



Sustainable Forest and Rangelands Management in the Dryland Ecosystems of Uzbekistan

Part I: Project Information

GEF ID

10367

Project Type

FSP

Type of Trust Fund

GET

CBIT/NGI

CBIT

NGI

Project Title

Sustainable Forest and Rangelands Management in the Dryland Ecosystems of Uzbekistan

Countries

Uzbekistan

Agency(ies)

FAO

Other Executing Partner(s)

Executing Partner Type

Other Executing Partner(s)

State Committee on Forestry; State Committee on land resources, geodesy, cartography and state cadaster

Executing Partner Type

Government

GEF Focal Area

Land Degradation

Taxonomy

Focal Areas, Land Degradation, Land Degradation Neutrality, Land Cover and Land cover change, Land Productivity, Carbon stocks above or below ground, Sustainable Land Management, Sustainable Agriculture, Ecosystem Approach, Income Generating Activities, Sustainable Forest, Restoration and Rehabilitation of Degraded Lands, Integrated and Cross-sectoral approach, Sustainable Livelihoods, Community-Based Natural Resource Management, Improved Soil and Water Management Techniques, Sustainable Pasture Management, Influencing models, Convene multi-stakeholder alliances, Demonstrate innovative approaches, Strengthen institutional capacity and decision-making, Transform policy and regulatory environments, Stakeholders, Beneficiaries, Private Sector, Individuals/Entrepreneurs, SMEs, Type of Engagement, Information Dissemination, Partnership, Consultation, Participation, Local Communities, Communications, Strategic Communications, Education, Public Campaigns, Behavior change, Awareness Raising, Civil Society, Community Based Organization, Non-Governmental Organization, Academia, Gender Equality, Gender results areas, Knowledge Generation and Exchange, Participation and leadership, Capacity Development, Access and control over natural resources, Access to benefits and services, Gender Mainstreaming, Gender-sensitive indicators, Women groups, Sex-disaggregated indicators, Capacity, Knowledge and Research, Knowledge Generation, Professional Development, Seminar, Training, Workshop, Knowledge Exchange, Field Visit, Innovation, Learning, Adaptive management, Indicators to measure change

Rio Markers**Climate Change Mitigation**

Climate Change Mitigation 1

Climate Change Adaptation

Climate Change Adaptation 1

Duration

60 In Months

Agency Fee(\$)

358,809

Submission Date

10/10/2019

A. Indicative Focal/Non-Focal Area Elements

Programming Directions	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
LD-1-1	GET	1,816,941	20,400,000
LD-1-4	GET	1,550,000	13,500,000
LD-2-5	GET	410,000	2,600,000
	Total Project Cost (\$)	3,776,941	36,500,000

B. Indicative Project description summary

Project Objective

Promote SLM/SFM and landscapes restoration for achieving LDN commitments of Uzbekistan

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
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Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
Component 1. Enabling Environment for LDN monitoring and target- setting	Technical Assistance	<p>1.1. Policy, monitoring and planning frameworks strengthened at national and sub-national levels to support LDN in production landscapes</p> <p><u>Targets:</u></p> <ul style="list-style-type: none"> - LDN TSP report and LDN monitoring system operational - local LDN hot and bright spots identified <p>1.2. LDN mainstreamed in national policies and planning</p>	<p>1.1.1. Baseline assessment and mapping of LDN indicators (land cover, land productivity and soil organic carbon) at national scale and in Bukhara-Navoi</p> <p>1.1.2. Monitoring system for LDN indicators at the national level integrated into existing national land-use monitoring systems</p> <p>1.1.3. LDN decision support system for target-setting, planning and implementation in place (using WOCAT/ DS-SLM, etc.)</p> <p>1.1.4. LDN Action Plan with voluntary targets defined in the Bukhara-Navoi landscape</p> <p>1.2.1. Review of strategic regulatory frameworks and territorial planning instruments to enhance local stakeholder participation and mainstreaming of LDN and land tenure at national level in Bukhara-Navoi</p> <p>1.2.2. Intersectoral coordination mechanisms strengthened (horizontal – between line</p>	GET	530,000	3,500,000

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
Component 2. Demonstrating the LDN approach and scaling out of SLM/SFM practices in Bukhara-Navoi landscape	Investment	<p>2.1 SLM/SFM technologies and approaches in the Bukhara-Navoi landscape upscaled to achieve LDN</p> <p><u>Targets:</u></p> <ul style="list-style-type: none"> - Number of hectares under SLM that meet LDN criteria (25,000 ha of irrigated agricultural land; 100,000 ha of forest land; and 100,000 ha of rangelands) - 13,000 ha of land restored (half forestland, half grasslands) - 5.1 Mton of CO₂eq sequestered - 1,000 direct beneficiaries (of which 50% are women) <p>2.2. Increased investments in pasture and rangeland management to achieve LDN</p> <p><u>Targets:</u></p>	<p>2.1.1. Gender balanced local multi-stakeholders groups established in Bukhara-Navoi (pasture user associations at district level, etc.)</p> <p>2.1.2. Participatory integrated land-use plans developed in the Bukhara-Navoi landscape</p> <p>2.1.3. Innovative SLM practices implemented to enhance the productivity and restore degraded land (grazing of riparian zones, grazing crop residues to allow vegetation recovery, pasture rotation, agro-forestry, etc.)</p> <p>2.2.1. Market access mechanism identified and key value chains (e.g. pistachio, walnut, milk, meat, etc.) strengthened to achieve LDN in the Bukhara-Navoi landscapes</p> <p>2.2.2. Training program in business planning for women entrepreneurs that perform critical functions along selected value chains</p> <p>2.2.3. LDN local transformative</p>	GET	2,867,087	32,240,000

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount(\$)	Co-Fin Amount(\$)
Component 3. Project Monitoring, Evaluation and lesson learned	Technical Assistance	<p>3.1. Knowledge management, M&E and lessons learned disseminated</p> <p><u>Targets:</u></p> <ul style="list-style-type: none"> - Functioning M&E system and GEBS and co-benefits established - Functioning LDN reporting to the UNCCD - 15 knowledge products and training/awareness raising materials on SLM and LDN (50% tailored to women) 	<p>3.1.1 Project mid-term and final evaluation conducted</p> <p>3.1.2 Global Environment Benefits, co-benefits and costs of SLM monitored, assessed and lessons analyzed.</p> <p>3.1.3 Knowledge management products developed and disseminated, including a set of manuals for LDN monitoring and implementation through scaling up of SLM</p> <p>3.1.4 Gender-focused communication strategy developed and implemented to support SLM scaling up to meet LDN targets</p>	GET	200,000	460,000
Sub Total (\$)					3,597,087	36,200,000
Project Management Cost (PMC)						

Project Management Cost (PMC)

GET	179,854	300,000
Sub Total(\$)	179,854	300,000
Total Project Cost(\$)	3,776,941	36,500,000

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

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount(\$)
Government	State Committee on Forestry	Public Investment	Investment mobilized	16,500,000
Government	State Committee for Land Resources, Geodesy, Cartography and State Cadastre	Public Investment	Investment mobilized	10,000,000
Government	Ministry of Agriculture	Public Investment	Investment mobilized	10,000,000
			Total Project Cost(\$)	36,500,000

Describe how any "Investment Mobilized" was identified

State Committee on Forestry: "Creation of shelterbelts" (\$6m); Afforestation activities, including establishment of forest plantations" (\$1m); Forest management activities, forest reclamation works, prevention of disease outbreaks and insect control (\$500k). State Committee for Land Resources, Geodesy, Cartography and State Cadastre: "Identification of boundaries of administrative and territorial units and land surveying" (\$9m); "Geobotanical surveys on pastures and hay fields" (\$1m) Ministry of Agriculture: The State budget will realigned with the objectives of the project.

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

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
FAO	GET	Uzbekistan	Land Degradation	LD STAR Allocation	3,776,941	358,809	4,135,750
Total GEF Resources(\$)					3,776,941	358,809	4,135,750

E. Project Preparation Grant (PPG)

PPG Amount (\$)

150,000

PPG Agency Fee (\$)

14,250

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount(\$)	Fee(\$)	Total(\$)
FAO	GET	Uzbekistan	Land Degradation	LD STAR Allocation	150,000	14,250	164,250
Total Project Costs(\$)					150,000	14,250	164,250

Core Indicators**Indicator 3 Area of land restored**

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
13000.00	0.00	0.00	0.00

Indicator 3.1 Area of degraded agricultural land restored

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

Indicator 3.2 Area of Forest and Forest Land restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
6,500.00			

Indicator 3.3 Area of natural grass and shrublands restored

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
6,500.00			

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

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

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

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
225000.00	0.00	0.00	0.00

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

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

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

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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Type/Name of Third Party Certification

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

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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225,000.00

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

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
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Documents (Please upload document(s) that justifies the HCVF)

Title	Submitted
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Indicator 6 Greenhouse Gas Emissions Mitigated

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
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Expected metric tons of CO ₂ e (direct)	5.1	0	0	0
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Expected metric tons of CO ₂ e (indirect)	0	0	0	0
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Indicator 6.1 Carbon Sequestered or Emissions Avoided in the AFOLU (Agriculture, Forestry and Other Land Use) sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
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Expected metric tons of CO ₂ e (direct)	5.1			
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Expected metric tons of CO ₂ e (indirect)				
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Anticipated start year of accounting	2021			
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Duration of accounting	20			
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Indicator 6.2 Emissions Avoided Outside AFOLU (Agriculture, Forestry and Other Land Use) Sector

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
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Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO ₂ e (direct)				
Expected metric tons of CO ₂ e (indirect)				
Anticipated start year of accounting				
Duration of accounting				

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

Total Target Benefit	Energy (MJ) (At PIF)	Energy (MJ) (At CEO Endorsement)	Energy (MJ) (Achieved at MTR)	Energy (MJ) (Achieved at TE)
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Target Energy Saved (MJ)				
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Indicator 6.4 Increase in Installed Renewable Energy Capacity per Technology (Use this sub-indicator in addition to the sub-indicator 6.2 if applicable)

Technology	Capacity (MW) (Expected at PIF)	Capacity (MW) (Expected at CEO Endorsement)	Capacity (MW) (Achieved at MTR)	Capacity (MW) (Achieved at TE)
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Indicator 11 Number of direct beneficiaries disaggregated by gender as co-benefit of GEF investment

	Number (Expected at PIF)	Number (Expected at CEO Endorsement)	Number (Achieved at MTR)	Number (Achieved at TE)
Female	500			
Male	500			
Total	1000	0	0	0

Part II. Project Justification

1a. Project Description

1) the global environmental and/or adaptation problems, root causes and barriers that need to be addressed (systems description);

The three largest land categories in Uzbekistan are: agricultural land (45.1%); forest fund (24.4%), and lands of the reserve (24.1%). In total, these land categories cover more than 42 million hectares (95% of the country). Of this area, arable land (including smallscale personal plots) make up only about 9.6%. Thus, the vast majority of land use in Uzbekistan is associated with pastures, forestry or unused land (often unofficially used as pasture).

The Uzbekistan livestock sector is heavily dependent on rainfed, native pastures and rangelands. Livestock production is mostly conducted through the Dehkan farm systems which combine small agricultural plots and small scale animal husbandry, with grazing restricted to local communal fields and individual watering points, with livestock rarely venturing more than 3 to 4 kms from these areas. Unsustainable management of these communal grazing areas and their aridity (>60% of rangelands^[1]¹ are located in areas classified as 'Drylands' under the UNCCD categories) has led to degradation of these systems, with significant reductions in species composition, ground cover and palatable biomass, while erosion rates and soil loss have increased. Pasture productivity is estimated to decrease by 1.5% annually, having been reduced by 21% since the turn of the century at a national level and up to 42% in the Bukhara and Navoi region. The annual costs of lost production of national rangelands due to land degradation (LD) has been estimated at 91 million USD.

Agriculture ranks as the third most important sector in the national economy (17.2% of GDP), employing nearly a third of the population (27%). However, LD has also had significant impact on crop production in the region. Although reliable estimates of economic losses due to land degradation in Uzbekistan are scarce, the World Bank has estimated decline in productivity due to the lack of updating and maintenance of irrigation and drainage systems, severe salinization of the soil and improper soil management at 1 billion USD. As such, the agricultural sector has been unable to adapt to supply feed for the increasing animal numbers (up 230%) or compensate for the loss of access to previous grazing lands (down 13%) as more marginal lands are put under crops.

¹

Rapid population growth (projected to rise from the current 33.5 million to 37 million by 2050), increasing animal numbers (230% from 2000) and climate change (CC) are putting pressure on increasingly stressed ecosystems. Access to former grazing areas is also decreasing (reduction of 13% from 2000 to 2016) as more demand for agricultural lands and problems of salinity force farmers to open more marginal lands for crop production. Social changes are also eroding cultural and traditional production methods that integrated control mechanisms that maintained pasture recovery times (mobility, grouping of animals, seasonal grazing areas, drought reserves). This is most apparent in Uzbekistan's high number of out-migrants (2 million), which is correlated to lack of employment opportunities, labour surplus in rural areas, and constraints in access to agricultural inputs, making rural populations, especially smallholder farmers, to some of the most vulnerable groups in the region.

Risks from climate change are considered high for Uzbekistan, according to (IPCC AR5) estimates. The western part of the country is likely to suffer frequent droughts that could increase the water demand for irrigation water, contribute to increased soil salinity and reduce native pasture productivity, with improper grazing management continuing to act as driver of desertification. Projected temperature increases and precipitation decreases are predicted to magnify current problems of water shortages and limit distribution throughout the ecological and socio-economic systems, with the country's water deficit of 2,000 m³ in 2005 predicted to rise to 13,000 m³ by 2050. As a result, rainfed cropping areas and pastures will most likely see important reduction in productivity of biomass and product outputs, with overall yield reductions of 20-50%. Water shortages, water and soil salinity, and erosion represent important challenges for Uzbekistan and the project location, due to its potential to serve as a green belt to halt the spread of desertification, is highly relevant.

Over the past few years, the difference in living standards between rural and urban population has increased from 8% (2001) to almost 12% (2005-2006). There are also significant differences in the rate of economic and social development not only between rural and urban areas, but also between different regions of the country. In Uzbekistan, the standard of living varies depending on the place of residence and the region. For example, 49% of the country's population lives in rural areas; 47% of the southern regions are classified as regions with a lower standard of living, and 27% - as regions with a low standard of living. Since 2001 economic growth has occurred mainly in regions with a sufficiently developed industrial sector, extractive industries, and a modern service sector, resulting in the gap between rural and urban populations. The unemployment rate is still high - 9.1% in 2019 (increase from 4% in 2006). The unemployment rate among young people aged 20–30 years is 15.1%, and 12.7% of women are unemployed. This is mainly due to a reduction in laborforce, mainly in the agricultural sector, due to the reorganization of agricultural enterprises.

Livestock is the main source of livelihoods in Uzbekistan, as livestock raising is the preferred way to invest personal funds, as opposed to investing in banks. However, this sector is not the main driving force of the national economy, since in Uzbekistan, 98% of dairy cattle are owned by large agricultural livestock farms (located mainly in the arid regions of Bukhara and Navoi), and the remaining 2% is owned by private farms. Forest land (most of which are deserts, dry steppes or deforested foothills) is mainly used as pastures.

Cattle breeding is the biggest threat to reforestation both inside and outside the forest. Forestry and rangelands are also closely related to other sectors. Extensive pastures are dependent on irrigated agriculture for feed, and their current insufficiency is the main limiting factor that leads to overgrazing in autumn, winter, and early spring. In addition, the local population in drylands practice informal firewood harvesting for heating and cooking, but this is still not taken into account in the framework of energy policy and is not part of any set goal of forest management.

Over the past 15–20 years, pastures have begun to suffer from serious degradation due to overgrazing and lack of proper pasture management systems. In May 2019, the country adopted a Pastures Law, but at present, normative documents have not yet been developed to regulate pasture management. However, pasture lands continue to deteriorate and farmers are forced to graze their livestock on pastures located on lands not allocated to agriculture. The structure of the livestock bred by the smallholders has been changing - the smallholders that owned cattle have been replacing them by small-horned ruminants due to lack of feed, deterioration and changing seasonality of pasturelands. They also switch to goat breeding instead of sheep, which exacerbates the problem, as goats eat up the root system of plants, leaving the land defenseless against the effects of wind erosion. Overgrazing of these types of lands is mainly concentrated in areas located in the immediate vicinity of settlements and around artesian wells.

The territory of Uzbekistan requiring measures to combat desertification exceeds 20 million ha. Land degradation is observed throughout the country, however, the most affected areas are concentrated in areas of the Bukhara and Navoi region and in the lowlands of the Amu Darya and Syr Darya river basins. Thus, the Government selected Bukhara-Navoi as one of the priority hot spots in the LDN Target Setting Report. It is one of the driest regions in Uzbekistan and faces a significant and growing threat of land degradation due to the fact that forestry, grazing, rainfed and arable farming compete for the same land. This is directly linked to food security and the long-term sustainable development of the region.

Moreover, the national geo-botanical research conducted from 1970 to 2017 shows that:

- plant diversity in pastures has decreased from 103 to 79 species;
- average yield decreased from 3.3 to 2.6 metric tons per hectare;
- pasture covered by plants decreased from 72% to 52%, and
- the area of degraded pastures increased from 18,000 to 54,000 ha.

Cattle, goat and sheep populations have grown in the area by 128, 198 and 112%, respectively, since 2003. The increased animal numbers and the concentration of grazing to the outskirts of local villages and water points have reduced area ground cover and led to overgrazing and localized extinction of key plant species. The impacts of improper grazing management has been especially apparent in the natural mountainous forests (spruce and pistachio) which need a long time to regenerate. These ecosystems play an extremely important role for protection against soil erosion and conservation of biodiversity and genetic resources.

The Bukhara-Navoi landscapes in the Aral Sea region contain a mosaic of land uses that are dominated by vast rangelands and dry mountain forest, with small areas of irrigated agriculture along the main water courses. The landscape is part of the natural belt of cultivation of pistachios, almonds, and walnuts, located within the boundaries of the north-western spur of the Pamir-Alay mountain system with a length of about 170 km. It is located in the desert arid zones and are characterized by having low and extremely low content of soil organic carbon content (less than 10 t/ha in the upper 30 cm soil layer). Low carbon reserves are due to the natural conditions prone to desertification processes and are associated with climatic features - extreme seasonal temperatures (30-40°C in the summer and -20°C in winter) and scarce precipitation (100-150 mm/year). Anthropogenic pressures are increasingly threatening endemic native and low-productive desert pastures and ecosystems as growing human and livestock populations move into the areas to use the sparse resources available.

Given the urgency and importance of protecting the ecosystems within the Aral Sea region, the Bukhara-Navoi landscape has been selected for the initial implementation and fine-tuning of the LDN approach in Uzbekistan. This holistic methodology will aid the understanding and management of the complexities and challenges that land degradation processes presents for local communities and those that work with them. The development and adaptation of the LDN framework to local contexts will later form the basis for scaling up the approach and the SLM solutions to the regional and national level.

In order to address land degradation effectively in Uzbekistan and to introduce the LDN approach and methodology at the national as well as sub-national level, the following barriers need to be addressed:

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Institutional weakness. At the policy level there are serious gaps related to integrated management of grasslands and forests, and a lack of a harmonized agro-environmental strategies and financing mechanisms that could support the implementation of LDN and institutions lack relevant information to mainstream SLM. Despite being integrated within the boundaries of the landscapes and administrative units, the responsible Government agencies do not have a joint operational framework and instruments for spatial, local and administrative planning, and tools for agro-ecological zoning are lacking. Pasture planning, monitoring, and management is therefore not practiced. Moreover, land tenure issues urgently need to be addressed: while 90% of animals are in private ownership, access/rent of pastures is unclear at various levels – from decision-makers to the farmers. Unlike

dehkan farms, farm enterprises are legal entities, and their activities are strictly regulated by the law. Therefore, to ensure sustainable intensification of livestock development, there is a need to eliminate gaps in legislation and expand the legal framework to farming activities.

Lack of scientific knowledge and data. Most data needed for decision-making on land management is old and often irrelevant. The most recent geo-botanical assessments were done in the 1970s. There is only one institute in the entire country that works on desert pasture ecosystems (Samarkand); the capacity is insufficient to raise the importance of the issue. Feed standards do not exist and there is no data on the number of functioning wells, and a pasture inventory (quantitative and qualitative) does not exist. Access to technological and practical know-how limits responses oriented towards resilience. The local communities have no access to knowledge-based materials on alternative practice and their benefits.

High perceived risk of new technologies. Agricultural and livestock production systems are extensive and overly, inefficient in their use of resources (land, labour, energy), and resulting in low productivity and outputs. SLM concepts in desert pasturelands are not oriented towards resilient production systems based on the integrated landscape approach. Small farmers predominantly believe that the best way to minimize risk is to maximize the number of livestock, with little regard for pasture or ecological health and function. Further, small farmers are generally risk averse, hence they are slow and reluctant to adopt new technologies or practices believing that they result in higher investment with low results. This is also coupled with the absence of real efforts to scale-out and/or introduce improved technologies and approaches on pasture management. The production of livestock products in the dehkan farms is of great social importance, since it is an important source of income and consumption for a significant number of families. However, the small size of the livestock production facilities makes it difficult to adopt and use modern technologies and to reach "economies of scale".

Lack of awareness at various levels from decision makers to farmers. Pastures are not perceived to generate important ecosystem services. While a pilot projects showed good results on demonstrating the benefits of pasture rotation, there still remains insufficient attention to the spread and uptake of this know-how. These methods are used only in those areas where there are strong sandstorms affecting road and railways. Nevertheless, none of the existing methods of fixing sand have been practiced to protect communities and vital agricultural areas from wind erosion. Due to these trends, the farmers have started shifting from sheep to goats that drastically worsen the land degradation problems.

When placed under proper grazing management, rangeland ecosystems recover relatively quickly, more so than other ecosystem types, such as forests which need longer recovery periods. However, rangeland and grassland restoration requires a holistic and participatory approach. To accomplish this, Land Degradation Neutrality (LDN) has been proposed as an overarching approach to guide the different organisational levels of the project, combining the various social, economic and environmental challenges under a single guiding holistic methodology to ensure no future net loss of productive land.

2) the baseline scenario and any associated baseline projects,

In Uzbekistan, a number of policies, laws, regulations, and strategies are addressing sustainable agriculture and pasture and forest management:

- The 2017-2021 Action Strategy identifies the “adoption of systemic measures to mitigate negative impacts of global climate change and the drying up of the Aral Sea on the development of agriculture and livelihoods of the population” as a priority area.
- Uzbekistan’s forest sector was reformed in 2017 with the extensive revision of the country’s forestry legislation. The reforms launched in 2017 included the use of land for plantations, the cultivation of various types of herbs and medicinal and aromatic plants, directly in forest zones. To this end, the State Forestry Committee was established with territorial divisions.
- National forest policy, including land tenure (rental of public land)
- Law on pasture and rangeland management (in draft)
- Amendments to "Code of Administrative Liability" regarding the system of penalties for inefficient land use, leading to the loss of soil, reducing their fertility, degradation or destruction.

Economic instruments:

- International Fund for Saving the Aral Sea
- Forest development fund
- Fund for ecology and environmental protection
- Fund for land improvement of irrigated lands
- Fund for state support of agriculture
- State support of investments of national sectoral programs related to intensification, introduction of resource-saving technologies, energy efficiency and low carbon emissions
- State Program for Improvement of the Ameliorative State of Irrigated Land and Rational Use of Water Resources for 2008-2012, 2013-2017, 2018-2019

Baseline initiatives led by the State committee on forestry (SCF)

Investments in the forestry sector are covered by the state budget and by each forestry organization's own funds. The SCF has an annual budget of \$7.5m. Presidential Resolution № PP-2966 on "Organization of activities of the State Committee on Forestry of the Republic of Uzbekistan", which covers the period 2017-2021, stipulates the following activities for the target landscape:

- "Creation of shelterbelts" (\$6m)

The Decree of the President of the Republic of Uzbekistan of August 23, 2019 No PP-4424 "On Additional Measures to Improve Forest Use Efficiency" in the Republic" approved indicators for the creation of protective forest stands for protection against wind and water erosion, aimed at increasing the productivity of agricultural land and around land reclamation in 2020-2024, according to which it is planned to plant in an area of 1,100 hectares in the Bukhara region, in Navoi It is planned to plant a region on an area of 695 hectares.

In addition, according to the Order of the Cabinet of Ministers of the Republic of Uzbekistan dated May 4, 2018, No. 357-f was instructed to reduce the impact of wind storms and preventing the movement of sand and soil erosion in the regions of the Bukhara region to create during the period 2018-2020 years of protective forest belts (Bukhara green screening) on the area of 2012 thousand hectares. The Order provides for the transfer of 3 thousand hectares of the Green Screen area to the State Forest Fund, the establishment of a plantation of medicinal plants (Shumgiya wa Issirik) in an area of 3 thousand hectares.

The Resolution of the Cabinet of Ministers of the Republic of Uzbekistan dated July 24, 2018 "On measures for the development of forestry in the Navoi region" according to which a decision was made to create a "Scientific Center for the Development of Forestry in the Desert Territories" in the Navoi Region. The work of the Center includes the following issues: conducting research on the development of agricultural technologies for growing plants in saline and arid lands; development of measures to restore degraded pasture lands; development of innovative and promising methods of growing plantings; improving the condition of the lands of the forest fund; introducing innovative methods for creating protective forest belts, developing technologies to prevent the movement of sand and wind erosion, conducting scientific research on the creation of plantations of medicinal plants, introducing plants resistant to drought and the effects of diseases and pests.

- Afforestation activities, including establishment of forest plantations" (\$10m). Approx. 50,000 ha under the Bonn challenge are in target area

A resolution by the President of the Republic of Uzbekistan dated August 23, 2019 under No. PP-4424 "On additional measures to increase the efficiency of forest use in the Republic", according to which the indicators for 2020-2024 were approved, including the following:

1. Creation of forests on the lands of the forest fund in the Bukhara region from 8,676 hectares to 9,652 hectares, in the Navoi region it is planned to plant from 10,380 to 1,0867 hectares of forest.

2. Harvesting of seeds of trees and shrubs, in the Bukhara region the annual harvest is 133-151.6 thousand tons, in the Navoi region it is planned to harvest 99.4-113.3 thousand tons annually.

3. 8,850-13,820 thousand units are planned for growing seedlings and seedlings annually in the Bukhara region, 6,050-8,790 thousand units in the Navoi region, including 9,138 thousand mulberry trees in the Bukhara region. Navoi region – 5,483 thousand units.

- Forest management activities, forest reclamation works, prevention of disease outbreaks and insect control (\$500,000)

A resolution by the President of the Republic of Uzbekistan dated August 23, 2019 No. PP-4424 “On Additional Measures to Improve Efficiency of Forest Use in the Republic” introduced indicators for 2020-2024 as the following: on the creation of a bio-laboratory to combat diseases of wild trees in state forestry, including 9 biolaboratory in Bukhara region, in Navoi region 6 biolaboratory.

Baseline initiatives led by the State Committee for Land Resources, Geodesy, Cartography and State Cadastre

- “Identification of boundaries of administrative and territorial units and land surveying” (\$9m). The investment follows a Resolution dated April 23, 2018 N 299 "On measures for further improvement of administrative-territorial units, registration of land resources and geobotanical survey of pastures and hayfields". The resolution has a purpose of strengthening the state control over the protection and rational use of lands, systematizing the accurate record of land resources, increasing the effectiveness of agricultural land, including irrigated, non-irrigated and pasture lands.

- “Geobotanical surveys on pastures and hay fields” (\$1m)

Baseline initiatives led by the Ministry of Agriculture (10m)

- Land management program - loan from the World Bank

- State program on livestock, which aims to increase the number of sheep and goats by 4% (relative to 2017)

- Presidential decree No. 3603 on “Measures for accelerated development of Karakul sheep breeding industry”

International baseline projects:

Uzbekistan, as a signatory of the UNCCD, is committed to set and implement measures that meet the global commitments of LDN, and in this way, contribute to goal 15.3 of the SDGs to achieve LDN by 2030. Uzbekistan considers the concept of LDN as a tool aimed at preserving land productivity and ensuring economic sustainability and social stability

of the population. The voluntary LDN target adopted by Uzbekistan is to “*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*”. In accordance with the same Decree of the Cabinet of Ministers “On Measures for Implementation of National Sustainable Development Goals and Targets for the Period up to 2030”, a Coordination Council on the implementation of national goals and targets in the field of sustainable development was created, ensuring inter-sectoral coordination and an integrated approach to achieving the SDGs. Subsequently, a Road Map was adopted to work out annual action plans, the system of indicators, and monitoring and reporting for each SDG. In addition to the three suggested UNCCD indicators, a number of national indices were considered, concluding that while the methods and data are able to provide preliminary estimates, further analyses were needed.

In conclusion, the project builds on a solid baseline for each component with national policies, laws, regulations, and strategies that address sustainable agriculture and pasture and forest management already in place. However, better integration across the key sectors is required in order to design LDN interventions. In addition, investments need to take more of a landscape approach to scaling up in order to set and meet sub-national LDN targets for key land types, such as pastures, forests and agriculture. Learning and dissemination of good SLM and SFM practices also need to be strengthened in order to meet SDG15.3 targets.

3) the proposed alternative scenario with a brief description of expected outcomes and components of the project;

Sustainable and pasture and forest management using the landscape approach is required to restore the vast drylands of Uzbekistan and to increase the productivity and efficiency of the livestock sector. According to the recently released IPCC report on Land, SLM, including sustainable forest management, can prevent and reduce land degradation, maintain land productivity, and sometimes reverse the adverse impacts of climate change on land degradation. Using an LDN approach can avoid, reduce and reverse land degradation, at scales from individual farms to entire watersheds, can provide cost effective, immediate, and long-term benefits to communities and support several SDGs with co-benefits for adaptation to and mitigation of climate change. The project will therefore promote SLM/SFM and landscapes restoration for achieving LDN commitments of Uzbekistan. Moreover, using the landscape approach to integration across sectors and scales increases the chance of maximising co-benefits and minimising trade-offs. The project will meet this objective through implementation of three interlinked components that will strengthen the enabling environment for SLM/SFM to achieve LDN, and scale out successful SLM/SFM practices in the target landscape. This will be underpinned by strengthened knowledge management that will facilitate further scaling up and out at the national level of LDN:

Component 1. Enabling Environment for LDN monitoring and target- setting

Outcome 1.1. Policy, monitoring and planning frameworks strengthened at national and sub-national levels to support LDN in production landscapes. The LDN target setting report of Uzbekistan will be made operational through establishment of a monitoring system that tracks the three LDN indicators on land cover, land productivity and soil organic carbon (SOC) across relevant sectors and under the overall coordination of Baseline initiatives led by the State Committee for Land Resources, Geodesy, Cartography and State Cadastre. This will also enable the identification of LDN hot spots and bright spots for targeting of future SLM interventions. The outcome will be achieved through four outputs.

1.1.1. Baseline assessment and mapping of LDN indicators (land cover, land productivity and soil organic carbon) at national scale and in Bukhara-Navoi. Activities include:

- Land Degradation Assessment in Dryland (LADA) global and local tools will be used to assess land degradation status, trends and drivers.
- In-depth analysis of available data and metrics in Uzbekistan on land cover, land productivity and soil organics carbon
- CollectEarth (FAO) and/or Trends.Earth (CI) used to assess LDN using existing national datasets and freely available remote sensing data

1.1.2. Monitoring system for LDN indicators at the national level integrated into existing national land-use monitoring systems. Activities include:

- Raise institutional capacities on monitoring of of LDN indicators (land cover, land productivity, and soil organic carbon) and their drivers (soil erosion, soil salinity, soil carbon sequestration potential)
- Mapping the entry points for include the LDN indicators in the current national land use monitoring systems
- Establish LDN monitoring system and integrate it with land use monitoring

1.1.3. LDN decision support system for target-setting, planning and implementation in place (using WOCAT/ DS-SLM, etc.). Activities include:

- DS-SLM tools developed by a FAO/GEF project used to design the LDN system and integrate data identified under outputs 1.1.1.
- LDN decision-support system established at national level
- LDN pilot systems at sub-national level established for the Bukhara-Navoi landscape

1.1.4. LDN Action Plan with voluntary targets defined in the Bukhara-Navoi landscape. Activities include:

- Consultations with local stakeholders on opportunities for SLM to avoid, reduce and reverse land degradation in the Bukhara-Navoi Landscape
- Participatory identification of voluntary LDN targets in the Bukhara-Navoi landscape
- Drafting of action plan and links developed with national-level LDN target setting

Outcome 1.2. LDN mainstreamed in national policies and planning processes at multiple levels to support SLM in production landscapes with focus on pastures. LDN principles will be integrated into the national frameworks with the focus on desert pastures landscapes. Intersectoral coordination mechanisms for SLM and LDN will be strengthened, especially between the State Committee for Land Resources, Geodesy, Cartography and State Cadastre, the Committee on Forestry and the Ministry of Agriculture. In addition, the new pasture and tenure law will be aligned with LDN principles through support to establishment of a normative baseline. The focus on the national policies as well as monitoring systems will ensure its sustainability from an institutional perspective.

The outcome will be achieved through three outputs:

1.2.1. Review of strategic regulatory frameworks and territorial planning instruments to enhance local stakeholder participation and mainstreaming of LDN and land tenure at national level and in Bukhara-Navoi. Activities include:

- Review of policies and regulations related to land resources, forestry and agriculture
- Identification of entry points for strengthening of stakeholder participation in LDN target setting and implementation at sub-national level, including gender sensitive analysis
- Identification of gaps and constraints related to land tenure, especially for pastures

1.2.2. Intersectoral coordination mechanisms strengthened (horizontal – between line ministries; vertical between different levels of administration/monitoring centers and local communities). Activities include:

- Analysis of the existing mechanisms for implementation of the UNCCD and SLM
- Development of new TORs for the existing UNCCD coordination mechanism that integrate LDN implementation and strengthening of its mandate

- Establishment of intersectoral coordination mechanisms to support LDN implementation at the landscape scale in Bukhara-Navoi

1.2.3. Pasture Law aligned with LDN priorities. Activities include:

- Review of documents to establish to land degradation baseline in pastures
- Gaps in the land tenure of pastures identified under 1.2.1 addressed through new regulations

Outcome 1.3. Enhanced capacity at national and sub-national levels to achieve LDN in Bukhara-Navoi. This outcome focuses on enhancing the capacity of technical staff in the State Committee for Land Resources, Geodesy, Cartography and State Cadastre, the Committee on Forestry and the Ministry of Agriculture at the national level, and extension staff and local communities in the Bukhara-Navoi landscape in LDN implementation that achieves a positive net balance in productive land through SLM. A total 1,200 people (of which 30% are women) will be trained to get enhanced capacity in LDN at national and sub-national levels. Capacity development and training of policy-makers as well as technical staff will further support the sustainability of the project approach and be supported by strengthened capacities at the sub-national level of extension staff and local communities.

It will be achieved through three outputs:

1.3.1. LDN training material for decision makers as well as practioners developed. Activities include:

- Development of training module on LDN principles, concepts and key indicators targeting decision makers and technical staff
- Development of training module on LDN in practice and how implementation of SLM could contribute to achieve LDN targets at national and sub-national level targeting technical staff as well as local communities (through the extension service)

1.3.2. Capacity development program in place for LDN target setting, implementation and monitoring for national and local government staff. Activities include:

- Training in LDN of decision makers and technical staff at the national level on baseline assessment and LDN monitoring, land tenure issues, etc.
- Training in LDN of local government staff on baseline assessment, monitoring, SLM and involvement of local stakeholders

1.3.3. Capacity building program on SLM to achieve LDN at local level for farmers in the Bukhara-Navoi landscape (using FFS, LADA, WOCAT, etc.). Activities include:

- At least one FFS established in the Bukhara-Navoi landscape to engage farmers in LDN implementation
- Training of farmers in use of practical tools, such as LADA and WOCAT, to identify suitable SLM interventions that will contribute to LDN

Component 2. Demonstrating the LDN approach and scaling out of SLM/SFM practices in Bukhara-Navoi landscape

Outcome 2.1 SLM/SFM technologies and approaches in the Bukhara-Navoi landscape upscaled to achieve LDN. Participatory integrated land-use plans will be developed and used as a basis for scaling up of good practices. SLM will be upscaled to cover 25,000 ha of irrigated agricultural land and 100,000 ha of rangelands. SFM will be upscaled on 100,000 ha of forest land, which will contribute to sequestration of 5.1 Mton of CO₂eq. In terms of socio-economic benefits, there will be 1,000 direct beneficiaries of which 50% will be women. There will be a strong focus on engaging stakeholders and ensure gender-balanced benefits.

Leguminous, fast growing tree and shrub species offer multiple ecosystem services and products in addition to the green fodder, and the increase in animal production and fuel resources would increase household income/farm resources and have direct gender benefits in the case of the Dehkan households, as more women take on responsibilities for livestock production and male counterparts migrate for better employment opportunities. Mobile fencing units will also be introduced, which can dramatically increase native pasture forage production and ground cover. If agroforestry works are undertaken with strategically targeted grazing applications on salt affected agricultural lands, then work to restore soil fertility while producing an economic return from the land could be achieved. These forage trees and shrubs could also be inter-spaced with other fruit and nut trees and alfalfa. The introduction of the leguminous species would provide for improved soil conditions and fertility, create a more climate resilient production system and diversify income options. The outcome will be achieved through three outputs:

2.1.1. Gender balanced local multi-stakeholders groups established in Bukhara-Navoi (pasture user associations at district level, etc.). Activities include:

- Stakeholder analysis and mobilization of local communities
- Strengthening of pasture user associations

- Identifying market access mechanisms and key value chains (e.g. pistachio, walnut, apricot, milk, meat, etc.) strengthened to achieve LDN in the Bukhara-Navoi landscapes resulting in increased revenue of local population (at least milk and apricot value chains target women).
- Training program in business planning for women entrepreneurs that perform critical functions along selected value chains.
- Introducing a quota (at least 30%) for women's participation in local multi-stakeholders groups established in Bukhara-Navoi (pasture user associations at district level, etc.)

2.1.2. Participatory integrated land-use plans developed in the Bukhara-Navoi landscape. Activities include:

- Participatory integrated land-use plans developed with local communities using e.g. LADA/WOCAT
- Integration of the integrated land management plans with other community and district-level planning processes.

2.1.3. Innovative SLM practices implemented to enhance the productivity of degraded land (grazing of riparian zones, grazing crop residues to allow vegetation recovery, pasture rotation, agroforestry, etc.). Activities include:

- Implementation of sustainable pasture management practices within the ILU plans, including improved pasture rotations, etc.
- Demonstration of sustainable forest and agroforestry management practices within the ILU plans, including agroforestry
- Demonstration of sustainable agricultural practices, including efficient water usage technologies such as drip irrigation

Outcome 2.2. Increased investments in pasture and rangeland management to achieve LDN. Local communities' access to markets will be improved through strengthening of at least two value-chains that will result in increased incomes from agroforestry and livestock. At least one value chain will target women and their capacity in business planning will also be strengthened.

The value chain approach will focus on agroforestry within community owned grazing areas, household Dehkans and privately operated farms to plant and utilise leguminous forage trees (preferably native) to bridge the 'feed gaps' in the seasonal rainfall periods and provide protein-dense, green feed to household livestock. These seedlings can be acquired through the nurseries established in the region through previous project interventions. Alternatively, small, household forage production nurseries could be established at a Dehkan or community level through training and supply of basic materials to those who participate. This option would be an opportunity for an enhanced gender approach and

there exist participatory forage selection and production methodologies that can inform and guide decision-making to best select those species that meet needs and pose little risk to native ecosystems. The communities are also familiar with the cultivation of Alfalfa as soil-enhancing forage crop and improved SLM practices should provide for improved fodder production at a larger, landscape level so increasing knowledge and productivity should increase market opportunities.

The second component of the value chain work would focus on the manufacturing or conversion of raw materials, principally milk and meat given their importance in rural economies, into a saleable goods. The lack of understanding of hygienic controls and processes from the milk stool or abattoir to the consumers plate often leads to food waste or a reduction in income, as the products cannot be stored for more than a day or two before being sold and consumed. The incorporation and training in the use of hygienic utensils and production processes for household and cooperatives would increase marketing options and allow for development and investment in quality improvements. Within this package would be work to determine the viability and return on investment of passive solar or underground cold storage structures for local consumption or solar powered cooling devices and transport for village cooperatives wanting to transport and sell goods in more lucrative urban markets.

Investments from donors and other funding mechanisms will also be identified and mobilised and at least two LDN project proposals will be developed. The project will seek to improve value chains to develop self-sustaining business models that will ensure the sustainability of project investments. This will be achieved through three outputs:

2.2.1. Market access mechanism identified and key value chains (e.g. pistachio, walnut, milk, meat, etc.) strengthened to achieve LDN in the Bukhara-Navoi landscapes. Activities include:

- Selection of value chains based on environmental and socio-economic sustainability criteria
- Social life cycle assessments (SLCAs) and life cycle sustainability assessments (LCSAs) of the selected value chains conducted including land use indicators
- Selection of the value chains to be supported based on the SLCA and LCSA results and assuring that at least one of them is focused on women only.

2.2.2. Training program in business planning for women entrepreneurs that perform critical functions along selected value chains. Activities include:

- Training of women entrepreneurs in business management, marketing and processing of selected value chains
- Training of extension staff and women groups in certification of value-chains required to access new markets

2.2.3. LDN local transformative projects, including resource mobilization plans developed in Bukhara-Navoi. Activities include:

- Identification of possible sources of financing for scaling up of SLM and SFM to achieve LDN at national and sub-national levels, including from line ministries, donors, climate finance, private sector, in-kind contributions from communities, cooperatives, private sector, etc.
- Development of resource mobilization plans at national and sub-national level to scale up LDN.
- Development of two transformative LDN projects

Component 3. Project Monitoring, Evaluation and lesson learned.

Outcome 3.1. Knowledge management, M&E and lessons learned disseminated. This outcome includes a functioning project M&E system and mid-term and final evaluation. Global environmental benefits generated by the project will also be assessed together with co-benefits and costs of SLM. It also includes the project's knowledge management and knowledge products will be widely disseminated to support out and upscaling of the LDN approach. It will be generated by four outputs:

3.1.1 Project mid-term and final evaluation conducted. Activities include:

- Project mid-term evaluation
- Project final evaluation

3.1.2 Global Environment Benefits (GEBs), co-benefits and costs of SLM monitored, assessed and lessons analyzed. Activities include:

- Monitoring of GEBs, including area under SLM/SFM and carbon benefits.
- Monitoring of socio-economic benefits using gender disaggregated data.
- Assessment of GEBs and co-benefits for reporting to the GEF and for the mid-term and final evaluations.

3.1.3 Knowledge management products developed and disseminated, including a set of manuals for LDN monitoring and implementation through scaling up of SLM. Activities include:

- Development of project briefs with lessons learned related to LDN monitoring and implementation as well as SLM/SFM best practices
- Development of manuals for LDN monitoring
- Application of innovative communication tools

3.1.4 Gender-focused communication strategy developed and implemented to support SLM scaling up to meet LDN targets. Activities include:

- Development of communication strategy in consultation with key national and sub-national stakeholders.
- Adoption of the communication strategy by the national LDN coordination mechanism that will be established under outcome 1.2.2.

4) alignment with GEF focal area and/or Impact Program strategies;

The proposed project is aligned with the Land Degradation Focal Area Strategy Objective 1-1 “Maintain or improve flow of agro-ecosystem services to sustain food production and livelihoods through Sustainable Land Management (SLM)”, LD 1-4 “Reduce pressures on natural resources from competing land uses and increase resilience in the wider landscape” and Objective 2-5 “Create enabling environments to support scaling up and mainstreaming of SLM and LDN”. The project will support the implementation of sustainable land management of Bukhara-Navoi landscape in order to (i) reduce pressure from livestock on pastureland and forest ecosystems, (ii) increase the productivity of the land and improve prospects for food security for local (low income) communities, (iii) reduce the risk of farmland expansion into neighboring grasslands, and (iv) reduce the risk of overexploitation of natural resources. In addition, the project will support efforts to restore productivity of degraded lands identified above to meet LDN targets at national and sub-national level.

5) incremental/additional cost reasoning and expected contributions from the baseline, the GEF TF, LDCF, SCCF, and co-financing;

GEF support provides an opportunity to integrate landscape management principles into sector strategies and ensure strong linkages between sectors to generate environmental and socio-economic benefits, as well as to engage multiple stakeholders at multiple scales, as per LDN requirements. GEF support will strengthen capacities at national and sub-national level to achieve land degradation neutrality and no net loss of productive land. The GEF supported SLM/SFM measures will also enhance the resilience of the Bukhara-Navoi landscape in the drylands of Uzbekistan to climate-change induced stress and shocks caused by increasing temperatures and unpredictable rainfall. The project with GEF

support will also be building sustainable livelihoods through SFM/SLM practices and improve market access through effective private sector engagement through targeted value chains.

Without incremental GEF funding, the observed land degradation trends, lack of intersectoral collaboration, and unsustainable land and forest management practices, will lead to further loss of ecosystem services and global environmental goods and loss of socio-economic opportunities for local communities. The project will have three components where GEF support builds on the national baseline already in place to strengthen the management of pastures and forest land.

6) global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF); and

The project will generate a range of global environmental benefits in the land degradation focal area with co-benefits related to climate change mitigation through improved land use. The global environmental benefits include:

- 13,000 ha restored
- SLM and SFM cover 225,000 ha of land (25,000 ha of irrigated agricultural land; 100,000 ha of forest land; and 100,000 ha of rangelands), and
- Sequestration of 6,1Mton of CO₂eq thanks to SLM/SFM within an LDN framework

In addition, strengthening of key value-chains will lead to improved income generation opportunities and more diversified livelihoods for around 1,200 people (of which 30% are women) in the target landscape .

7) innovation, sustainability and potential for scaling up.

Innovation

The project expects to partner and take advantage of the experience of international partners working in the region (ICBA, ICARDA, GIZ, Succow Foundation), and will coordinate with the work being carried out under CACILM. In the selected landscape, the most cost-effective way of restoring degraded pastures and forest land will be used, and new and innovative methods to improve their species diversity and water-use efficiency will be tested. In this way, new approaches to phytoamelioration and recultivation of disturbed lands will be demonstrated. The methods used will be based on a combination of forest reproduction, while simultaneously increasing pasture productivity. Community-based approaches to identifying and designing measures to strengthen agriculture and forest value chains is new and innovative in Uzbekistan. Another innovative element is to

link new restoration methods to the concept of LDN to balance gains and losses within the same land types supported by continues monitoring of land productivity and soil organic carbon and different scales.

Sustainability

The project approach related to LDN and scaling up of investments on SLM/SFM will be integrated into national policies and programmes as well as monitoring systems that will ensure its sustainability from an institutional perspective. The project will seek to improve value chains to develop self-sustaining business models that will ensure the sustainability of project investments. Capacity development and training of policy-makers as well as technical staff in implementation and monitoring of LDN will further support the sustainability of the project approach and be supported by strengthened capacities and participation at the sub-national level of extension staff and local communities in reaching LDN targets.

Scaling up

The project will achieve large-scale impact and transformative change in the Aral Sea region of Uzbekistan through operationalizing the landscape and LDN approach in a target landscape. Scaling up to national level of the landscape and LDN approach will be supported by policy and institutional strengthening as well as effective monitoring, knowledge management and capturing of best SFM and SLM practices and lessons learned. Scaling up will also be supported by development of a resource mobilization strategy and of transformative LDN project proposals.

[1] Total amount of rangelands in the country is 21.1 million ha

1b. Project Map and Coordinates

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

There are 5 maps available to support the PIF (available in the Word document of the PIF):

Maps 1: Uzbekistan Drylands and project area of interest (AOI): Bukhara-Navoi landscape



Map 2. Pasturelands and forestlands in Bukhara

Map 3. Pasturelands and forestlands in Navoi

Map 4: Land degradation in project area of interest (AOI): Bukhara-Navoi landscape

Map 5: Land degradation changes in project area of interest (AOI): Bukhara-Navoi landscape

2. Stakeholders

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

Indigenous Peoples and Local Communities

Civil Society Organizations Yes

Private Sector Entities Yes

If none of the above, please explain why:

The proposed PIF is a result of several stakeholder consultations that took place between summer of 2018 until the PIF submission. The consulted groups included small scale farmers, Tashkent-based NGOs, farmer associations, and academia.

In addition, provide indicative information on how stakeholders, including civil society and indigenous peoples, will be engaged in the project preparation, and their respective roles and means of engagement.

Stakeholder	Mandate (or activities)	Potential role in the project
State Committee on Forestry (SCF) of the Republic of Uzbekistan	UNCCD focal point The institution is responsible for overall development and planning, policy making and management of open forest land pastures and other lands under its jurisdiction, including protected areas and hunting grounds	Responsible for project execution and overall coordination. The Committee will be technically leading land degradation assessment, introduction of technologies, and LDN monitoring systems.

State Committee on land resources, geodesy, cartography and state cadaster (SCLR) of the Republic of Uzbekistan	The institution is responsible for the regulatory framework related to land use, land tenure, and planning processes for land use and pasture	Responsible for project execution. The Committee will participate in activities dedicated to land use planning processes, including the integration of joint pasture-forest management, lead creation of a monitoring system for land use
State Committee on Ecology and Environmental Protection	The institution is responsible for the formation of a common environmental policy and regulatory framework. It play an advisory role on environmental issues in general and conservation technical issues related to biodiversity conservation	Consulting on the broader environmental and landscape issues.
Ministry of Agriculture of Uzbekistan	The institution is responsible for policy making, planning, coordination and implementation of all activities related to the productive use of land, agriculture and food security	Consulting on livestock and landscape issues and ensure coordination with agricultural private sector lending initiatives
Association of Farmers of Uzbekistan	An association representing farmers, protection and representation of their interests in state and other organizations	Consulting on interests of farmers, a systematic review of land use efficiency in farms.
FAO	GEF Implementing Agency	Provision of technical assistance on LDN target setting and monitoring systems, SLM/SFM practices and decision support for scaling out, land planning and integrated landscape management approach, value chain, market access and knowledge management and monitoring and assessment tools. Support of methodologies according to international standards. Support and monitoring of project implementation.
Institute of Karakul Sheep Breeding and Desert Ecology	The institution is responsible for the development of scientific approaches and the practical implementation of innovative technologies in the field of pasture management and animal husbandry in desert regions	Ensuring scientifically-based locally available approaches and practices on improving pasture management. As well as the opportunity providing support in the supply of seeds, fertilizers, seedlings, breeding stock and other resources.

Forestry Research Institute	The Institute unites five forest experimental research stations. The Institute is responsible for forest research.	Consulting on locally available technologies and approaches on the forestry issues
Private sector actors	Promote sustainable value chains and foster innovative markets	Responsible for supporting the enabling environment needed for the sustainability of the values chains

3. Gender Equality and Women's Empowerment

Briefly include below any gender dimensions relevant to the project, and any plans to address gender in project design (e.g. gender analysis).

In Uzbekistan, women make up a large proportion of the agricultural labour force, they are the majority of food producers, and at the same time, they contribute significantly to the care of their households. Women and men, due to their different economic and social roles and experiences, have differentiated responsibilities and capacities in terms of land management. The most prominent gender disparities in Uzbekistan are observed in women's positions in the labour force and employment, their limited access to higher education and low representation in political office and decision-making posts. Gender stereotypes continue to be prevalent and have a profound impact on women's access to opportunities and resources.

The female labour force participation rate for Uzbekistan is 48.5 percent, and the male labour force participation rate is 76.6 percent. While the gender gap in labour force participation rates is on par with that of middle income and developing countries in Europe and Central Asia, the particularly low female employment rate for the 18–35 age group indicates that women take almost exclusive responsibility for unpaid care work in Uzbekistan.

During full project preparation a social analysis, including a gender analysis, will be undertaken by a social scientist to determine: the number of female farmers; the number of women-farmer headed households; the differentiated impacts of land degradation on farmer women; the different knowledge base of men and women; analysis of women's role in livestock breeding value chain to increase women's economic empowerment, enhanced access and control over natural resources, increased participation of female small- holders in SME; identify increased gender mainstreaming opportunities in target value chains (a minimum of milk and apricot value chains targeting women); strategies to increase the quota of women participation in local multi-

stakeholder groups established in Bukhara-Navoi; strategies for optimizing the participation of women in landscape management and optimizing their economic benefit. This will lead to identification of gender indicators.

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

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

improving women's participation and decision-making; and/or Yes

generating socio-economic benefits or services for women. Yes

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

Yes

4. Private sector engagement

Will there be private sector engagement in the project?

Yes

Please briefly explain the rationale behind your answer.

The proposed project will target smallholders whose livelihoods depend on the desert ecology and who control over 70% of pastures and agriculture land. The project will be involved in community-based land use management (i.e. pasture management) in the project areas to harness the cumulative economic value of small-scale forest and farm producers. The project will target at least two key food value chains: livestock (mainly sheep and goats, including the Karakul sheep), and nuts (pistachio, the viability of working with other nuts will be explored during preparation).

The proposed project will target rural Dehkan household and private industry farms whose agricultural products provide for the majority of food produced and consumed within the country. Of special significance is the milk and meat markets for household income, with data from 2010 determining that on an average, a household sells around 1,500 litres of dairy products, 300 kg of meat and 1.7 heads of livestock per year. Works that provide quality feed during the dry months and increase animal milk production, weight and body condition are key steps to improve income and address climate and demographic challenges that Uzbekistan's rural area face.

5. Risks

Indicate risks, including climate change, potential social and environmental risks that might prevent the Project objectives from being achieved, and, if possible, propose measures that address these risks to be further developed during the Project design (table format acceptable)

Risk	Rating	Mitigation Measure
Lack of close cooperation between key institutional stakeholders, such as the State Committee on Forestry, the State Committee on land resources, geodesy, cartography and state cadaster, the State Committee on Ecology and Environmental Protection, and the Ministry of Agriculture	Low	This risk will be mitigated under Component 1 of the project that will strengthen the intersectoral coordination mechanism to enhance cooperation on LDN.
Lack of political support to LDN and SLM with focus on grasslands	Low	Political support is high for SLM and LDN, which is demonstrated by the existing policies related to land and forestry. This project will provide an opportunity to strengthen the LDN framework that requires inter-sectoral coordination and to demonstrate good practices in the field.
Low technical capacity in operationalizing LDN at national and regional level halting the project's progress	Low	Capacity development for LDN will be provided under Components 1 and 2, which will mitigate the risk. Component 3 will in addition provide capacity building for replication of the LDN in other landscapes.
Natural changes in agro-ecological zones due to gradual changes in climate and extreme weather events	Moderate	SLM/SFM practices to be demonstrated and scaled up by the project are proven to enhance resilience to climate change, such as improved grazing rotation and multi-purpose agroforestry practices.
Lack of commitment of local stakeholders at the community level to adopt SLM/SFM to achieve LDN	Low	Implementation will be undertaken through community-based participatory approaches that address local cultural, socio-economic and ecological concerns. The project will provide incentives to farmers to engage in various activities that target LDN, involving both capacity building, awareness, and value-chain strengthening. Further consultations with target communities and local stakeholders will be undertaken during the PPG phase.

6. Coordination

Outline the institutional structure of the project including monitoring and evaluation coordination at the project level. Describe possible coordination with other relevant GEF-financed projects and other initiatives.

The Project will be implemented by the State Committee on Forestry (SCF) that will be responsible for project execution and overall coordination. The SCF will be technically leading land degradation assessment, introduction of technologies, and LDN monitoring systems. State Committee on land resources, geodesy, cartography and state cadaster (SCLR) will also be involved in project execution and participate in activities dedicated to land use planning processes, including the integration of joint pasture-forest management, and take the lead in establishing a monitoring system for land use and land use change.

Uzbekistan is already implementing a number of projects aimed at sustainable land management and close coordination will be ensured with these projects to exchange experiences and realise synergies, but their funding will not be considered as co-financing.

- GEF/UNDP/State Committee on Ecology Project "Sustainable Use of Natural Resources and Forestry in Key Mountain Areas Important for Globally Significant Biodiversity", 2017 - 2021.
- GEF/FAO/State Committee for Forestry Project "Sustainable Management of Mountain and Valley Forests", 2018-2021.
- GEF/FAO CACILM program "Integrated Natural Resources Management in Drought-Prone and SaltAffected Agricultural Production Landscapes (CACILM-2)", 2018-2021.

Internationally, the project will establish linkages to the Global Agenda of Action in Support of Sustainable Livestock Sector Development (GASL). The Project's Outcomes and Outputs will be disseminated through the different activities of the GASL. At the same time, the project will benefit from experiences and lessons learnt in similar projects carried out in the framework of GASL.

In light of the complex mix of stakeholders and the project's intent to effect change across large landscapes, Project Steering Committee (PSC) will be established and led by the State Committee on Forestry and be composed of representatives of key agencies and initiatives that share interests with the proposed project. The following national actors will be involved in the PSC: Ministry of Agriculture; State Committee on land resources, geodesy, cartography and state cadaster; State Committee on Ecology and Environmental Protection; Association of Farmers of Uzbekistan; and other organizations. The PSC coordination and oversight mechanism will be established under the PPG so that the key stakeholders may review and comment upon the full project design to ensure it is compatible with the implementation environment and builds upon best practices.

The project is planned to be implemented using only OPIM modality through the State Committee on Forests. OPA assessment will be conducted during the PPG phase and respective implementation-execution arrangements will be set up accordingly.

7. Consistency with National Priorities

Is the Project consistent with the National Strategies and plans or reports and assessments under relevant conventions

Yes

If yes, which ones and how: NAPAs, NAPs, ASGM NAPs, MIAs, NBSAPs, NCs, TNAs, NCSAs, NIPs, PRSPs, NPFE, BURs, INDCs, etc

The proposed project is in line and is supportive of existing national strategies and priorities. It is strongly aligned with the priorities of the UNCCD and the SDG15.3 target on LDN, as well as priorities established under other relevant multilateral environmental agreements (MEAs) as follows:

LDN TSP goal:

- The voluntary LDN target adopted by Uzbekistan: “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”.

CBD National Targets:

- *National Target 5:* By 2025, a set of measures to reduce the rate of degradation and fragmentation of the most vulnerable natural ecosystems is developed and is in the process of implementation.
- *National Target 8:* By 2025, the state programme for conservation and sustainable use of agricultural biodiversity is developed.

UNFCCC NDC:

Adaptation of agriculture and water management sector

- Improvement of the climate resilience of the agriculture through diversification of food crops production pattern; conservation of germplasm and indigenous plant species and agricultural crops resistant to droughts, pests and diseases; development of biotechnologies and breeding new crop varieties adopted to conditions of changing climate.
- Improvement of irrigated lands affected by desertification, soil degradation and drought, increase in soil fertility of irrigated and rainfed lands.
- Further improvement of water management practice in irrigated agriculture with wide use of integrated water resources management approaches and innovative technologies for water saving, including broad introduction of drip irrigation systems.
- Improvement of pasture productivity and fodder production in desert and piedmont areas.

Adaptation of ecosystems

- Restoration of forests in mountain and piedmont areas, conservation of indigenous plant species in semi-deserts and deserts;
- Conservation, restoration and maintenance of ecological balance in the protected nature territories;

Improvement of sustainability in management of fragile desert ecosystems.

Social:

- Widening the participation of the public, scientific institutions, women and local communities in planning and management

Bonn Challenge

- National commitment to forest landscape restoration: 500,000 ha (2011-2030).

Consultations during the PPG phase with responsible institutions, committees and MEA focal points will further strengthen the linkages to national priorities in project design and implementation.

8. Knowledge Management

Outline the Knowledge management approach for the Project, including, if any, plans for the Project to learn from other relevant Projects and initiatives, to assess and document in a user-friendly form, and share these experiences and expertise with relevant stakeholders.

The proposed project will develop a set of manuals and media products that describe the improved practices, measures and technologies, for use by extension workers and producers (Output 3.1.3). These products will document lessons learnt, share validated SLM/SFM options developed under Outcome 2.1. The activities implemented under component 3 – Monitoring, Evaluation and Lessons Learned - will result in a communication strategy that will be implemented to support SLM scaling up to meet LDN targets. In addition, the project's broad participation process, involving relevant policy making, research, extension and institutions, will ensure that knowledge is shared efficiently within the country. SCF will be an important partner for lesson sharing and knowledge management. In addition, FAO's relevant platforms (Pastoralist Hub, Global Agenda for Sustainable Livestock, and others) will be used for sharing of lessons and experiences on sustainable pasture, forest and land management at the international level.

Part III: Approval/Endorsement By GEF Operational Focal Point(S) And Gef Agency(ies)

A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S): (Please attach the Operational Focal Point endorsement letter with this template).

Name	Position	Ministry	Date
Jakhongir Talipov	Chief Specialist	The State Committee for Ecology and Environmental Protection	10/4/2019

ANNEX A: Project Map and Geographic Coordinates

Please provide geo-referenced information and map where the project intervention takes place

The following five maps are available to support the PIF:

Maps 1: Uzbekistan Drylands and project area of interest (AOI): Bukhara-Navoi landscape



Map 2. Pasturelands and forestlands in Bukhara



Map 3. Pasturelands and forestlands in Navoi



Map 4: Land degradation in project area of interest (AOI): Bukhara-Navoi landscape



Map 5: Land degradation changes in project area of interest (AOI): Bukhara-Navoi landscape

