 1), AWP/B and M&E Plan. The Budget Holder has the responsibility to coordinate the preparation and finalization of the PPR. Each semester the PC will prepare a draft PPR, and will collect and consolidate any comments from the FAO PTF. The PC will submit the final PPRs to the FAO BH every six months, prior to 10 June (covering the period between January and June) and before 10 December (covering the period between July and December). The July-December report should be accompanied by the updated AWP/B for the following Project Year (PY) for review and no-

objection by the FAO PTF. After LTO, BH and FLO clearance, the FLO will ensure that project progress reports are uploaded in FPMIS in a timely manner

297. **Annual Project Implementation Review (PIR)**. The BH (in collaboration with the PMU and the LTO) will prepare an annual PIR covering the period July (the previous year) through June (current year) to be submitted to the GEF Coordination Unit for review and approval no later than (check each year with FAO GEF Coordination Unit but roughly end June/early July each year). The FAO GEF Coordination Unit will submit the PIR to the GEF Secretariat and GEF Evaluation Office as part of the Annual Monitoring Review report of the FAO-GEF portfolio. PIRs will be uploaded on the FPMIS by the FAO GEF Coordination Unit.

Key milestones for the PIR process:

Early July: the LTOs submit the draft PIRs (after consultations with BHs, project teams) to the FAO GEF Coordination Unit (faogef@fao.org , copying respective GEF Unit officer) for initial review;

Mid July: FAO GEF Coordination Unit responsible officers review main elements of PIR and discuss with LTO as required;

Early/mid-August: FAO GEF Coordination Unit prepares and finalizes the FAO Summary Tables and sends to the GEF Secretariat by (date is communicated each year by the GEF Secretariat through the FAO GEF Unit;

September/October: PIRs are finalized. PIRs carefully and thoroughly reviewed by the FAO GEF Coordination Unit and discussed with the LTOs for final review and clearance;

Mid November 17: (date to be confirmed by the GEF): the FAO GEF Coordination Unit submits the final PIR reports -cleared by the LTU and approved by the FAO GEF Coordination Unit- to the GEF Secretariat and the GEF Independent Evaluation Office.

298. **Technical Reports**. Technical reports will be prepared by national, international consultants (partner organizations under LOAs) as part of project outputs and to document and share project outcomes and lessons learned. The drafts of any technical reports must be submitted by the PCU to the BH who will share it with the LTO. The LTO will be responsible for ensuring appropriate technical review and clearance of said report. The BH will upload the final cleared reports onto the FPMIS. Copies of the technical reports will be distributed to project partners and the Project Steering Committee as appropriate.

299. **Co-financing Reports**. The BH, with support from the PCU, will be responsible for collecting the required information and reporting on co-financing as indicated in the Project Document/CEO Request. The PCU will compile the information received from the executing partners and transmit it in a timely manner to the LTO and BH. The report, which covers the period 1 July through 30 June, is to be submitted on or before 31 July and will be incorporated into the annual PIR. The format and tables to report on co-financing can be found in the PIR.

300. **GEF LD Tracking Tool (TT)**. Following the GEF policies and procedures, the tracking tool for land degradation will be submitted at three stages: (i) with the project document at CEO endorsement; (ii) at the project's mid-term evaluation/review; and (iii) with the project's terminal evaluation or final completion report. The TT will be uploaded in FPMIS by the FAO GEF Coordination Unit. The TT are developed by the Project Design Specialist, in close collaboration with the FAO Project Task Force. They are filled in by the PCU and made available for the mid-term review an again for the final evaluation.

301. **Terminal Report**. Within two months before the end date of the project, and one month before the Final Evaluation, the PCU will submit to the BH and LTO a draft Terminal Report. The main purpose of the Terminal Report is to give guidance at ministerial or senior government level on the policy decisions required for the follow-up of the project, and to provide the donor with information on how the funds were utilized. The Terminal Report is accordingly a concise account of the main products, results, conclusions and recommendations of the project, without unnecessary

background, narrative or technical details. The target readership consists of persons who are not necessarily technical specialists but who need to understand the policy implications of technical findings and needs for insuring sustainability of project results.

4.5.4 Monitoring and evaluation Plan Summary

Table 6 summarizes the main monitoring and evaluation reports, parties responsible for their publication and time frames.

Table 6: Summary of main monitoring and evaluation activities

Type of M&E Activity	Responsible Parties	Time-frame	Budgeted costs
Inception Workshop	PCU supported by the FAO LTO, BH, and the GEF Coordination Unit	Within two months of project start up – will be organised along the international workshop planned under Activity 1.1.1	USD 30,000 (budgeted under workshops)
Project Inception Report	PCU cleared by FAO LTO, BH, and the GEF Coordination Unit	Immediately after workshop	USD 0 - project inception report is developed by the PCU.
Field based impact monitoring	PCU and FAO Liaison Officer	Periodically – to be determined at inception workshop	USD 30,000
Supervision visits and rating of progress in PPRs and PIRs	PCU, FAO LTO and TCI/GEF Coordination Unit may participate in the visits if needed.	Annual or as required	The visits of the LTO and the TCI/GEF Coordination Unit will be paid by GEF agency fee. The visits of the PCU will be paid from the project travel budget
Project Progress Reports	BH with support from PC, with inputs from National Assessment Teams and other partners	Six-monthly	USD 0 (as completed by PCU)
Project Implementation Review report (PIR)	BH (in collaboration with the PCU and the LTO) Approved and submitted to GEF by the FAO-GEF Coordination Unit	Annual	Paid by GEF agency fee
Co-financing Reports	BH with support from PC and input from other co-financiers	Annual	Completed by PCU and BH
Technical reports	PCU, LTO and uploaded on the FPMIS by the BH	As appropriate	USD 25,000 (Report compiling project's best practices and lessons learned)

Type of M&E Activity	Responsible Parties	Time-frame	Budgeted costs
GEF LD Tracking Tool	PCU and LTO	Updated at the time of the mid term review/evaluation and the final evaluation	USD 0 - data is collected by the PCU
Mid-term review/evaluation	External consultant, in consultation with PCU, GEF Coordination Unit, LTO and other partners	At mid-point of project implementation	USD 40,000 for independent consultants and associated costs. In addition the agency fee will pay for expenditures of FAO staff time and travel
Final evaluation	FAO Evaluation Office (OED) in consultation with the FAOR/, GEF Coordination Unit and project team	At the end of project implementation	USD 55,000 for external consultant. In addition the agency fee will pay for expenditures of FAO staff time and travel
Final Report	PCU, LTO, GEF Coordination Unit, TCSR Report Unit	At least two months before the end date of the Operational Partner Agreement	USD 8000
Total Budget			**USD 188,000**

4.6 PROVISION FOR EVALUATIONS

302. A Mid-Term Review/Evaluation will be undertaken at project mid-term to review progress and effectiveness of implementation in terms of achieving the project objectives, outcomes and outputs. Findings and recommendations of this review/evaluation will be instrumental for bringing improvement in the overall project design and execution strategy for the remaining period of the project's term. FAO will arrange for the mid-term review/evaluation in consultation with the project partners. The evaluation will, inter alia:

- review the effectiveness, efficiency and timeliness of project implementation;
- analyze effectiveness of partnership arrangements;
- identify issues requiring decisions and remedial actions;
- propose any mid-course corrections and/or adjustments to the implementation strategy as necessary; and
- highlight technical achievements and lessons learned derived from project design, implementation and management.

303. It is recommended that an independent Final Evaluation (FE) be carried out three months prior to the terminal review meeting of the project partners. The FE will aim to identify the project impacts and sustainability of project results and the degree of achievement of long-term results. This evaluation will also have the purpose of indicating future actions needed to sustain project results and disseminate products and best-practices within the country and to neighbouring countries.

4.7 COMMUNICATION AND VISIBILITY

304. The project will have a high visibility from the local to the global level, in particular through the organization of workshops and consultation processes at the local, national and global scales. At the international level, technical meetings with relevant experts, policy makers and key pastoralists representatives will be organized to identify the global domains of indicators, and then to discuss and finalize the indicator framework and the assessment and monitoring methodology. At the national level, workshops will be organized at different stages to present and discuss the project and the framework of indicators, and later to present and discuss the finalized assessment and monitoring framework and identify SLM best practices. At the local level, a 4 months consultation process will be implementing to develop and test the assessment and monitoring methodology.

305. These various communication tools during project implementation will ensure a high visibility for the project at the local, national and global scale.

SECTION 5 – SUSTAINABILITY OF RESULTS

5.1 SOCIAL SUSTAINABILITY

306. The project will ensure the participation of local communities from the conception of the assessment and monitoring procedures to the inception and implementation thereof. This participatory approach and the integration of the local knowledge into the assessment and monitoring methodology are crucial to ensure its relevance and accuracy for the end users, e.g. the local communities themselves.

307. The application of the assessment and monitoring methodology in the field will be the opportunity to identify and promote best SLM practices, which will improve the management of natural resources and therefore the livelihoods of local communities. The identification of best practices will take into consideration gender inequality and will pay a particular attention to practices that promote gender equality and strengthen women's right and access to natural resources.

5.2 ENVIRONMENTAL SUSTAINABILITY

308. In the long term, the project will contribute to reverse LD and improve SLM in pastoral areas. The project will develop a assessment and monitoring methodology that will be used in the field in the medium term through follow-up ensured by national partner organisations, among others, to allow local pastoralist communities to assess and monitor the status and the management of their land and natural resources. This methodology will be developed in a participatory manner and will thus be adapted to the local situation and will respond to the need of local communities in terms of land management assessment and monitoring. It is therefore likely that communities will continue using this methodology that will provide information to best adapt their land management in order to reverse LD and improve SLM. The fact that the project is embedded in IUCN's GDI will ensure that all project findings that contributes to the sustainable management of dryland ecosystems will be scaled up and promoted at the global level through the GDI, ensuring the sustainability of project findings and thus contributing to environmental sustainability.

5.3 FINANCIAL AND ECONOMIC SUSTAINABILITY

309. The visibility of the project at the global, national and local scales in several countries will also ensure that best SLM practices identified through project implementation will be promoted at these different scale. By raising awareness on these practices, and more generally on SLM and LD, the project could influence the amount of financial resources given to initiatives related to pastoral areas, SLM and LD. It could for instance help increase donors support towards similar issues.

310. In particular, the fact that the project is embedded into IUCN's GDI will ensure that all project findings that will contribute to the SLM of dryland will be integrated into the GDI, securing financial input to use and apply the project findings in the long-term.

5.4 SUSTAINABILITY OF CAPACITIES DEVELOPED

311. Strong institutional capacity is critical to ensure sustainability and achievement of project impact. That is why the project is built to ensure the effective coordination and cooperation amongst stakeholders and project partners, on capacity development activities covering both technical and institutional strengthening aspects. Capacity development regarding LD and SLM assessment and

monitoring, and identification and implementation of SLM best practices, is provided to the pilot countries participating in the proposed project.

312. Developing capacity amongst local communities is important to enable them to integrate their local knowledge with scientific and modern methods. The assessment and monitoring methodology to be developed will take into account local capacities in order to be easily accessible and understandable by local communities. Local and national institutions will also be closely involved in the development of the assessment and monitoring methodology which will ensure that they will have enough capacity to properly interpret the data, which will ensure the sustainability of the assessment and monitoring system in the long term.

5.5 APPROPRIATENESS OF TECHNOLOGIES INTRODUCED

313. N/A

5.6 REPLICABILITY AND SCALING UP

314. By involving local and national actors and by working across countries, this project creates concrete opportunities for scaling up and out. Learning exchanges among communities and between communities and policy makers, scientific expert or NGO practitioners at local, national and global levels creates space for horizontal learning. Interactions between levels (local, national and global) allows for vertical information flows and a scaling up of lessons on good practices. Cross-country, South-South exchanges among policy makers and NGO practitioners across the pilot countries in Africa, Asia and Latin America provide further advantages and options for scaling up to a global level. The project is also embedded in IUCN's GDI, a global initiative supporting the sustainable management of drylands, which will create opportunities for the promotion and uptake of project findings globally. Furthermore, best practices and lessons learned in developing, testing and finalising this assessment and monitoring methodology will be compiled and dissemination through the Pastoralist Knowledge Hub and the knowledge management platform for the Great Green Wall.

315. Under the LD focal area objective targeted, the project aims at developing an approach that can be used for the benefit of future GEF LD projects that are dealing with rangelands.

APPENDIX

APPENDIX 1: RESULTS MATRIX

Results Chain	Indicators	Baseline[51]	Milestones			Means of Verification and Responsible Entity	Assumptions
			Year 1	Year 2	End of Project Target – year 3		
Project Objective/Impact To strengthen the capacity of local and national stakeholders in pastoral areas comprising of grasslands and rangelands to assess LD and make informed decisions to promote SLM in a way that preserves the diverse ecosystem goods and services provided by rangelands and grasslands							
Outcome 1 A participatory assessment and monitoring system for pastoral areas comprising of grasslands and rangelands, is developed and tested	Outcome Indicator 1.1: Standardized procedural and operational manual available	There are no standardize procedures for monitoring and assessing LD in grasslands and rangelands	A draft operational and procedural manual to monitor and assess LD and SLM based on the framework of indicators domains is developed	The draft operational and procedural manual is tested through district level consultations	The procedural and operational manual is revised based on feedback and lessons learned, and then published	Means: Operational and procedural manual Resp: Project Team	Relevant institutions are willing to cooperate Relevant institutions and the local assessment team participate actively in the trainings provided by the project Pastoral communities are empowered Activities respond to the real needs of
	Outcome Indicator 1.2: Number of international and national consultations organised to discuss, test and revise the assessment and monitoring procedures	Little common understanding and views on the global indicators by domain of assessment to be defined for monitoring and assessing LD in grasslands and rangelands	An international technical consortium of experts meets to identify, define and review a minimum number of global indicators by domain of assessment		A second international consultation is organised with key relevant scientists, technicians, decision makers and key representatives from pastoral communities to	Means: International and national workshops attendance sheets and agenda Resp: Project team	

[51] Value in the case of quantitative indicators and description of situation in the case of qualitative indicators. Please insert the year of the baseline

Results Chain	Indicators	Baseline[51]	Milestones			Means of Verification and Responsible Entity	Assumptions
			Year 1	Year 2	End of Project Target – year 3		
			5 national level workshops organised to (i) introduce the project objective, and the framework of global indicators by domain of assessment; (ii) identify key national and local resource people to support the assessment; and (iii) assess relevant policy entry points		present and discuss the final framework of global indicators and the finalised assessment and monitoring method		pastoral communities (including women)
	Outcome Indicator 1.3: Level of involvement of local pastoral communities in defining and testing the domains of indicators, specific indicators and the assessment and monitoring operational and	The design of assessment and monitoring systems has been crafted by scientists, academics and extension workers with little to no space for input	Participatory testing of the relevance and feasibility of the selected global indicators is conducted at field level in the 5 targeted pilot sites	District/site consultations are organised in the 5 targeted pilot sites for selecting the sampling sites, identifying specific indicators per global indicator	The final version of the assessment and monitoring operational and procedural framework is done taking into account feedbacks received from	<u>Means</u>: Attendance sheets Interviews with pastoralists Progress reports <u>Resp</u>.: Project team	

Results Chain	Indicators	Baseline[51]	Milestones			Means of Verification and Responsible Entity	Assumptions
			Year 1	Year 2	End of Project Target – year 3		
	procedural framework	from the land-users.		domains, presenting the assessment work, validating the indicators selected by the communities, testing the proposed data collection technique(s) for each indicator, and for feedback exchanges	local communities	Service Providers	
Output 1.1 A Monitoring and assessment procedural and operational manual is developed	Procedural and operational manual	No standardize procedures for monitoring and assessing LD in grasslands and rangelands	A draft operational and procedural manual to monitor and assess LD and SLM based on the framework of indicators domains is developed			<u>Means:</u> Draft operational and procedural manual Progress Report <u>Resp:</u> Project Team	
Output 1.2 The Monitoring and assessment procedural and operational manual is tested at local level and the global indicators are further adapted while assessing	Number of sites where the manual is tested.	The design of existing assessment and monitoring systems has generally not sufficiently		An assessment team is trained in the 5 pilot countries district/site consultations		<u>Means:</u> Training reports District assessment reports	

Results Chain	Indicators	Baseline[51]	Milestones			Means of Verification and Responsible Entity	Assumptions
			Year 1	Year 2	End of Project Target – year 3		
policies		involved the land-users.		organised in the 5 pilot countries for selecting sampling sites, identifying specific indicators per global indicator domains, presenting the assessment work, validating the indicators selected by the communities, and testing the proposed data collection technique(s) for each indicator		Resp: Project team Assessment team	
Output 1.3 The assessment and monitoring method is refined and finalised based on lessons learned from the district/site tests	Finalized manual	There is no standardize procedures for monitoring and assessing LD in grasslands and rangelands which takes into account feedback from land-users			The procedural and operational manual is revised based on feedback received and lessons learned compiled A second international consultation is	Means: Revised procedural and operational manual International consultation reports Resp: Project team	

Results Chain	Indicators	Baseline[51]	Milestones			Means of Verification and Responsible Entity	Assumptions
			Year 1	Year 2	End of Project Target – year 3		
					organised to present and discuss the final framework of global indicators and the finalised assessment and monitoring method		
Outcome 2 National and international agro-sylvo-pastoral decision making processes benefit from the assessment and monitoring procedural and operational manual and the participatory national grassland and rangeland assessments.	Outcome Indicator 2.1: Number of action plans for mainstreaming SLM best practices	No action plans for mainstreaming SLM best practices available		Key policy mainstreaming entry points are identified during the local assessment steps SLM best practices identified during the field survey are compiled and discussed and an action plan to insert the assessment findings into the current strategies, policies and plans is developed for each pilot site	A national workshop is organised in each country to present and discuss the action plan and identify SLM best practices and measures that are best fit to influence policy making regarding pastoral areas	<u>Means:</u> Action plans Progress report <u>Resp:</u> Project team	Relevant institutions are willing to cooperate Viable SLM practices already exist

Results Chain	Indicators	Baseline[51]	Milestones			Means of Verification and Responsible Entity	Assumptions
			Year 1	Year 2	End of Project Target – year 3		
	Outcome Indicator 2.2: Recognition of the assessment and monitoring method in at least 2 relevant international fora	There is no standardize procedures for monitoring and assessing LD in grasslands and rangelands			The new standardize assessment and monitoring method for LD and SLM in grasslands and rangelands is recognized by at least 2 international fora	Means: Progress report Resp: Project team	
Output 2.1 Participatory national grassland and rangeland assessment results are linked to national and local decision-making processes	Number of SLM best practices shared with decision makers	Pastoral decision making processes are not informed by specific assessment on LD, SLM, multiple benefits and ecosystem services trends		SLM best practices are compiled and discussed and an action plan to insert the assessment findings into the pastoral decision making processes is developed for each pilot site	A national workshop is organised in each country to present and discuss the action plan and identify SLM best practices and measures that are best fit to influence national pastoral decision making processes	Means: Action plans Attendance sheets Progress report Resp: Project team	
Output 2.2 Assessment and monitoring method shared with relevant international mechanisms in order to integrate/align with	Alignment proposals	International fora do not have standardize procedures for monitoring and			Study on possible alignment/integration with international	Means: Progress report Resp:	

Results Chain	Indicators	Baseline[51]	Milestones			Means of Verification and Responsible Entity	Assumptions
			Year 1	Year 2	End of Project Target – year 3		
existing frameworks		assessing LD in grasslands and rangelands			frameworks conducted and disseminated to relevant fora	Project team	
Outcome 3 Project's outcome and output targets are monitored and evaluated, and lessons learned and best practices are captured and disseminated to facilitate future operations	Outcome Indicator 3.1: Fulfilment of planned M&E activities including establishing baseline values for all project indicators, yearly updating of indicators, a mid-term evaluation/review and a final project evaluation	n/a		50% percent progress in achieving project outcomes	Project outcomes achieved and showing sustainability	Means: PIRs Midterm and final evaluations Resp: Project team	The M&E team provides quality reports in a timely manner Accurate data is available to perform project M&E tasks
Output 3.1 A project monitoring system providing systematic information on progress towards the project outcome and output targets is set-up and implemented	n/a	n/a	Performance framework developed	Monitoring of results	Monitoring of results	Means: Performance framework Resp: Project Team	
Output 3.2 Midterm and final evaluation/review conducted	n/a			Mid-term evaluation/ review conducted	Mid-term evaluation/review and final evaluation conducted.	Means: Mid-term review/evaluation and final evaluation reports	

Results Chain	Indicators	Baseline[51]	Milestones			Means of Verification and Responsible Entity	Assumptions
			Year 1	Year 2	End of Project Target – year 3		
						Resp: Project team and independent evaluators	
Output 3.3 Project related best practices and lessons learned are documented and published.	n/a	n/a	Best practices and lessons learned in developing and testing the assessment and monitoring method are captured	Best practices and lessons learned in developing and testing the assessment and monitoring method are captured	A report compiling project's best practices and lessons learned is developed and disseminated through the Pastoralist Knowledge Hub and the knowledge management platform for the Great Green Wall	Means: Report compiling best practices and lessons learned Resp: Project team	

APPENDIX 2: WORK PLAN

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Component 1: Participatory assessment and monitoring system for pastoral areas comprising of grasslands and rangelands														
Output 1.1: A Monitoring and assessment procedural and operational manual is developed	Activity 1.1.1: In PY1, an international technical meeting with experts drawn from SHARP, LADA, IUCN, SDGs, Collect Earth, UNCCD, policy makers and key pastoralist representatives from the target countries will meet to identify, define and review a minimum number of global indicators by domain of assessment	IUCN												
	Activity 1.1.2: Organization of a national level workshop to (i) introduce the project objective, and the framework of global indicators by domain of assessment; (ii) identify key national and local resource people to support the assessment; and (iii) assess relevant policy entry points	IUCN												
	Activity 1.1.3: Initial consultations with communities	IUCN												
	Activity 1.1.4: Secondary data consolidation on target districts/sites on latest assessment approaches, indicators, sampling techniques and remote sensing	IUCN												
	Activity 1.1.5: Development of an operational and procedural manual to monitor and assess LD and SLM based on the framework of indicators domains	IUCN												
Output 1.2: The Monitoring and assessment procedural and operational manual is tested at local level and the global indicators are further adapted while assessing policies	Activity 1.2.1: Adaptation and contextualization of the framework of global indicators to the district/local level in each of the pilot countries while linking it to sustainable land management (i) Training of the assessment team (ii) Preliminary district/site consultation, selecting sampling sites by classifying the landscape within each district/site, identifying specific indicators	IUCN												

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	per global indicator domains, and presenting the assessment work (iii) Rapid validation of indicators selected by the communities, testing of proposed data collection technique(s) for each indicator, data compilation and reflection													
	Activity 1.2.2: Data compilation, storage, analysis, and production of an assessment report at the district (or equivalent administrative division) and national levels	IUCN												
	Activity 1.2.3: Compilation of feedback and lessons learned from the testing of the method and procedures for each district/site	IUCN												
Output 1.3: The assessment and monitoring method is refined and finalised based on lessons learned from the district/site tests	Activity 1.3.1: Revision of the procedural and operational manual based on feedback and lessons learned compiled under 1.2.3	IUCN												
	Activity 1.3.2: Organization of a second international consultation with key relevant scientists, technicians, decision makers and key representatives from pastoral communities to present and discuss the final framework of global indicators and the finalised assessment and monitoring method	IUCN												
	Activity 1.3.3: Compilation, analysis and publication of the framework of globally relevant local level indicators defined by domain of assessment and the finalized assessment and monitoring operational and procedural manual	IUCN												
Component 2: Inform international and national agro-sylvo-pastoral decision making process														
Output 2.1: participatory national grassland and rangeland assessment results are linked to national and local decision-making processes	Activity 2.1.1: Analysis of options to support local level political decision and investment based on the assessment results	IUCN												
	Activity 2.1.2: Organization of a workshop at the national level to (i) present the finalized assessment and monitoring method; and (ii) identify SLM best	IUCN												

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	practices identified through the assessments that could influence tangible policy practices													
	Activity 2.1.3: Facilitation of mainstreaming of these SLM best practices and measures into national and international partner organizations advocacy policies	IUCN												
Output 2.2: Assessment and monitoring method shared with relevant international mechanisms in order to integrate/align with existing frameworks	Activity 2.2.1: Analysis of potential integration between the present framework and other relevant international methods (i.e. UNCCD PRAIS indicators)	FAO												
	Activity 2.2.2: Facilitation of the diffusion of information about the new method and indicator framework in UNCCD and other relevant technical panels or scientific conference	FAO												
Component 3: Knowledge management, monitoring and evaluation														
Output 3.1: A project monitoring system providing systematic information on progress towards the project outcome and output targets is set-up and implemented	Activity 3.1.1: Development of a performance framework (M&E plan) defining roles, responsibilities, and frequency for collecting and compiling data to assess project performance	IUCN												
	Activity 3.1.2: Implementation of the project monitoring system throughout the duration of the project	IUCN												
Output 3.2: Midterm and final evaluation/review conducted	Activity 3.2.1: After 18 months of project implementation, a mid-term project evaluation/review will be conducted by an external consultant, who will work in consultation with the project team including FAO-GEF Coordination Unit, the LTO (Lead Technical Officer), and other partners.	FAO												
	Activity 3.2.2: At the end of project implementation a final project evaluation will be conducted under the supervision of FAO Office of Evaluation, OED, in consultation with the project team including FAO-GEF Coordination Unit, the LTO, and other partners	FAO												
Output 3.3: Project related best practices and lessons learned are documented and published	Activity 3.3.1: Collection of best practices and lessons learned throughout the implementation of the project	FAO												

Output	Activities	Responsible institution/ entity	Year 1				Year 2				Year 3			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	Activity 3.3.2: Publication of a report compiling project's best practices and lessons learned, and dissemination through the Pastoralist Knowledge Hub and knowledge management platform for the Great Green Wall	FAO												

APPENDIX 3: RESULT BUDGET

GCP_GLO_562_Budget
_15032016.xlsx

APPENDIX 4: REVIEW OF EXISTING ASSESSMENT AND MONITORING SYSTEMS

Global Tools

#	Tools Description	Benefits	Drawbacks, lessons learned, gaps
1.	**Participatory selection process for indicators of rangeland condition in the Kalahari (Reed and Dougill, 2002)** This approach was based on a 'sustainable livelihoods analysis' (SLA) that involved semi-structured interviews to examine social, financial, physical, human and natural capital assets used by households to ensure livelihood security. From these discussions, LD indicators were identified including a range of sustainability indicators and management strategies that are then discussed further in community focus groups to evaluate the credibility, accuracy and ease of use of each one. The process used community volunteers to develop a series of indicators that identify environmental degradation so that communities can then monitor environmental change. The following categories of indicators were identified: • Vegetation (e.g. decreased grass cover); • Soil (e.g. soft soil); • Livestock (e.g. declining livestock weight); • Wild animals and insects (e.g. decreased abundance of small antelopes); and • Socio-economic (e.g. increased household expenditure on food).	The results of the study showed that local knowledge can be a rich source of information to gather LD and SLM indicators. This approach to indicator selection successfully engaged a wide range of stakeholders (communal and commercial pastoralists, extension workers, researchers and policy-makers) in the identification and evaluation of degradation indicators. It used a system of bottom-up approach to indicator selection and gathered large lists of indicators which were then reviewed. The approach enabled community empowerment through participation and is suitable for developing sub-district and district-level rangeland assessment guides. The approach also provided a framework that could be adopted by government at the relevant ministerial level for participatory methods in environmental monitoring.	Shortcomings of this approach relate to the long and complex process for indicator selection and the type of skills required in the facilitator or enumerator. The study also highlighted that some selected indicators may not be sufficiently reliable or sensitive to accurately assess LD and should be carefully evaluated. The approach also has the potential to become too site-specific and will not enable cross-regional or national comparisons. Indicators selected by different communities at different sites were not completely comparable but this could be overcome by agreeing on a set of relevant aggregate indicators or indicator families as is later proposed.

#	Tools Description	Benefits	Drawbacks, lessons learned, gaps
2.	**Land users monitoring field guide for improved management decisions (The Desert Margins Program, 2009)** The Desert Margins Program (2009), a GEF-funded initiative, developed a Land User's Monitoring Field Guide for Improved Management Decisions and provides details of a simple, practical monitoring approach. This approach focuses on rangeland productivity and therefore could be criticised for lacking attention to ecosystem-level indicators and long-term trends. However, it provides a practitioner-oriented approach that could provide a step towards developing more sophisticated systems. The methodology measures the following indicators, along with record sheets and practical advice on monitoring techniques: • Rainfall (quantity); • Veld (land and vegetation): species composition, forage production/palatability, bush density; • Soil: type, type of degradation, conditions (e.g. erosion, compaction, loss of nutrients, loss of termites, worms and ants); and • Livestock condition.	The attraction of this approach is that it is very simple for use by farmers and herders and it lends itself to development of pictorial tools. The approach can be easily built upon to create a more robust and sophisticated system to attain a greater amount of information	The approach does not provide an insight into changes in hydrology and other important ecosystem functions that underpin long term sustainability of grasslands and rangelands systems. It also does not include analysis of the spatial pattern of vegetation or soil properties, both of which can be important indicators of threshold transitions and effective in informing management and creating a system of adaptive management. The approach is local-level and may not be appropriate for regional or national level monitoring unless combined with other approaches.
3.	**Framework for participatory assessments and implementation of global environmental conventions at the community level (Oba et al. 2008)** The approach by Oba et al. is designed to elicit local knowledge or rangeland health and to use this as the basis of local-level monitoring. The methodology works with community range scouts who map the assessment area, describe landscape categories, identify indicators and	This framework creates a suitable platform for scientists to support and collaborate jointly with local communities to undertake participatory assessments while still being able to collect robust and quantitative data. The assessment	Indicators used were only suitable for assessment purposes of pastoral land uses and other indicators would be required to assess other land uses and interactions with pastoral systems and get a holistic approach. For the assessment to be useful outside of the

#	Tools Description	Benefits	Drawbacks, lessons learned, gaps
	conduct transects. The approach relies heavily on ecological range assessments using plots and description of range condition and assessments of plan species. The approach also uses a Grazing Suitability Index (GSI) and Potential Grazing Capacity Index (PGCI) along with ecological indicators (plant richness, biomass, density and range condition and trends, grazing pressure, soil degradation vulnerability index).	method captures local level data that is relevant for national level planning and decision making.	community it is necessary for ecologists to support the community range scouts.
4.	**A guide for pastoralist communities to monitor rangeland health (Riginos and Herrick, 2009)** Riginos and Herrick present a ten-step guide to monitoring rangeland management, which was developed in Eastern Africa. The methodology uses a series of the following simple steps that can improve the rigour of local monitoring and could be combined with participatory approaches to provide more robust models: 1. Complete an inventory and assessment of the land; 2. Define management objectives; 3. Define monitoring objectives; 4. Decide what to monitor; 5. Decide where to monitor; 6. Decide when and how often to monitor; 7. Document the specific monitoring plan; 8. Collect the data; 9. Analyze and interpret the results; and 10. Learn from and act on the results. The methodology is designed to monitor three main ecosystem attributes: vegetation, water and soil. Of these, the core indicators suggested are: • Amount of bare ground;	The approach uses a simple, easy to follow guide that can improve the rigour of local level monitoring and improve the capacity of herders to carry out their own monitoring to influence management decisions. The system is adequate for local level monitoring and guiding management decisions.	This system is designed for the very local field-level monitoring to be conducted by pastoralists as the end user and is not designed for higher level monitoring and thus has limitations for land-use planning at the regional or national levels. For pastoralists to effectively use the monitoring system training is required from external agents and could be viewed as a drawback to its wide-scale uptake. Indicators are pre-defined and may not all be relevant to the end-user. Furthermore, the approach does not include any socio-economic indicators which would give important secondary information on the drivers of LD or attributes of rangeland/grassland and rangeland health and SLM.

#	Tools Description	Benefits	Drawbacks, lessons learned, gaps
	• Plant basal cover; • Perennial grass cover; • Tree and shrub cover; • Tree and shrub density; • Gaps between plants; and • Plant height.		
5.	**Framework for integrating monitoring and assessment in rangeland management (Herrick et al. 2006)** Herrick et al. present a framework for an ecological site-based approach for classification of sites rather than a simpler measurement of current vegetation, since vegetation alone can be of limited value for land management, particularly in areas that have been extensively modified, for example by cultivation, erosion, grazing, logging etc. Vegetation-based measurements do not give adequate insight into the potential of a given site, which is determined by a number of factors including soil surface texture, soil depth, and climate. The approach is based defining a State and Transition Model, which describes current understanding of ecosystem dynamics within particular regions and soil types. The framework takes a dual-purpose approach to: (1) coordinate use of existing tools, resources, and diffuse knowledge, and (2) facilitate integration and application of new knowledge on landscape units across scales as it is developed. The framework includes five elements: 1. An ecological site-based approach for categorizing land based on soils and climate; 2. A repository for organizing existing data and knowledge about each ecological site; 3. Conceptual models that organize information on the impacts of management and climate variability;	The approach uses three key ecosystem attributes that are the foundation for nearly all land management objectives: soil and site stability, hydrologic function, and biotic integrity. The framework has the potential to significantly increase the extent to which arid-land management is based on science. By applying assessment and monitoring protocols that are consistent with a broad range of management objectives, this approach can help managers reduce costs while increasing their ability to adapt management based on an understanding of changes in fundamental ecosystem properties and processes. The approach also used a combination of Monitoring and Assessment (M&A) data with models enabling adaptive management. It also used both long term and short term indicators which are useful for determining trend and management, respectively. The framework could	The approach may be limited by a lack of precision in using qualitative indicators that are unable to detect small changes in the ecological system. This could restrict its use by land users at the lowest scale (both spatial and temporal). It may also face limitations in detecting changes at a landscape scale due to its plot-level protocol. This approach as with the Riginos and Herrick (2010) approach does not take into consideration socio-economic aspects of M&A systems, thus not providing a holistic suite of indicators or providing any insights into the drivers of LD. Some of the components of this approach are not available outside of the USA and limits usability on a global scale.

#	Tools Description	Benefits	Drawbacks, lessons learned, gaps
	4. Protocols for assessing key ecosystem attributes fundamental to a variety of management objectives; and 5. Protocols for monitoring key ecosystem attributes.	adapt well to use at all scales but may require interpretation and adaptation at each site.	
6.	**A conceptual tool for improved rangeland management decision making at grassroots level (Kellner and Moussa, 2009)** The Local-level Conceptual Monitoring tool aims to support management decision-making to achieve sustainable management and animal production. The first step addresses monitoring objectives, how monitoring fits into management activities and how the information collected is essential for meaningful decision-making. The second step provides indication on where the monitoring should take place (e.g. entire rangeland area or more localised) according to the assessment objectives or resources. The third step indicates the components and indicators to monitor whilst the fourth step provides a procedure on conducting monitoring, the tools and methods, the types of observations and recording data. The fifth step addresses the monitoring period (time frame) and the frequency of observations. The sixth step addresses data management and analysis. Indicators include: 1. Rainfall; 2. Soil erosion – sheet, rill and gully erosion; 3. Vegetation – bush density, species composition, grass biomass; and 4. Livestock – livestock condition.	This framework approach attempts to use indicators that would be specifically relevant and influence the lives of local farmers and communities. The local level monitoring concept tries to integrate the knowledge, experiences and data captured by the local land user to make them more aware of the causes of changes in their rangeland and will help in the decision of appropriate management strategies that can be implemented or adapted that suit their specific needs. The data from this approach can also be analysed and collated by scientists, and government.	The approach focuses on rangeland productivity and does not include ecosystem-level indicators and long term trends. Whilst this makes it practical for regular application by farmers, it limits the utility in monitoring LD and SLM practices. Neither does the approach include analysis of the spatial pattern of vegetation or soil properties, both of which can be important indicators of threshold transitions and effective in informing management and creating a system of adaptive management.
7.	**Land Degradation Assessment in Drylands (LADA)** The Land Degradation Assessment in Drylands project (LADA) started in 2006 with the aim of creating the basis for informed policy advice	The participatory and decentralised approach of LADA has proven an effective way of gaining national understanding of the state of	Subjective due to it being based on expert opinion and not quantitative enough.

#	Tools Description	Benefits	Drawbacks, lessons learned, gaps
	on LD at global, national and local level. The main LADA objective was to develop tools and methods to assess and quantify the nature, extent, severity and impacts of LD on dryland ecosystems at national, sub-national and global levels. LADA had three components: 1. Identification of status and trends of LD; 2. Identification of hotspots; and 3. Identification of bright spots and priority areas where conservation and rehabilitation of land could be most cost-effective. LADA is based on the DPSIR framework as follows: • State of land degradation – type of land degradation (soil, biological and water); • Direct pressures towards land degradation – over-exploitation of vegetation; • Wider influences on land degradation "driving forces' – access rights/tenure; • Impacts of land degradation – impact on ecosystem services; and • Responses – macro-economic policies.	degradation at that level and it is the first important step towards integrated assessments. The involvement of a wide stakeholder base is also attributed to the success of the wide-scale acceptance of assessment results.	
8.	**WOCAT Methodology: Soil Degradation and Soil Conservation Assessment** (Van Lynden et al. undated). WOCAT (World Overview of Conservation Approaches and Technologies) has developed standardized tools to enable the global documentation, monitoring and assessment of soil and water conservation knowledge. A set of three comprehensive questionnaires and corresponding databases were developed to document all relevant aspects of soil and water approaches, and map their area coverage. The database focuses on case studies that describe the technology and the	The mapping methodology comprises of an interactive mapping tool for data entry and map viewing. The maps generated from this process can be at any scale from local to global levels and are aimed at supporting planners and decision makers make informed decisions related to future investments. They also help identify	The WOCAT methodology deals with soil degradation and conservation in general and does not focus on pastoral rangeland and grassland and rangeland in particular.

#	Tools Description	Benefits	Drawbacks, lessons learned, gaps
	human and natural environment, where it is used, and which approach was used for its implementation. The questionnaire and database of soil and water conservation map aims at providing a spatial overview of soil degradation and conservation. The mapping methodology covers assessment of land use, soil degradation, soil and water technologies and aspects of soil productivity. Data are collected through a "Participatory Expert Assessment" method which includes both expert knowledge and existing documents and which reflects the current state of knowledge. Ideally several experts who know the status of the land sit together and fill in the data in a process of negotiation and consultation of existing documents. By using the base map in the country or region, information on land use, soil degradation, soil and water conservation, and productivity issues need to be entered into the matrix table.	knowledge gaps and research priorities.	
9.	**SHARP: Self-evaluation and Holistic Assessment of climate Resilience of farmers and Pastoralists.** Resilience is a key concept when it comes to land degradation, food security and improved livelihood for the rural poor. SHARP is a holistic and participatory resilience assessment tool that addresses the current lack of resilience participatory assessments at the household level. The assessment is undertaken through an iterative participatory survey that takes into account the situations, concerns and interests of family farmers and pastoralists regarding climate resilience. Since May 2013, more than 450 farmers have tested SHARP though projects implemented in Mali, Angola, Mozambique, Niger, Burkina Faso, Uganda and Senegal. The 52 survey questions encompass the four following areas: agricultural practices; natural resources and environmental conditions; social aspects; and economic variables.	SHARP has a participatory approach and is focusing on farmers and pastoralists	It is more focusing on climate resilience than LD.

#	Tools Description	Benefits	Drawbacks, lessons learned, gaps
	SHARP is implemented through 3 different phases. The first phase is the participatory self-assessment survey. The second phase consists in a gap analysis and assessment of the survey at both the local level and through a cross-sectional review of multiple assessments. The third phase aims at using the results of the assessment to guide farmers and agro-pastoralists' practices, and at integrating the results into government policies and upcoming projects.		
10.	To effectively monitor ecosystem resilience, the Commonwealth Scientific and Industrial Research Organization (CSIRO) in partnership with the Scientific and Technical Advisory Panel of the Global Environmental Facility (STAP/GEF) have developed the **Resilience, Adaptation Pathways and Transformation Assessment (RAPTA) Framework** in 2015. This framework is intended to meet common objectives across the three Rio Conventions (UNFCCC, UNCCD and CBD), the SDG and the GEF land degradation strategy. The procedure of the RAPTA framework is an iterative method for assessment. It is to be conducted at focal scale with a multi-stakeholder engagement, and following a 4 step process: a) system description; b) assessing the system; c) adaptive governance and management; and d) multi-stakeholder engagement[52].	The development of this assessment framework to resilience, adaptation and transformation represents an opportunity to align approaches and monitoring towards common objectives, contribute to integrated strategies, and pursue synergies in reporting between the Conventions. The RAPTA framework is flexible and will lay the ground for the assessment and monitoring system to be developed under the proposed project.	RAPTA is a general tool that focuses on ecosystem resilience, but it is nost particularly focused on pastoral rangeland and grassland and rangeland in particular.

Assessment and monitoring tools used at national level

Burkina Faso	11.	**IUCN TOP SECAC** is a tool-kit with 11 tools, structured to measure climate change adaptation by analysing vulnerability, capacities and planning of adaptation actions. The tools include; i) Climate vulnerability and capacity analysis; ii) Community-based Risk Screening Tool Adaptation and Livelihoods; iii) Participatory analysis of vulnerability factors; iv) Vision–Actions–Partnerships; v) Outcome challenges for each partner; vi) Graduated progress markers; vii) The results chain; viii) Monitoring and

[52] CSIRO. 2015. The Resilience, Adaptation and Transformation Assessment Framework: from theory to application.

		evaluation information matrix of the identified actions; ix) Outputs, protocol for results/outcomes monitoring and evaluation; x) The most significant changes; and xi) Outcome journal. In Burkina Faso, it has been applied at village and provincial levels using objectively verifiable indicators to describe changes in thematic areas such as climate change. The approach involves identifying major community resources, and impacts hazards have had on these resources. The assessment method is strong in utilization of local knowledge as well as involvement of marginalized groups such as youth and women. The indicators however, may not be able to provide a complete picture of LD at all levels as off-site impacts can easily be omitted
	12.	The **EU Household Tool Approach** uses early warning system detailing household strategies to access food and income while monitoring impacts shocks have on household economies. The framework details two sets of information: livelihood baselines and monitoring data whose result present on-going analysis of current and expected situations for intervention. With populations being zoned geographically based on their sharing same type of livelihood, the approach facilitates geographical targeting and tailoring of indicators to be monitored. Examples of indicators include sources of income, expenditure that allows for comparisons of wealth to be made and also expressing impact of hazards at household level. The levels of impacts are noted to vary based on availability of coping strategies at household level and ability to respond to shocks. This tool allows for scalability to national levels, it is however restrictive in application as non-economic indicators able to detail impacts of hazards may not be adequately captured. The assessment tool thus needs integration with other systems to allow for a more holistic assessment.
	13.	The **FMNR-Groundswell** is a knowledge-based approach for farmers that allows them to learn and expand soil conservation to enhance resilience to climate change. Climate change impacts on soils are recorded using indicators such as soil moisture levels after rainstorms at village levels. Other indicators include amount of biomass, crop residues and animal manure. To enhance climate resilience, farmers are encouraged to conserve soil moisture by use of techniques such as mulching and allowing regeneration by selecting shoots from underground stumps.
	14.	**SAFA** is a self-evaluation tool measuring sustainability; social, economic, governance and environment along food and values chains by assessing impacts and performance. The indicators53, applicable at different levels are customized to measure diverse contexts such as livestock, crop, fisheries and forestry. This integration is essential if holistic assessments are to be reached; LD for example can have both on-site and off-site impacts. However, challenges in implementation of SAFA include difficulty in use by smallholders, and expensive resources needed to collect performance data and inaccuracy of data when up to date data are not used.
	15.	**Collect Earth** is a tool that supports multi-phase National Forest Inventories; and Land Use, Land Use Change and Forestry (LULUCF) assessments. Application also includes monitoring agricultural land and urban areas. The software is supported by

[53] The list of indicators can be found at http://www.fao.org/fileadmin/templates/nr/sustainability_pathways/docs/SAFA_Indicators_final_19122013.pdf

		search engines such as Bing Maps and Google Earth and is available for downloading and use. It gives access to free, very high resolution imagery allowing to visualize land elements and vegetation types and can be used to assess land use and land use change. During several workshops in Rome and in Niamey in early 2015, representatives from various countries in the Sahel including from Burkina Faso were trained on the use of Collect Earth.
Kenya	16.	**FAO Global Land Cover Network** (GLCN). FAO has been working closely with other aid organizations and developing countries to promote the sustainable use of natural resources. To effectively implement these programs, up-to-date and accurate mapping of the topography, land cover and land use is critical. GLCN through its programme, AFRICOVER, has produced a complete land cover analysis for Kenya showing status and trends of land cover. Kenya's land cover change from 1970 to 2000 is mapped. AFRICOVER's goals have been to use remote sensing and GIS technologies for natural resource management; develop an innovative, land cover/land use classification methodology to store information, and provide it in a way to answer user needs; provide capacity building and participation; support spatial data infrastructure initiatives; and, build partnerships and alliances. This is a non-participatory assessment. The costs associated with this kind of work maybe too expensive for local communities and perhaps too complicated to decipher. However, the data can be a good source of information on how land cover in the pilot areas has changed over time
	17.	**Global Assessment of Land Degradation and Improvement** (GLADA): The GEF-UNEP-FAO programme GLADA conducted a pilot study in Kenya aimed at; i) identifying the status and trend of LD and ii) identifying hotspots suffering constraints or at severe risk and also areas where degradation has been arrested or reversed. The general approach developed for GLADA involved a sequence of analyses to identify LD hotspots using remotely sensed data and existing datasets: first using simple NDVI indicators such as mean annual sum NDVI (surrogate for mean annual biomass production) and the trend of biomass production; secondly integration of biomass and climatic data (rain-use efficiency); thirdly, stratification of the landscape using land cover and soil and terrain data to enable a more localized analysis of the NDVI data. Next, the identified hotspots were characterized manually, using 30m-resolution Landsat data, to identify the probable kinds of LD, preliminary to field examination by national teams within the programme. The study notes that although LD hotspots can be identified using biomass indicators through remote sensing, combining biomass data with rain-use efficiency is more robust especially in rain deficient areas. Also interpretations of NDVI data must be followed up with field work to establish actual conditions on the ground underscoring the need for a participatory assessment.
	18.	**Automated Geospatial Watershed Assessment** (AGWA). Rapid land cover changes occurring in the Rift Valley of Kenya are altering the hydrologic response of critical watersheds. Four Landsat scenes from the past 18 years were used to develop a land cover classification scheme for the Njoro River watershed. These data were input to the AGWA, a GIS tool. AGWA was used to parameterize and run the Soil and Water Assessment Tool, a hydrologic model suitable for assessing land cover change impacts on hydrologic response. Climate, soil and terrain data were built for the watershed using historical data and field work, and classified land cover data were created using supervised and unsupervised classification and verified in the field. Techniques and methods

		were created to transform Kenya data sets into suitable formats for AGWA. Preliminary findings indicate that changes in landscape and land use are reflected in significant changes to simulated hydrologic results. The study is very focused on water catchments and is not a clear representation of an area ecological functioning. Other important aspects such as socio-economic aspects that aid in trend explanation are also lacking in this assessment.
	19.	**Monitoring Rangeland Health** (Riginos and Herrick, 2010) is a guide developed to assist in the design and implementation of a simple rangeland monitoring programme in Eastern Africa54. It outlines a series of steps that enable community members and other land managers to decide what, where, when, and how to monitor, as well as how to interpret and apply the results of their monitoring. The guide is intended to build on traditional monitoring systems and support them with science-based principles and tools that will facilitate the development of a simple, sustainable, and systematic approach to monitoring long-term changes in rangeland health. The step include; i) Complete and inventory and assessment of land; ii) Define management objectives; iii) Define monitoring objectives; iv) Decide what to monitor; v) Decide where to monitor; vi) Decide when and how often to monitor; vii) Document the specific monitoring plan; viii) Collect the data; ix) Analyze and interpret the results; x) Learn from and act on the results. Field testing for the guide were carried out during two workshops held in 2009 in Kenya. It is however not clear how much this methodology has been applied and whether it has influenced policy at all.
	20.	**Indigenous knowledge in rangeland assessments** (Oba, 2009) is a study that was commissioned by IUCN-WISP, which focused on the selection and application of indicators and the potential roles indigenous knowledge played in rangeland management for reducing risks of drought resilient livelihoods. It covered field studies in 3 countries including Kenya. The report highlights the importance of participatory research where ecologists and policy makers utilize local (herder) indigenous knowledge for assessments, monitoring and decision making in rangeland management. The integration of scientific and traditional indicators serves two main purposes; i) Developing common methods for rangeland assessments and monitoring and ii) Forming a basis for improving drought resilient livelihoods.
	21.	**NASA-LANDSAT**. From a vegetation index of the spectral behavior of vegetation, digitally processed Landsat imagery was used to monitor changes in the productivity of semiarid pasture in Northern Kenya. The vegetation could not, however, be successfully mapped by visual appraisal of Landsat false color imagery due to the sparse plant cover and its spectral similarity with bare soil.
Kyrgyzstan	22.	**Changing Systems, Changing Effects—Pasture Utilization in the Post-Soviet Transition, Dörre, A and Borchardt, P. 2012**. This study was carried out in Fergana Range within the Bazar Korgon district using socio-economic and ecological data collected over 4 years. It looked at ways in which historical preconditions, current socioeconomic conditions, laws and regulations, and

[54] Source: Riginos, C. and Herrick, J.E. 2010. Monitoring Rangeland Health: A Guide for Pastoralists and Other Land Managers in Eastern Africa, Version II. Nairobi, Kenya: ELMT-USAID/East Africa

		administrative and management practices influence current pasture problems. The study findings included conclusions that the changes of pasture social and ecological features cannot be explained solely in terms of excessive use by local people. Interdisciplinary approach such as one encompassing socio-historical and ecological research is thus needed in establishing sustainable utilization regimes are holistic. Recommendations of the study include need for capacity and financial support to local institutions if they are to sustainably manage the pastures. Although this study had participatory aspects, it was mainly used to collect empirical data on socio-historical contexts while the ecological vegetation analysis was analyzed using NDVI. The study would have been more robust if NDVI analysis was followed by ground truthing instead comparison only against historical data.
	23.	**Central Asian Countries Initiative on Land Management** (CACILM) addresses sustainable agriculture (rainfed and irrigated lands) and sustainable pastureland management. CACILM is a multi-country, multi-donor partnership that supports the development of a national programmatic framework to combat LD (and desertification) by promoting comprehensive approaches to sustainable land and water management. Within their 10 year programme, the focus on member countries including Kyrgyzstan are (i) strengthened policy, legislative, and institutional frameworks, creating conditions conducive for SLM; (ii) increased capacity of key institutions responsible for planning and implementing land management interventions; and (iii) improved land management and natural systems through the combined impact of appropriate enabling conditions and targeted project investments. Within this framework, a national programming framework for SLM was developed that defines and describes LD, the causes of LD and presents projects and technical assistance to achieving SLM. A monitoring system for pasture land use was proposed that is based on animal and production characteristics, vegetation and soil erosion criteria. The University of Central Asia's Mountain Societies Research Institute (MSRI): is a university-wide, interdisciplinary research institute dedicated to addressing the challenges and opportunities within Central Asian mountain communities and environments. The institution has on-going work including on I) **Learning Landscape Initiative** implemented in partnership with the University of British Columbia and supported by the Canadian Department of Foreign Affairs, Trade and Development. The project involves research on socio-ecological systems in Naryn Oblast through collaborations with local organizations and other stakeholders to generate knowledge and influence adaptive decision-making; ii) Mountain Environmental Virtual Observatories (EVO) project, has conducted in partnership with Imperial College of London and Wageningen University, cutting-edge concepts of adaptive governance linking scientific and local knowledge with community partners in remote mountain areas. The project focuses on how local communities can be engaged in monitoring of pasture condition, biodiversity in protected areas and other ecosystem services with the help of modern technologies and equipment in Naryn region of Kyrgyzstan.
Niger	24.	**Climate proofing**, a tool developed by GIZ, provides a methodological framework to facilitate the identification and systematic analysis of the effects of climate change and the integration of relevant adaptation measures into planning at national, sectoral, project and local levels. Through this tool, climate oriented analyses of policies, projects and programmes highlights risks and opportunities related to climate change. In Niger, the projects include integrated protection of agricultural, forest and rangeland

		resources in Tillabéri-Nord and Tahoua rural development projects aimed at improving communal land on plateaus and slopes and farmland. While observing the frequency of extreme weather events in the Sahel, climate proofing analyzes the various categories of climate change often observed, their direct effects and possible responses. The studies using technologies such as satellite imagery revealed that although reversal of LD had been minimal, villages are investing in rehabilitation of degraded land to cope better in times of crisis through activities such as firewood collection and picking of fruits. The climate proofing results have; i) underlined the importance of soil and water conservation in the country in increasing resilience to climate change; ii) Better influence on suitable community actors involved in projects; iii) Suitable sectoral investments and iv) Seen the integration of soil and water conservation strategies in development programmes. An FAO project "Integrating climate resilience into agricultural and pastoral production for food security in vulnerable rural areas through FFS Approach", that is funded by GEF is planning to use climate proofing in Niger to assess resilience of farmer-herder communities to climate change.
	25.	**The Rapid Appraisal of Agricultural Knowledge Systems** (RAAKS) was developed by Wageningen University in 1997 to promote innovation through sharing of knowledge and information by various stakeholders. RAAKS provides a framework for participatory action research by stakeholders such as farmers, policy makers, researchers, extensionists to understand and improve agricultural knowledge systems while better understanding their role as innovators.
	26.	Similar to the mentioned tools above, the **Socio-economic and Gender Analysis** (SEAGA) provides detailed socio-economic and gender profiles of communities in the project regions. SEAGA is elaborated jointly by FAO, World Bank, UNDP and ILO to develop the capacity of development specialists and humanitarian officers to incorporate socio-economic and gender analysis into development initiatives and rehabilitation interventions
	27.	**HAPEX-Sahel**. The Hydrologic-Atmospheric Pilot Experiment (HAPEX) sponsored by NASA was used to assess land use and LD in Southwestern Niger in 1999. HAPEX provided satellite and air photography imagery in Fandou Béri, an area inhabited by Zarma farmers and some semi-sedentary Peulh pastoralists. This was complemented with field studies exploring relationships between erosion (through wind and water), soil fertility and agricultural practice.
Uruguay	28.	**Development of a GIS map of natural grasslands of geomorphological regions:** The areas covered include Sandstone, Basalt, Lens Central, Eastern and North eastern Cristalino. The aim of the initiative is to characterise the heterogeneity of natural grassland ecosystem to enable better management of this resource. The specific objectives include; i) Updating and complementing the classification of natural grassland communities of the regions; ii) Generating maps of natural grassland communities described for each geomorphological unit selected; iii) Characterize the temporal Aerial net primary productivity of each of the described communities and their spatial variability; iv) Analyse the temporal behaviour and trends of indicators of Aerial net primary productivity (ANPP) and its dynamics at the regional scale for the period 1981-2013 and correlate the information generated with

		descriptions of land use, soil and climate data based on the available information and v) ANPP monitoring at farm level through Forage Tracking System (SEGF) in at least100 properties

APPENDIX 5: RISK MATRIX

	Risks	Impact	Probability of occurrence	Degree of Incidence	Mitigation Actions	Responsible party
1.	**Political-institutional risk:** Divergent priorities of projects partners with regards to pastoral land resources assessments	**Moderately high**. The project is involving several countries and partners, divergent priorities and political issues would severly affect the ability of the project to reach its objectives	Low	Green	Project partners will undertake several consultations to reach consensus on key issues during project implementation. Main project partners will be meeting at least once a year through the project steering committee.	Project Steering Committee
2.	**Low political will** to put into practice new science, capacities and innovations	**Moderately high**. This would halt or delay the project's activities and will jeopardize the sustainability of project' results	Moderately low	Amber	The project will establish a systematic feedback loop mechanism to ensure that the international and national agro-pastoral decision making processes are informed and will benefit from the assessment and monitoring system. The system will be aligned as much as possible with tools and approaches that are already in place. The trainings, capacity development and multi-level consultation processes that will be implemented through the project will allow local stakeholders and decisions makers to build ownership and to understand the value of the project in view of LD reporting requirements.	National assessment teams Policy Expert
3.	**Climate contingency risk:** Climate change impacts on land resources and pastoral management systems could mean that assessment results are quickly outdated	**Moderately high**. It would lower the impacts of the assessment results in the long term.	Moderately high	Amber	Strong linkages are being developed with baseline projects and other initiatives focusing on strengthening the resilience of communities and livelihoods to climate change impacts. This work will be closely taken into account while developing the participatory assessment tool and its content. This tool will be easy to use and	National Assessment teams

					readily available for local users that can repeat the analysis as appropriate at a low cost and therefore update the assessments on a regular basis informing the level of resilience of the land to climate change as well. Furthermore, this project will be associated to UNCCD follow-up work and UNCCD-COP12 ouctomes among other, when parties agreed on the indicators they will use to measure progress, strengthen measures to make the land resilient to climate change and to halt the biodiversity loss that follows the destruction of ecosystems.	
4.	**Social risks**: Reluctance to participate in the project activities by pastoralists	**High**. As the whole assessment process will be participatory, the reluctance of pastoralists will jeopardize the implementation of project activities.	Low	Amber	The participatory approach embedded in the project will allow local communities to get involved from the onset of the project in the selection of indicators. This will ensure that the indicators are fit to assess the local situation and that pastoralists understand them and are able to use them to conduct the assessment. The participatory approach should also show local institutions and communities the benefits of conducting the assessment to improve the management of pastoral areas and their natural resources. It will give local institutions and communities the opportunity to build ownership over the assessment and monitoring methodology.	National Assessment teams Project Coordinatio n Unit
5.	**Coordination challenges** due to complex project design as it spans several countries, multiple levels and engages multiple partners/actors simultaneously	**Moderately high**. Coordination challenges could significantly delay project activities and negatively impact expected results.	Moderately high	Amber	The project has been designed to ensure that consistent communication processes are established horizontally across pilot countries and sites, and vertically from the local to the global level. An international meeting will be organized for the selection	FAO Project Steering Committee

					of global indicator domains and to reach a common understanding at the global level. The global operational and procedural manual will compile the data collected in the field in the five countries, it will therefore establish a common understanding between all partners to conduct the assessment and monitoring, which will facilitate the coordination at the global level. As a global institution, FAO will ensure the coordination and will make the link between all partners across the pilot countries.	Policy Expert

APPENDIX 6: TERMS OF REFERENCE (ToRs) OF KEY STAFF

This Appendix provides Terms of reference for the following:

PCU and Admin Staff

Project Coordinator

Policy Expert (FAO)

Senior technical backstopping expert (IUCN/GDI)

IUCN Admin and procurement Officer

FAO Budget and Operation Officer

International Consultants

Rangeland Expert

Ecologist/Botanist

Data Analysis Expert

Remote Sensing Expert

SHARP Expert

National Consultants

National consultant for consolidation of secondary data

PROJECT COORDINATOR

Scope

This position will be full time for the entire duration of the project. Total input: 36 months.

Under the supervision of: UICN GDI

Reporting to: UICN GDI, FAO LTO

Based at IUCN GDI, in Nairobi, Kenya

Internationally recruited

Tasks

The Project Coordinator (PC) will be in charge of the daily management and technical supervision of the project including:

- Coordinating and closely monitoring the implementation of project activities;
- Technically identify, plan, design and support all activities;
- Day-to-day management of the project;
- Ensure a results-based approach to project implementation, including maintaining a focus on project results and impacts as defined by the results framework indicators;
- Coordination with related initiatives;
- Ensuring a high level of collaboration among participating institutions and organizations at the global, national and local levels;
- Tracking the project's progress and ensuring timely delivery of inputs and outputs;
- Implementing and managing the project's monitoring and communications plans;
- Organizing annual project workshops and meetings to monitor progress and preparing the Annual Budget and Work Plan (AWP/B);
- Submitting the PPR with the AWP/B to the Project Steering Committee and FAO;
- Acting as Secretary of the Project Steering Committee; and
- Preparing the PIR, and supporting the organization of the mid-term review and final evaluation.

Qualifications

- Higher degree related to natural resources or land management;
- At least ten years' experience in the pastoral sector or on land degradation related issues;
- Solid experience in project management and in particular results based management;
- Good understanding of issues related to grassland and rangeland, and pastoral communities in developing countries;
- Proven experience with Land degradation assessment tools;
- Previous experience working with international partners on related issues;
- Demonstrated commitment to participatory natural resource management techniques;
- Fluency in English, French and Spanish. Knowlegde of Russian an advantage; and
- Previous experience in the pilot countries is an asset.

POLICY EXPERT

Scope

This position will be part time for the entire duration of the project. Total input: 36 months (half-time).

Under the supervision of: FAO LTO

Reporting to: FAO LTO and IUCN GDI

Based at FAO AGP Division, in Rome

Internationally recruited

Tasks

The Policy Expert will be in charge of:

- Facilitating the mainstreaming of SLM best practices and measures into national and international partner organizations advocacy policy;
- Liaise with government agencies and regularly advocate on behalf of the project;
- Ensuring in particular a close collaboration between the Mountain Partnership Secretariat and the Pastoral Knowledge Hub and the GGW/ACP project team which are based at FAO HQ;
- Facilitating the recognition and adoption of the assessment and monitoring method in relevant international mechanisms,
- Closely coordinating and working with the UNCCD Secretariat, among others;
- Ensuring the documentation and publishing of project related best practices and lessons learned;
- Taking part to the initial national workshop and local consultations, the development of the procedural manual, the baseline assessment work at the local level, and all further consultations to be organized at district and national levels in relation to policy aspects; and
- Contributing to the publication of the final Assessment and Monitoring Method and the results of the five specific participatory national grassland and rangeland assessments conducted in the pilot sites.

Qualifications

- Higher degree related to advocacy and land management policies;
- At least 10 years' experience working on pastoral and land management political issues;
- Previous experience working with local pastoral communities in developing countries;
- Previous experience working with pastoralists advocacy networks such as the Mountain Partnership Secretariat or Pastoralists Knowledge Hub;
- Proven experience with the UNCCD;
- Previous experience compiling best practices and lessons learned to influence policies;
- Previous experience in the pilot countries is an asset;
- Fluency in English.

SENIOR TECHNICAL BACKSTOPPING EXPERT

Scope

The senior technical backstopping expert will be contracted for 140 days over the entire duration of the project.

Under the supervision of: IUCN

Reporting to: IUCN

Based at IUCN GDI, Nairobi, Kenya

Recruited within IUCN GDI

Tasks

- The technical implementation of project activities under Component 1 and 2 (except for Output 2.2 which will be under the responsibility of the Policy Expert based at FAO HQ);
- The daily management and coordination of the project in coordination with the project coordinator;
- Financial, contracting and procurement planning;
- In collaboration with the project coordinator, preparing and sending to FAO six-monthly Project Progress Reports (PPR), financial reports, Annual Work Plan and Budget (AWP/B), and all the necessary documentation for the Project Implementation Review (PIR); and
- Link with IUCN Financial Services Unit, responsible for all project-related financial transactions, records and reporting to donors, for project financial controls.

Qualifications

- Higher degree related to natural resources or land management;
- At least fifteen years' experience in land degradation related issues;
- Solid experience in project management and in particular results based management;
- Good understanding of issues related to grassland and rangeland, and pastoral communities in developing countries;
- Proven experience with Land degradation assessment tools;
- Previous experience working with international partners on related issues;
- Demonstrated commitment to participatory natural resource management techniques;
- Fluency in English, French and Spanish; and
- Previous experience in the pilot countries is an asset.

IUCN ADMIN AND PROCUREMENT OFFICER

Scope

This position is part time over the entire duration of the Project.

Under the supervision of and reporting to: IUCN GDI

Based at IUCN GDI, in Nairobi, Kenya

Recruited within IUCN GDI

Tasks

Under the direct supervision of the IUCN GDI coordinator and in consultation with the Project Coordinator, the IUCN admin and procurement officer will have the following responsibilities and functions:

- Ensure smooth and timely implementation of project activities in support of the results-based work plan for IUCN executed outputs (1.1, 1.2, 1.3, 2.1 and 3.1), through operational and administrative procedures according to FAO rules and standards;
- Coordinate the project operational arrangements through contractual agreements with key project partners;
- Arrange the operations needed for signing and executing Letters of Agreement (LoA) with relevant project partners;
- 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;
- Ensure the accurate recording of all data relevant for operational, financial and results-based monitoring;
- 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;
- Execute accurate and timely actions on all operational requirements for personnel-related matters, equipment and material procurement, and field disbursements;
- Participate and represent the project in collaborative meetings with project partners and the Project Steering Committee, as required;
- Undertake missions to monitor the outputs-based budget, and to resolve outstanding operational problems, as appropriate;
- 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;
- In consultation with FAO Evaluation Office, the LTU, and FAO-GEF Coordination Unit, support the organization of the mid-term evaluation/review and final evaluations, and provide inputs regarding project budgetary matters; and
- Undertake any other duties as required.

Qualifications

- University Degree in Economics, Business Administration, or related fields;

- Five years of experience in project operation and management related to natural resources management, including field experience in developing countries;
- Proven capacity to work and establish working relationships with government and non-government representatives;
- Fluency in English; and
- Knowledge of IUCN and FAO's project management systems.

FAO BUDGET AND OPERATION OFFICER

Scope

This position is part time over the entire duration of the Project.

Under the supervision of and reporting to: FAO BH

Based at FAO, in Rome

Recruited within FAO

Tasks

Under the direct supervision of the FAO BH and in consultation with the Project Coordinator, the Budget and Operation Officer will have the following responsibilities and functions:

- Ensure smooth and timely implementation of project activities in support of the results-based work plan for FAO executed outputs (2.2, 3.2 and 3.3), through operational and administrative procedures according to FAO rules and standards;
- Coordinate the execution with IUCN;
- Ensure smooth collaboration and communication with IUCN admin and procurement officer;
- Maintain inter-departmental linkages with FAO units for donor liaison, Finance, Human Resources, and other units as required;
- Ensure the accurate recording of all data relevant for operational, financial and results-based monitoring;
- 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;
- Execute accurate and timely actions on all operational requirements for FAO personnel-related matters, equipment and material procurement, and field disbursements;
- In consultation with FAO Evaluation Office, the LTU, and FAO-GEF Coordination Unit, support the organization of the mid-term evaluation/review and final evaluations, and provide inputs regarding project budgetary matters;
- Provide inputs and maintain the FPMIS systems up-to-date; and
- Undertake any other duties as required.

Qualifications

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

RANGELAND EXPERT

Scope

This expert will be recruited for 235 days over the duration of the project.

Under the supervision of and reporting to the Project Coordinator

Internationally recruited

Tasks

The rangeland expert will:

- Participate in and help coordinate the international technical meeting to identify, define and review a minimum number of global indicators by domains of assessment under Activity 1.1.1;
- Help organize the national level workshops to (i) introduce the project objective, and the framework of global indicators by domain of assessment; and (ii) identify key national and local resource people to support the assessment under Activity 1.1.2;
- Provide technical support during the field testing of domains indicators under Activity 1.1.3;
- In collaboration with the Ecologist/Botanist and the SHARP expert, develop an operational and procedural manual to monitor and assess LD and SLM based on the framework of indicators domains under Activity 1.1.5;
- In coordination with the Botanist/Ecologist and SHARP experts, provide technical support to the assessment teams during the preliminary district/site consultation, the selection of sampling sites, and the identification and testing of specific indicators per global indicator domains under Activity 1.2.1 (ii) and (iii);
- In collaboration with the Ecologist/Botanist expert, review and provide input to the national assessments reports (Activity 1.2.2); and
- Conduct a study analyzing the potential integration between the present framework and other relevant international methods under Activity 2.2.1.

Qualifications:

- Higher university diploma in environment, natural resources or land management;
- Excellent understanding of grassland and rangeland ecosystems;
- Good understanding of global assessment tools to assess and monitor grassland and rangeland worldwide;
- Previous experience in the assessment of rangeland and grassland health;
- Previous experience in the development of indicators to assess rangeland and grassland health;
- Experience in providing technical support to local communities in developing countries;
- Good relations with international partners working on land degradation;
- Previous experience in the pilot countries is an asset; and
- Fluency in English, working knowledge un French and Spanish. Russian an advantage.

ECOLOGIST/BOTANIST

Scope

This expert will be contracted for 120 days over the duration of the project.

Under the supervision of and reporting to: Project Coordinator

Internationally recruited.

Tasks

- Participate in and help coordinate the international technical meeting to identify, define and review a minimum number of global indicators by domains of assessment under Activity 1.1.1;
- Help the national expert for the consolidation of secondary data on the identification of ecological indicators used to assess LD and SLM, and the types of data collection techniques used for each indicator (Activity 1.1.4);
- In collaboration with the SHARP and Rangeland experts, develop an operational and procedural manual to monitor and assess LD and SLM based on the framework of indicators domains under Activity 1.1.5;
- In collaboration with the Rangeland and SHARP expert, provide technical support to the assessment teams during the preliminary district/site consultation, the selection of sampling sites, and the identification and testing of specific indicators per global indicator domains under Activity 1.2.1 (ii) and (iii); and
- In collaboration with the Ecologist/Botanist expert, review and provide input to the national assessments reports (Activity 1.2.2).

Qualifications

- Higher university diploma in botanic and/or ecology;
- Excellent understanding of grassland and rangeland ecosystems;
- Previous experience in the assessment of land and ecosystem health;
- Previous experience in the development of indicators to assess land and ecosystem health;
- Experience in providing technical support to local communities in developing countries;
- Previous experience in the pilot countries is an asset; and
- Fluency in English, working knowledge un French and Spanish. Russian an advantage.

DATA ANALYSIS EXPERT

Scope

This expert will be contracted for 60 days over the duration of the project.

Under the supervision of and reporting to: Project Coordinator

Internationally recruited.

Tasks

This expert will be in charge of:

- Reviewing and providing input to the procedural and operational manual under Activity 1.3.1;
- Analyzing all previously collected data under Component 1 in order to:
    - Review and finalize the framework of global indicators;
    - Review and finalize the procedural and operational manual; and
    - Compile all data collected through assessment at local field level;
    - Publish the final Assessment and Monitoring Method including the framework of global indicators, and the results of the five specific participatory national grassland and rangeland assessments conducted in pilot sites.

Qualifications

- Higher university degree in environment, natural resources and/or land management;
- Proven experience in data analysis and compilation from a wide variety of sources;
- Good understanding of land-related issues in developing countries;
- Excellent writing skills;
- Excellent communication skills for a diverse public; and
- Fluency in English.

REMOTE SENSING EXPERT

Scope

This expert will be contracted for 60 days over the duration of the project.

Under the supervision of and reporting to: Project Coordinator

Internationally recruited.

Tasks

- Consolidate existing remote-sensing imagery and systems for each pilot country at national level and at the selected sites (for land-cover and land-use); and
- Develop digitized maps and sampling points based on data from community consultations and GPS coordinates.

Qualifications

- Higher university degree in GIS and remote sensing;
- Previous experience providing support to local communities;
- Previous experience working with land-related issues in developing countries; and
- Proven experience with GIS and RS software.

SHARP EXPERT

Scope

This expert will be contracted for 100 days over the duration of the project.

Under the supervision of and reporting to: Project Coordinator

Internationally recruited.

Tasks

- Participate in and help coordinate the international technical meeting to identify, define and review a minimum number of global indicators by domains of assessment under Activity 1.1.1;
- Provide technical support during the field testing of domains indicators under Activity 1.1.3;
- Contribute to the development of an operational and procedural manual to monitor and assess LD and SLM based on the framework of indicators domains under Activity 1.1.5;
- Provide technical support to the policy expert.

Qualifications

- Advanced university degree in engineering, agriculture, or natural resources;
- Level and relevance of experience regarding climate or land degradation related risks and farmers/pastoralists resilience, including the SHARP tool;
- Level and relevance of experience in assessment of land degradation in grassland and rangeland areas;
- Recognized expert in participatory activities in developing country;
- Level of experience in training smallholders in self-assessment;
- 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;
- Ability to use computer software such as MS Office and other project management software and database; and
- Fluency in English

EXPERTS FOR THE CONSOLIDATION OF SECONDARY DATA

Scope

These experts (one per country) will be recruited for 40 days each.

Under the supervision of and reporting to: Project Coordinator

Nationally recruited.

Tasks

The expert will be in charge of collecting and consolidating the following secondary data (Activity 1.1.4) to inform the development of the draft operational and procedural manual:

- Latest assessment and monitoring approaches developed and adopted in each pilot country;
- Ecological indicators used to assess LD and SLM, and the types of data collection techniques used for each indicator, with the help of the Ecologist/Botanist expert;
- Socio-economic data from existing assessments and monitoring studies to interpret drivers and outcomes of LD and SLM including but not limited to:
    - Basis of the pastoral economy: livestock species and breeds products, management practices, market / value chains, mobility, etc. (note, these are not comprehensive lists but an indication of broad areas to review);
    - Cultural aspects of grassland and rangeland management: governance, institutions, norms, reciprocity etc.;
    - Land rights: tenure security, protection of seasonal zones, corridors etc.;
    - Gender roles, responsibilities and challenges;
    - Social indicators: school enrolment, literacy rates, child and maternal mortality, malnutrition etc.;
    - Political issues: marginalization, quality of representation, conflicts; and
    - Overview of the local environmental context, including documented historical trends and assessments.
- In collaboration with the RS expert, collect and consolidate existing remote-sensing imagery and systems for each pilot country at national level and at the selected sites (for land-cover and land-use). Integrating Remote Sensing (RS) into the initial assessment will enable:
    - Improved and cross-examined local assessments;
    - Improved spatial analysis of field data; and
    - Scale-up of assessment to the national level.

All the data from the pilot countries will be compiled into a comprehensive report.

Qualifications

- University Diploma in sociology, political science or development studies;
- Proven experience in desk study and secondary data collection;
- Previous experience writing reports on political, land and social issues in developing countries;
- Good understanding of socio-economic and political issues related to land in developing countries;
- Good writing skills.

APPENDIX 7: COFINANCING LETTERS

Cofinancing Partner	Signed Letter
FAO-FOA	ACP.pdf
FAO-AGP	AGP.pdf
IUCN	IUCN.pdf
MPS	MPS.pdf
PKH	PKH.pdf
Uruguay Ministry of Agriculture, Livestock and Fisheries	Uruguay_MGAP.pdf

APPENDIX 8: RESPONSES TO STAP AND GEF SEC COMMENTS

#	Comment	Proposed response
	STAP Comments	
1.	In the project description (A.1), STAP recommends defining clearly the problem statement, describing better the barriers and threats to sustainable agro-pastoral and pastoral systems, and how monitoring systems and participatory assessments can address the project objective on "improving the assessment capability and decision-making process" for pastoralists and policy-makers. In this regard, it would be useful to describe more thoroughly (and clearly) the potential drivers (direct and indirect) of land degradation and its adverse effects on ecosystem services (e.g. climate regulation, food provisioning) “basing the information on the target sites as much as possible”. References (from published or unpublished sources) would be useful to support statements providing a general characterization of the effects of land degradation, or sustainable land management, on ecosystem services. Furthermore, additional descriptions of the target sites would be valuable. This includes providing information on the socio-economic characteristics of herders/communities, agroecosystems (e.g. agro-pastoral, pastoral), and precipitation and temperature trends. Currently, some of this information is provided only for some African (target) countries, while there is no information in the proposal for Latin America or Asia “the other two target regions”. One source of information for climate data is the "Climate Change Knowledge Portal": http://sdwebx.worldbank.org/climateportal/index.cfm	The rationale of the project has been clarified in Section 1.2. It now includes a clear description of the baseline in each pilot country, as well as a description of the remaining barriers to monitor and assess grasslands and rangelands LD and SLM. A table has been introduced in Section 1.1.2 describing the status, threats and drivers of LD in each pilot country. A description of the target sites in each pilot country has been introduced in Section 1.7, including a description of socio-economic and agro-systems characteristics.
2.	It is unclear from the problem statement and the interventions' descriptions how component 1 and component 2 link to address the project objective. At the moment, these two components do not appear to be complementary. It would be useful to detail further the rationale for component 1. For example, it is unclear from the proposal how the tools	The project framework has been thoroughly revised to better link component 1 and 2 towards the achievement of the project objective.

#	Comment	Proposed response
	to analyse sustainable land management, or land degradation, (component 1) will complement the monitoring system developed by component 2. The interconnection between both components needs to be described clearly and better linked to the problem, and project objective.	Component 1 now consists in the development of a participatory assessment and monitoring system for pastoral areas. Component 2 aims to inform international and national agro-sylvo-pastoral decision making processes, by compiling SLM local best practices and measures identified during the initial assessment performed under Component 1 and by using these to inform tangible national policies, including through follow-up support that will be provided by the national partner organisations that will be closely involved in all project activities.
3.	STAP recommends adding the development of a conceptual framework for the selection of indicators for pastoral and agro-pastoral areas. The proposal raises briefly the intention to develop an indicator framework (page 7) for pastoral and agro-pastoral areas. However, given the importance of developing a conceptual framework for indicator selection, STAP recommends adding this activity to the project framework and developing it further as a more prominent sub-activity of component 2. A comprehensive set of indicators that assesses the impacts of land management (pastoral management) on ecosystem services (global environmental benefits) at the appropriate spatial and temporal scales will require thorough analysis. In addition to comprehensiveness, the framework also will need to be flexible enough to adjust to the purpose of the assessment (including the appropriate scales). It is critical to first articulate the purpose of the indicator set: who will use it, and in what context. Comprehensive and flexible frameworks for indicators can contribute to the sustainability of the tool and its potential for scaling-up. The project developers may wish	The first component of the project will support the development of a conceptual framework for the selection of indicators. This framework will include on the one hand a set of global domains of indicators to ensure comparability across countries, and on the other hand specific indicators applicable at the local level, that will be integrated in the global domains of indicators. The conceptual framework of indicators will be further discussed and developed during the international technical meeting to be organized through Activity 1.1.1. Among other, the framework of indicators will take into account: - Driving forces, Pressures, States, Impacts, and Responses (DPSIR method),

#	Comment	Proposed response
	to rely on the following two sources when conceiving the conceptual framework, or for identifying scientific partners that can assist with this activity: 1) Niemeijer, D. and de Groot, R.S. 2008. A conceptual framework for selecting environmental indicator sets. Ecological Indicators 8: 14-25. 2) van Oudenhoven, A.P.E., Petz, K., Alkemade, R., Hein, L., de Groot, R.S. 2012. Framework for systematic indicator selection to assess effects of land management on ecosystem services. Ecological Indicators 21: 110-122.	- STAP's Resilience Assessment Adaptation Transformation Assessment Learning framework, - Scientific recommendations from sources such as Niemeijer et al. 2008, and van Oudenhoven et al. 2012.
4.	The baseline scenario needs to be described more thoroughly. Currently, there is only a brief narrative on the scenario. STAP recommends describing further the baseline scenario based on details relevant to the project sites. Additionally, STAP recommends curtailing the information describing the associated baseline projects, or providing this information in a more user-friendly way, for example in a table.	The baseline scenario has been clarified in Section 1.2.1. The baseline initiatives are presented for each pilot country in a synthetic but comprehensive manner. The baseline initiatives taken into account are more consistent and are now limited to the activities of the GEF project partners in each pilot countries.
	GEF SEC Comments 10 March 2014	
5.	Is the baseline project, including problems that the baseline project seeks to address, sufficiently described and based on sound data and assumptions? Two main problems are identified (1) lack of process that transfers LD and SLM information to appropriate policies and legal instruments, and 2) lack of coherent indicators on multiple ecosystem benefits in grassland and pastoral areas. The baseline scenario includes a long list of projects, mainly managed by FAO, IUCN, IFAD and their partners on the considered issues. *At CEO endorsement, reinforce the problem analysis and focus on a smaller number of projects to describe the baseline scenario.*	The problem analysis has been reinforced in Section 1.1 and Section 1.2 and the number of baseline initiatives has been reduced to: - IUCN - Global Drylands Initiative - FAO-FOR through EU-ACP project "Action against desertification in support of the implementation of the Great Green Wall for the Sahara and the Sahel initiative" - Pastoral Knowledge Hub
6.	Is the role of public participation, including CSOs, and indigenous peoples where relevant, identified and explicit means for their engagement explained?	Yes, a specific sub-section is dedicated to this issue under Section 1.4 on participant and stakeholder analysis.

#	Comment	Proposed response
	FAO works with various networks involving NGOs/CSOs (WISP, WAMIP, for instance). However, at *CEO endorsement please include universities and research/training centers in the considered countries. This kind of project is a unique opportunity to empower national and local scientific partners.*	The project is taking into account national and local scientific partners. Scientific experts from each pilot country will be part of the National Assessment Teams and will therefore benefit from capacity building activities on the assessment and monitoring process
7.	Does the project take into account potential major risks, including the consequences of climate change, and describes sufficient risk mitigation measures? (e.g. measure to enhance climate resilience). *Provide a comprehensive risk assessment at CEO endorsement*	A comprehensive risk assessment is presented in a risk matrix in Appendix 5 of the project document
8.	Is the project consistent and properly coordinated with other related initiatives in the country or in the region? The project is consistent and coordinated with other initiatives involving mainly FAO and IUCN. Other agencies as IFAD and some initiatives supported by bilateral partners are also mentioned. *At CEO endorsement, please confirm the way this project will coordinate with these initiatives. For instance, the PRAPS and the Regional Sahel Pastoralism Support Project are mentioned in the PIF: during the PPG, please explore the best ways to coordinate and associate them (steering committee?)*	The number of initiatives with which the project will collaborate has been clarified and include the following: - IUCN - Global Drylands Initiative - FAO-FOR through EU-ACP project "Action against desertification in support of the implementation of the Great Green Wall for the Sahara and the Sahel initiative" - Pastoral Knowledge Hub - Mountain Partnership The national implementing partners will be part of the project steering committee to ensure good coordination.
9.	Has cofinancing been confirmed? The project reasoning is built on cofinancing brought up by FAO and IUCN. The cofinancing amount is acceptable. - Please, confirm the cofinancing at CEO endorsement.	Partners providing cofinancing have been identified and are as follows: - IUCN - Global Drylands Initiative and Kenya and Burkina Programming; - FAO-FOA through EU-ACP project "Action against desertification in support of the

#	Comment	Proposed response
	- If possible, bring other partners to increase the cofinancing (WB, UNDP, UNEP, IFAD, AfDB, for instance).	implementation of the Great Green Wall for the Sahara and the Sahel initiative" and the "Global Drylands Assessment"; - Pastoral Knowledge Hub; - Mountain Partnership Secretariat; - FAO AGPM; and - Uruguay.
10.	Confirm the countries that will be committed (the number of 9 is announced, but only eight countries are listed).	The countries that will be involved in the project have been limited to 5: Burkina Faso, Kenya, Kyrgyzstan, Niger and Uruguay. Five main criteria were used to select the five pilot countries: - The importance of the pastoralism sector; - The effects of LD; - Potential collaborations, leverage effects and co-financing; and - The level of access to data.

APPENDIX 9: ENVIRONMENTAL AND SOCIAL REVIEW FORM

(for category C projects)[55]

PROJECT NAME	

Project description and (environmental and social impacts - approximately 500 words or less**):**

Grasslands cover approximately 30 percent of the earth's ice-free land surface and 70 percent of its agricultural lands. They provide many ecosystem services of vital importance for local communities and are in particular a significant source of livestock feed and of livelihoods for stock raisers and herders.

However, it is estimated that 40% of extensive pastoral land use systems and 58% of agro-pastoral systems are degraded, and that Land Degradation (LD) costing the global economy around USD40 billion annually worldwide. LD has significant consequences on grassland and rangeland. Degraded land is costly to reclaim and, if severely degraded, may no longer provide the range of ecosystem functions and services it once did, leading to a loss of the goods and many other potential environmental, social, economic and non-material benefits that are critical for society and development.

Multiple systems have been developed in the past to monitor and assess the health of grassland and rangelands. However, despite the high importance placed on evaluating the drivers, current state, trends and impacts of LD, there is yet to be a global standard protocol defined for monitoring and assessing LD in grasslands and rangelands to upscale Sustainable Land Management (SLM), which is what the proposed project is aiming at. Existing tools do not deal in particular with the link between pastoralism and LD in grasslands and rangelands, and no global participatory and holistic method and process is available yet to monitor LD and SLM practices and related benefits to make informed decisions.

This project will be implemented by FAO in five pilot countries, namely: Burkina Faso, Kenya, Kyrgyzstan, Niger and Uruguay. The objective of the project is to strengthen the capacity of local and national stakeholders in pastoral areas comprising of grasslands and rangelands to assess LD and make informed decisions to promote SLM in a way that preserves the diverse ecosystem goods and services provided by rangelands and grasslands. The International Union for Conservation of Nature (IUCN) will be the project's main executing partner through the Global Drylands Initiative that strongly focuses on supporting restoration and sustainable management including sustainable pastoral development.

Working with various partners, the project offers a framework to design a methodology for the participatory assessment and monitoring of LD and multiple benefits of pastoral areas. The findings of the assessment and monitoring process will also identify SLM best practices that can feed into policy processes. The project will work with national partners in each pilot

[55] Please see FAO Environmental Impact Assessment – Guidelines for FAO Field Projects http://www.fao.org/docrep/016/i2802e/i2802e.pdf

country, including the General Directorate of Pastoral Resources Management in Burkina Faso, the Directorate of Livestock Production in Kenya, the Department of Pasture in Kyrgyzstan, the Ministry of Livestock in Niger and the Ministry of Agriculture in Uruguay.

The project is structured through three main components. The first component consists of the development of a participatory assessment and monitoring system for pastoral areas comprising of grassland and rangeland. This system will comprise a holistic and practical framework of indicators together with a procedural and operational manual that will both be tested in the field and refined accordingly. The second component aims to inform international and national agro-sylvo-pastoral decision making processes on the basis of the results and best practices from the participatory pastoral areas assessments realized under the first component. The third component focuses on knowledge management, communications, monitoring and evaluation of the project**.**

Certification:

Project Category C	**Yes**	**No**
I affirm that I have performed an environmental review of this project and certify that the project conforms to the pre-approved list of projects excluded from environmental assessment and that the project will have minimal or no adverse environmental or social impacts. No further analysis is required.	**X**	

Title, name and signature of project Lead Technical Officer:

Nora Berrahmouni, Forest Officer (Drylands)

Forest policy and Ressource Division (FOA)

Date:

8 February 2016

Insert scanned signed PDF as icon here:

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