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Conservation and Sustainable Management of High-Value Arid Ecosystems in the Lower Amu Darya Basin

Part I: Project Information

GEF ID
10439

Project Type
FSP

Type of Trust Fund
GET

CBIT/NGI
☐ CBIT
☐ NGI

Project Title
Conservation and Sustainable Management of High-Value Arid Ecosystems in the Lower Amu Darya Basin

Countries
Tajikistan

Agency(ies)
UNDP

Other Executing Partner(s)	Executing Partner Type
National Biodiversity and Biosafety Center	Government

GEF Focal Area

Multi Focal Area

Taxonomy

Focal Areas, Biodiversity, Mainstreaming, Forestry - Including HCVF and REDD+, Agriculture and agrobiodiversity, Species, Crop Wild Relatives, Plant Genetic Resources, Threatened Species, Protected Areas and Landscapes, Productive Landscapes, Terrestrial Protected Areas, Community Based Natural Resource Mngt, Forest, Forest and Landscape Restoration, Drylands, Land Degradation, Sustainable Land Management, Ecosystem Approach, Sustainable Pasture Management, Income Generating Activities, Restoration and Rehabilitation of Degraded Lands, Integrated and Cross-sectoral approach, Sustainable Agriculture, Community-Based Natural Resource Management, Sustainable Forest, Sustainable Livelihoods, Gender Equality, Gender results areas, Knowledge Generation and Exchange, Participation and leadership, Access and control over natural resources, Awareness Raising, Capacity Development, Access to benefits and services, Gender Mainstreaming, Women groups, Gender-sensitive indicators, Beneficiaries, Sex-disaggregated indicators, Convene multi-stakeholder alliances, Influencing models, Demonstrate innovative approache, Strengthen institutional capacity and decision-making, Type of Engagement, Stakeholders, Partnership, Participation, Information Dissemination, Consultation, Private Sector, SMEs, Individuals/Entrepreneurs, Communications, Education, Behavior change, Civil Society, Academia, Community Based Organization, Local Communities

Rio Markers
Climate Change Mitigation

Climate Change Mitigation 1

Climate Change Adaptation

Climate Change Adaptation 0

Duration

60 In Months

Agency Fee($)

250,774

Submission Date

11/13/2019

A. Indicative Focal/Non-Focal Area Elements

Programming Directions	Trust Fund	GEF Amount($)	Co-Fin Amount($)
BD-1-1	GET	1,001,530	7,000,000
BD-1-4	GET	100,000	1,500,000
BD-2-7	GET	901,529	4,000,000
LD-1-2	GET	212,222	1,333,333
LD-1-3	GET	212,223	1,333,334
LD-1-4	GET	212,222	1,333,333
	Total Project Cost ($)	2,639,726	16,500,000

B. Indicative Project description summary

Project Objective

Secure high value arid ecosystem biodiversity and associated ecosystem services, while ensuring resilient and sustainable livelihoods in Tajikistan's lower Amu Darya landscape.

Project Component	Financing Type	Project Outcomes	Project Outputs	Trust Fund	GEF Amount($)	Co-Fin Amount($)
Component 1. Integration of biodiversity conservation and sustainable land management in production landscape	Investment	Biodiversity mainstreamed in land-use planning and management in 3 priority districts covering >250,000 ha, indicated by: (i) operationalization of integrated spatial plans, forest and pasture management plans; (GEF Core sub-indicator 4.1: 250,000 ha) (ii) Ecologically sensitive pasture management implemented in 48,000 ha of high value arid ecosystems, supporting LDN principles and national targets (GEF Core sub-indicator 4.3: 48,000 ha; GEF Core sub-indicator 6.1: 247,682 mTCO2e in total GHG emissions mitigated) (iii) Improved soil organic carbon content and vegetation cover on 22,000 ha, supporting LDN principles and national targets; (GEF Core sub-indicator 3.4: 22:000) (iv) 7,350 ha of high conservation value dry forest under improved management	1.1 Integrated spatial plans in 3 priority districts developed, approved and under implementaiton, with high value ecosystems mainstreamed, including high resolution maps of KBAs, PAs, transition zones, and surrounding land use 1.2 Dryland High Conservation Value Forest (HCVF) guidelines and management plans developed, approved and operationalized in 2-3 priority forestry units covering 7,350 ha of HCVF (outside of PAs), incorporating biodiversity considerations and provisions for joint forest management to support sustainable livelihoods, including training of local resource users 1.3 Sustainable pasture management plans that mainstream biodiversity in 2-4 priority areas in and around	GET	1,500,000	10,000,000

(GEF Core sub-indicator 4.4: 7,350 ha;
GEF Core sub-indicator 6.1: GHG emissions mitigated))

(v) 650 ha of degraded high value arid ecosystems reforested under sustainable agroforestry practices, supporting LDN principles and national targets;
(GEF Core sub-indicator 3.2: 650 ha;
GEF Core sub-indicator 6.1: GHG emissions mitigated))
(vi) 1,000 local resource users with improved livelihood resiliency and sustainability, and 20,000 direct beneficiaries

(GEF Core sub-indicator 11: 20,000)

Baseline and targets will be confirmed during the PPG.

high value arid ecosystems (outside PAs) developed, approved and operationalized, covering 48,000 ha, plus 22,000 ha of degraded pastureland restored, including training of local resource users

1.4 Key high value arid ecosystems in 3-4 sites (outside PAs) including 650 ha of degraded HCVF restored, including through reforestation under agroforestry using globally significant Red List fruit and nut species to support sustainable livelihoods

| Component 2. Protected Area strengthening and expansion | Investment | Conservation of arid Key Biodiversity Areas enhanced, indicated by:

(i) increased management effectiveness of 7 PAs covering >150,000 with increase in the METT scores by 50-100%; (GEF Core sub-indicator 1.2: 157,671 ha)

(ii) 5 Plant Micro Reserves established and operationalized covering 500 ha of critical habitats of globally significant crop wild relatives including *Amygdalus bucharica, Amygdalus vavilovii, Crataegus darvasica, Crataegus necopinata, Malus sieversii, Pyrus cajon, and Pyrus tadshikistanica.*

(GEF Core sub-indicator 4.1: 500 ha)

Baseline and targets will be confirmed during the PPG. | 2.1 High resolution land-use maps for 7 PAs and buffer zones developed, covering >150,000 ha, and analysis of land-use conflicts (for inputs to Output 1.1)

2.2 Management effectiveness of 7 legally recognized PAs increased through investments in improved community participation and benefits, monitoring, enforcement capacity

2.3 Legally recognized Plant Micro Reserves (PMRs) established in selected KBAs for the conservation of rare crop wild relatives and associated flora communities, under community-based management, and management operationalized. | GET | 850,000 | 5,500,000 |

| Component 3. Knowledge Management and Learning | Technical Assistance | Strengthened understanding among resource-users and decision makers regarding the existence and value of arid high value biodiversity in Tajikistan, indicated by: (i) Improved land use management decisions; (ii) Increased commitment to protected areas conserving arid high value ecosystems; (iii) increased capacity for LDN monitoring; (iv) project adaptive management undertaken and lessons documented and disseminated.

 Baseline and targets will be confirmed during the PPG. | 3.1. Knowledge management, education and awareness campaign conducted targeting institutional-level key decision-makers and local resources users on key issues and approaches for conservation of globally significant biodiversity and PAs, including strengthened capacity for LDN monitoring

3.2. Coordination with other initiatives, and project M&E | GET | 164,026 | 500,000 |
|---|---|---|---|---|---|
| | | | Sub Total ($) | 2,514,026 | 16,000,000 |

Project Management Cost (PMC)

			GET	125,700	500,000
			Sub Total($)	125,700	500,000
			Total Project Cost($)	2,639,726	16,500,000

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($)
GEF Agency	UNDP	Grant	Investment mobilized	500,000
Government	State Committee for Environmental Protection	Public Investment	Recurrent expenditures	12,400,000
Government	Ministry of Agriculture	Public Investment	Investment mobilized	2,500,000
Government	District governments in priority areas	In-kind	Recurrent expenditures	100,000
Government	Forestry Agency	Public Investment	Investment mobilized	1,000,000
			Total Project Cost($)	16,500,000

Describe how any "Investment Mobilized" was identified

Note on "Investment Mobilized": - In case of GEF approval, UNDP will be prepared to invest grant financing to support the project. - In case of project approval, the Forestry Agency has agreed to coordinate with the project the development and implementation of sustainable forestry principles in high value drylands forests, and options for sustainable hunting, sought to be implemented through Output 1.2 - The investment expected to be mobilized from the Ministry of Agriculture will be targeting development of new irrigated lands and restoration of agricultural lands (sustainable agriculture, sustainable pasture management, agro-forestry, the development of agro-business), which is related to Output 1.2, 1.3, 1.4 and 3.1. Coordination between the Ministry of Agriculture and other partners will be done by the National Biosafety Center as part of their overall execution role, including through the Project Board. All co-financing commitments will be discussed at PPG with the entity providing the cofinancing. The amounts will be confirmed. The linkages and relevance to specific project sites/project activities will be agreed as well. Letters of cofinancing will be obtained that will confirm amounts, relevance and coordination with relevant project elements.

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($)
UNDP	GET	Tajikistan	Biodiversity	BD STAR Allocation	2,003,059	190,291	2,193,350
UNDP	GET	Tajikistan	Land Degradation	LD STAR Allocation	636,667	60,483	697,150
				Total GEF Resources($)	2,639,726	250,774	2,890,500

E. Project Preparation Grant (PPG)
PPG Required ☑

PPG Amount ($)

100,000

PPG Agency Fee ($)

9,500

Agency	Trust Fund	Country	Focal Area	Programming of Funds	Amount($)	Fee($)	Total($)
UNDP	GET	Tajikistan	Biodiversity	BD STAR Allocation	70,000	6,650	**76,650**
UNDP	GET	Tajikistan	Land Degradation	LD STAR Allocation	30,000	2,850	**32,850**
				Total Project Costs($)	100,000	9,500	109,500

Core Indicators

Indicator 1 Terrestrial protected areas created or under improved management for conservation and sustainable use

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
157,671.00	0.00	0.00	0.00

Indicator 1.1 Terrestrial Protected Areas Newly created

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

Name of the Protected Area	WDPA ID	IUCN Category	Total Ha (Expected at PIF)	Total Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)

Indicator 1.2 Terrestrial Protected Areas Under improved Management effectiveness

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)
157,671.00	0.00	0.00	0.00

Name of the Protected Area	WDPA ID	IUCN Category	Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Total Ha (Achieved at MTR)	Total Ha (Achieved at TE)	METT score (Baseline at CEO Endorsement)	METT score (Achieved at MTR)	METT score (Achieved at TE)	
Childuktaron State Nature Reserve	167078	Habitat/Species Management Area	14,600.00							🗑
Dashtidzhum Nature Refuge	167081	Protected area with sustainable use of natural resources	50,100.00							🗑
Dashtidzhum State Nature Reserve	167080	Strict Nature Reserve	19,700.00							🗑

Karatau Nature Refuge	555571309	Protected area with sustainable use of natural resources	14,400.00	🗑
Khatlon Nature Refuge	n/a	Protected area with sustainable use of natural resources	6,000.00	🗑
Sary Khosor Nature Refuge	167119	Protected area with sustainable use of natural resources	3,085.00	🗑
Tigrovaya Balka Strict Nature Reserve	1735	Strict Nature Reserve	49,786.00	🗑

Indicator 3 Area of land restored

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

22650.00	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)
650.00			

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)

22,000.00

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)
305850.00	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)

250,500.00

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

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

Type/Name of Third Party Certification

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

Ha (Expected at PIF)	Ha (Expected at CEO Endorsement)	Ha (Achieved at MTR)	Ha (Achieved at TE)
48,000.00			

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)
7,350.00			

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

Title	Submitted

Indicator 6 Greenhouse Gas Emissions Mitigated

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO_2e (direct)	247682	0	0	0
Expected metric tons of CO_2e (indirect)	0	0	0	0

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

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO_2e (direct)	247,682			
Expected metric tons of CO_2e (indirect)				

Anticipated start year of accounting	2020
Duration of accounting	20

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

Total Target Benefit	(At PIF)	(At CEO Endorsement)	(Achieved at MTR)	(Achieved at TE)
Expected metric tons of CO_2e (direct)				
Expected metric tons of CO_2e (indirect)				
Anticipated start year of accounting				
Duration of accounting				

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

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

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

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

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

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

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

* At least 7 PAs covering more than 157,671 ha in the targeted landscape area will receive direct project investments under Component 2, and METT tracking tools will be completed for these PAs within the scope of the project to track improvements in management effectiveness resulting from project activities. ** Although Tajikistan does not have good data on the exact extent and location of degraded lands, it is typically estimated that between 25-75% of lands are degraded, depending on the specific location and type of land use (forest, pasture, arable land). Under Component 1 the project will develop and implement sustainable use plans for 70,000 ha (to be confirmed at PPG phase) of forest and pasture area in and around KBAs; it is conservatively estimated that 1/3rd of these lands (22,650 = 650 ha HCVF + 22,000 ha pasture) are currently degraded (to be confirmed at PPG phase), and that they will be restored through the implementation of sustainable use plans. 150 hectares of degraded forest lands will be restored through reforestation of wild fruit and nut species, or through implementation of agroforestry, and 500 ha will be restored through support for natural regeneration. Tajikistan has committed to restoring 70,000 ha of lands under the Bonn Challenge, and therefore the 22,650 ha restored under this project will constitute a significant portion of Tajikistan's Bonn Challenge commitment. *** The project targets a landscape that encompasses 12 KBAs that have a total area of 654,441 hectares. Within this, there are 7 existing PAs with a total area of at least 157,671. This leaves a balance of 502,770 ha of non-PA landscape that will be addressed within the scope of the project through various approaches. Within this total there will be areas that receive more intensive interventions than others. The areas to be most specifically addressed under the project and not otherwise included in the above core indicators include: >250,000 ha under integrated land use planning (Output 1.1), 7,350 ha of forest (other than the 650 ha of degraded forest included in Core indicator 3) (Output 1.2), and 48,000 ha of pastures (other than the 22,000 ha of degraded pastures included in Core indicator 3) (Output 1.3). In addition, 500 ha of PMRs will be created (Output 2.3). Figures will be confirmed during the PPG phase. **** Per preliminary calculations from FAO EX-ACT tool. ***** The area of the 12 targeted KBAs is 654,441 ha (including the aforementioned PAs). Under Component 1 the project will be supporting integrated spatial plans mainstreaming biodiversity for 3 priority districts covering more than 250,000 ha (to be confirmed at PPG phase); however, although the administrative area of the districts (that will be covered by the spatial plans) is 250,000 ha, it is expected that the main focus of the biodiversity mainstreaming within the plans will be within the KBA areas of the districts, which are already counted in the above figures. Therefore no non-KBA part of this 250,000 ha is counted in this figure, in order to avoid double-counting. + For further confirmation at PPG phase. The direct project beneficiaries will be residents in targeted local communities benefiting from improved and joint forest management (Output 1.2), those involved in livestock grazing that are covered by the project-developed sustainable pasture management plans (Output 1.3), and those involved in restoration of degraded lands through establishment of agro-forestry (Output 1.4).

Part II. Project Justification

1a. Project Description

1a. *Project Description.*

Description of the Target Landscape

The majority of Tajikistan's territorial area is within the "Mountains of Central Asia" biodiversity hotspot, including the foothills of the lower Amu Darya landscape. This region is also within the Global 200 priority ecoregions. The major ecosystems in Tajikistan include forests, woodlands, rangelands (steppe and grasslands), deserts and wetlands. The vegetation changes from steppe communities in the west to semi-desert and desert-like formations in the south. The eastern and southern regions of the country are characterized by open, rocky slopes having extensive woodlands dominated by juniper and pistachio species. Lowland forests (also known as tugai forest) are found on the floodplains and low river terraces, generally growing on alluvial, swampy, or moist soils. Few tugai forests remain in Tajikistan, though some stands have been conserved.

The geographic focus of the project is the lower Amu Darya river landscape, which is largely encompassed within the administrative boundaries of Khatlon province; this is the most southwestern region of Tajikistan. This region is less mountainous and at lower elevation than much of the rest of the country, although the highest peaks in Khatlon reach over 3,000 m (compared to more than 7,000 m for the highest peaks in the country). The landscape is intersected by a number of rivers flowing down from the Pamir mountains. The Amu Darya is formed at the intersection of the Vaksh and Panj rivers, along Tajikistan's border with Afghanistan. Other notable tributaries flowing through the landscape include the Kyzylsu and Yakhsu rivers.

The lower Amu Darya landscape provides numerous ecosystem services. Khatlon province accounts for 45% of Tajikistan's Gross Agricultural Output, 20% more than any other region. The region includes 33% of agricultural land, 49% of cropped land, 40% of the country's cattle, and 39% of the sheep and goats. Khatlon has more than 50% of the country's vineyards. The Amu Darya river flows through the landscape, along with multiple other rivers derived from the annual snow melt of the Pamir and Alai mountain ranges. These rivers provide critical water for agricultural irrigation, and through hydropower facilities also provide large amounts of energy for domestic use and for export; energy exports are a major part of Tajikistan's national development strategy. At the same time, the area encompasses 12 KBAs, which provide biodiversity ecosystem services, such as provisioning. Many of the KBAs have been identified based on rare and important plant species, many of which are wild relatives of agrobiodiversity species such wild pistachio and wild almond. These dryland forests also provide necessary ecosystem services such as provisioning of fuel wood, although these resources are overexploited and poorly managed.

Biodiversity

The high value arid ecosystems of the lower Amu Darya landscape includes 12 identified Key Biodiversity Areas (KBAs) covering ~655,000 ha, which are described in the table below. Also see Section II.1b of this PIF document, for a project map and geographic coordinates.

ble 1 Key Biodiversity Areas and PROTECTED AREAS in Project Scope[1]

KBA	Area (ha)	Global KBA Criteria	KBA Trigger Species	Associated PA (IUCN Category)	PA Area (ha)	Geographic Location (approx.)
Tajik Babatag	85,000	B1	*Calligonum griseum, Gypsophila tadshikistanica, Gypsophila vedeneevae, Stipa longiplumosa, Stipa ovczinnikovii, Tulipa tubergeniana, Testudo horsfieldii, Neophron percnopterus*	*No existing PAs for this KBA*	*N/A*	37°29'14.4"N 67°52'13.1"E
Gazimalik	70,000	B1	*Allium gypsodictyum, Anemone bucharica, Circaetus ferox, Tulipa tubergeniana*	*No existing PAs for this KBA; PA proposed*	*N/A*	38°00'32.0"N 68°27'48.3"E
Sarsaryak	20,000	B1	*Salvia baldshuanica, Tulipa maximowiczii, Tulipa subpraestans, Testudo horsfieldii, Haliaeetus leucoryphus*	Khatlon Nature Refuge (IV)	6,000	38°15'49.1"N 69°09'07.3"E
Ayvaj	22,000	A1, B1	*Allium gypsodictyum, Alsophylax tadjikensis, Pseudoscaphirhynchus kaufmanni, Aspiolucius esocinus, Chlamydotis macqueenii*	*No existing PAs for this KBA*	*N/A*	36°57'50.2"N 68°02'32.0"E
Tigrovaya Balka	62,000	A1, B1, D1	*Cervus hanglu, Netta rufina, Pseudoscaphirhynchus kaufmanni, Columba eversmanni, Falco cherrug, Neophron percnopterus, Aspiolucius esocinus*	Tigrovaya Balka State Nature Reserve (I)	49,786	37°16'22.4"N 68°27'29.9"E
Tajik Karatau	60,000	B1	*Anemone bucharica, Ferula decurrens, Tulipa maximowiczii, Tulipa rosea, Tulipa tubergeniana, Testudo horsfieldii*	Karatau Nature Refuge (IV)	14,400	37°29'21.9"N 69°15'42.4"E
Khoja Mumin	3,000	B1	*Amygdalus bucharica, Crocus korolkowii, Ostrowskia magnifica, Rhus coriaria*	*No existing PAs for this KBA; PA proposed*	*N/A*	37°44'08.2"N 69°38'48.4"E
Kushvorista	83,000	A1, B1	*Amygdalus bucharica, Amygdalus vavil*	Dashtidzhum	19,70	37°35'29.2"N

| Kashinota n	88,880	A1, B1	Amygdalus bucharica, Amygdalus vavil ovii, Crataegus darvasica, Ostrowskia magnifica, Rhus coriaria	Dashtidzhum National Natur e Reserve (I)	48,480 0	37°00'29.2"N 70°09'20.0"E
Baljuvan	94,000	A1, B1	Crataegus necopinata, Iris hoogiana, P yrus cajon, Pyrus tadshikistanica, Ranu nculus baldshuanicus, Salvia baldshua nica, Tulipa praestans, Malus sieversii	Sari Khosor N ature Park (II)	3,085	38°36'13.9"N 69°42'50.4"E
Muminabad	46,000	B1	Arabidopsis bactriana, Crataegus neco pinata, Ostrowskia magnifica, Tulipa pr aestans, Iris hoogiana, Ranunculus bal dshuanicus, Pyrus tadshikistanica, Mal us sieversii	Childukhtaron Nature Refuge (IV)	14,60 0	38°17'18.4"N 70°09'11.7"E
Dashtijum	40,000	A1, B1	Amygdalus bucharica, Amygdalus vavil ovii, Arabidopsis bactriana, Ostrowskia magnifica, Swida darvasica, Ungernia t adshikorum, Rhus coriaria, Columba ev ersmanni, Falco cherrug	Dashtidzhum Nature Refuge (IV)	50,10 0	38°00'55.9 7"N 70°12'45. 91"E
Dangara Ma ssif	69,441	IBA crit eria A1, A3, A4i	Ammoperdix griseogularis, Tadorna fer ruginea, Grus grus, Falco cherrug, Hipp olais languida, Phylloscopus neglectus, Sitta tephronota, Irania gutturalis, Oena nthe picata, Oenanthe finschii, Oenanth e xanthoprymna, Emberiza buchanani, Emberiza stewarti	Khatlon Natur e Refuge (IV)	6,000	37°57'26.2"N 69°24'18.6"E

While much of the region has notable biodiversity in multiple forms, there are a total of 42 "trigger" species identified for the KBAs above. These include 21 non-tree plant species (e.g. flowers, shrubs, etc.), 9 tree species, 7 bird species, 2 reptiles, 2 fish, and 1 mammal. See Annex D to this PIF for a full summary list of KBA trigger species.

Protected Areas: There are 7 national-level legally recognized protected areas in the targeted landscape, which encompass portions of the targeted KBAs. The 7 SPNAs and their respective associated KBAs are indicated in the previous Table 1.

The Law on Special Protected Nature Areas (2011) makes provision for eight categories of Special Protected Nature Areas (SPNAs) – Wilderness Areas/ Biosphere Reserves; National/ Provincial Parks; Special Nature Reserves; Natural Monuments; Ecological and Heritage Areas; Forest Parks and Botanical Gardens; Natural Health Treatment Territories and Resorts; and Natural Recreational Areas – of which only the four Wilderness Areas (IUCN Category I), two National Parks (IUCN Category II) and thirteen Special Nature Reserves (IUCN Category IV) are administered as de facto protected areas (PAs). The Wilderness Areas, National Parks and Special Nature Reserves – along with the twenty-six Natural Monuments (IUCN Category V/VI) - cover a total area of more than 3 million ha. At present the national system of SPNAs cover 22% of the country's territory. The PA system is supported by the government's Econet programme, which prescribes reorganization and expansion of SPNA system through the creation of buffer zones, and also other zones of use of natural resources. In addition, there is a national action plan for the protected area system, defining duties and deadlines for implementation of activities.

The National Biodiversity and Biosafety Centre (NBBC), established by Government Decree (No. 392 of 2003), was created to coordinate activities aimed at facilitating, monitoring and reporting on the implementation of the Convention on Biological Diversity (CBD) and its protocols in Tajikistan. Its activities include: mainstreaming the NBSAP into sectoral action plans; developing fiscal incentives for biodiversity conservation; and developing and maintaining a national biodiversity database. The NBBC is structured into two departments: (i) National, Sectoral and inter-sectoral cooperation on implementation of targets and objectives of Convention on Biological Diversity; (ii) International cooperation and scientific-technical progress. The NBBC works closely with the Research Laboratory for Nature Protection and the National Center on Implementation of National Environmental Action Plan.

Forests: With 410,000 ha (or less than 3%) of the country's territory covered by forests, Tajikistan has the lowest forest coverage in Central Asia. This has resulted from a prolonged deforestation process, particularly in the plains and foothills of Tajikistan (the Lower Amu Darya region targeted by the project), which reduced forest cover from possibly as much as 25% of the country over the 20th century. Almost all the forests in Tajikistan are classified as protective forests. Cutting of timber is officially prohibited; only sanitary cutting is allowed. Natural forests are divided into five types: broadleaved mesophilous forests; hard-leaved xerophilous light forests (shibliak); small-leaved microthermous mountain forests; juniperus forests; and tugai forests. According to data from Global Forest Watch, in Khatlon province there is approximately 8,090 ha of forest (at >10% canopy cover) (see Figure 1 below), which is less than 1% of total area, while 316,000 (13%) ha was identified as "shrubland". Per official statistics, forest area in Khatlon province covers 116,279 ha.

FIGURE 1 FOREST COVERAGE IN THE LOWER AMU DARYA LANDSCAPE
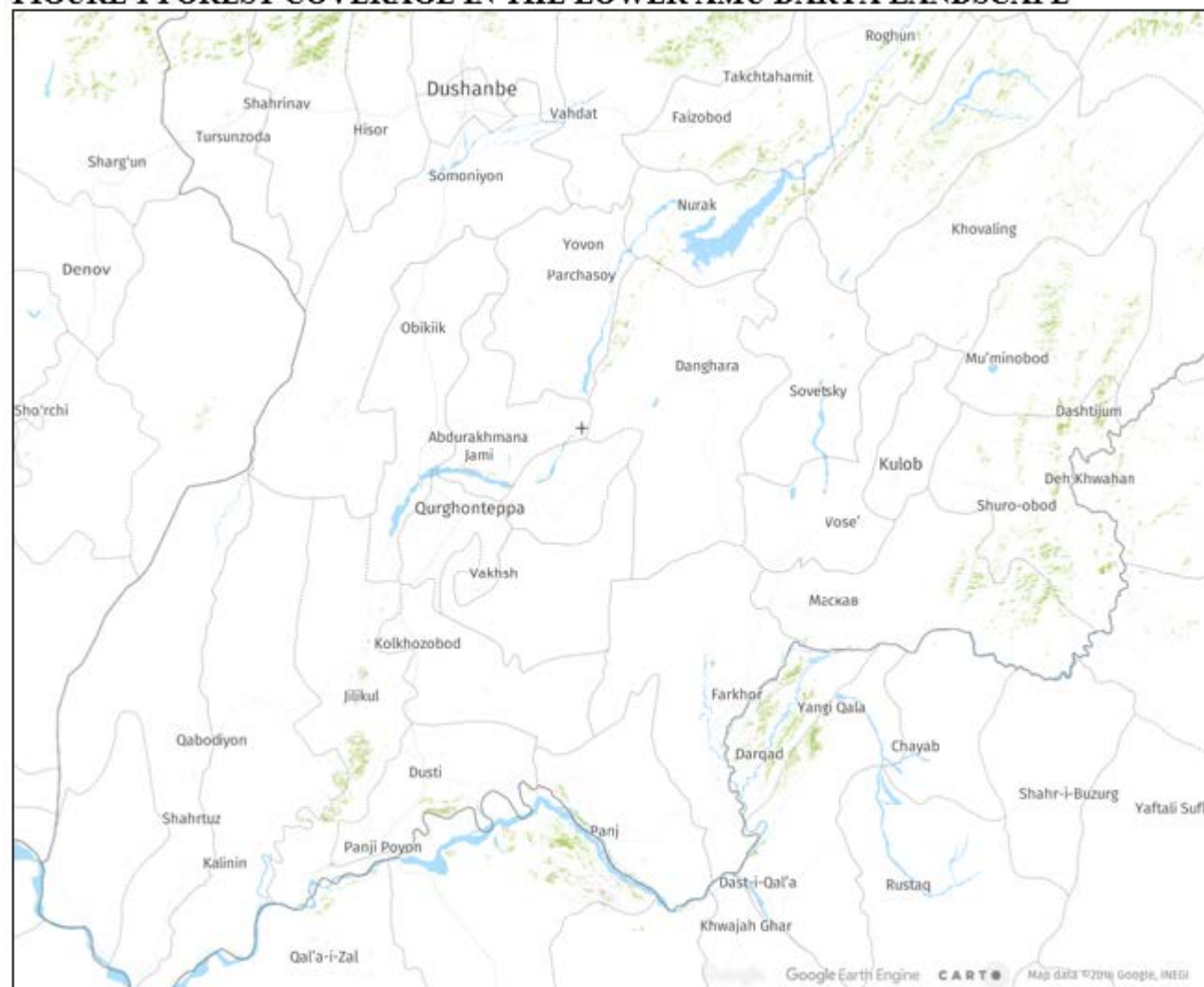
(Source: Global Forest Watch, 2019)

The Forestry Agency, established by Government Decree (No. 132 of 2014), is the executive body responsible for the preparation and administration of state forest policy and regulations. It is directly accountable for the planning and management of state forests and forest resources, the supervision of recreational and commercial hunting activities and the planning and management of all SPNAs. Operationally, the Forest Agency is structured into three Divisions: (i) Division for Afforestation; (ii) Division for Forestry, Fauna and Flora Protection and Hunting; and (iii) Division for Agriculture and Wild- Growing Forest Products. The Division for Forestry, Fauna and Flora Protection and Hunting is further organised into four units: (i) Forestry and Hunting Inspectorate (regulates and enforces forestry and hunting legislation); (ii) Department of Special Protected Natural Areas (administers National Parks and Wilderness Areas; (iii) State Forest Institution (implements forestry activities in state forests and administers special nature reserves); and (iv) Scientific Institute of Forestry (undertakes forestry research). The State Forest Institution currently comprises 40 leskhoz (forest business units), 5 tree nurseries and 13 special nature reserves (usually located within the administrative area of the leskhoz). The leskhoz are engaged in forest protection, restoration, conservation and management throughout the

country. The leskhoz are also in charge of wildlife (including hunting and fisheries) in the forests. The number of staff varies from leskhoz to leskhoz and depends on the area's size. Personnel include technical staff, administrative staff and workers and forest guards. Between 20 and 40 staff members are typically assigned to each leskhoz. The Department of Special Protected Natural Areas is functionally further divided into four divisions: (i) Park Management; (ii) International Relations and Tourism; (iii) Monitoring, Research and Public Relations; and (iv) Finance and Human Resources. The Department has a total staff complement of 207, including nine park directors, 8 Deputy Park Directors, 117 rangers/ senior rangers, 41 fire-fighting staff and 25 technicians.

Pastures: The total area of pasture land in Tajikistan - including grasslands, alpine meadows, woodlands and wetlands - used for livestock grazing is estimated at 3.9 million ha. Most of these pastures are located in hilly and mountainous areas above 2,000 m. In Khatlon province, approximately 357,000 ha of territory is grassland (14%) of area). Traditionally pastures have formed the basis of Tajikistan's livestock sub-sector and have been utilised for centuries through an altitude- and season- based transhumance grazing system. In recent times, much of the pastures at lower elevations (<1,500 m) have been used for year-round grazing by local communities whose access to more distant pasture lands has been restricted due to changes in tenure arrangements as a result of population increase in most places. There have also been changes in livestock holding patterns and most families typically now own only 2-5 livestock per household. Access to grazing rights may be obtained through lease agreements with the dekhan farms (typically for a period up to 10 years), certificates of use from the local offices of the Land Committee (typically for a period up to 20 years) and rental (typically short-term) from the local forest enterprises (leskhoz).

Land Tenure: There is no private legal ownership of land in Tajikistan, as land and other natural resources are owned exclusively by the government, which is responsible for their effective use. The Land Code (1996, as amended) sets forth several tenure options for agricultural land, distinguishing primary use rights from secondary use rights. Primary use rights include the following: (i) perpetual use - this right has no fixed term and is granted to legal entities (e.g. state and cooperative agricultural enterprises, public and religious organizations and charities, industrial and transportation needs, public enterprises, defence, etc.); (ii) limited or fixed-term use - this right may be granted to legal or physical persons for either a short-term (up to 3 years) or long-term (3–20 years); and (iii) life-long inheritable tenure - this right may be assigned to physical persons or collectives and applies to land-shares used to organize a dekhan farm, as well as household plots. The only secondary use-right established in the Land Code is the right to lease in which a primary rights holder may lease out their plots for a term not exceeding 20 years. All use-rights are subject to state-imposed land-use standards. Household farms are primarily leased, with 67% of the land leased from farm enterprises and about 12% leased from other individuals. The remainder (about 21%) holds use-rights received directly from the state. In summary, the land tenure situation in Tajikistan is not insecure per se - there are well established procedures and norms that set forth land tenure arrangements for resource users. Although the land is not privately owned, resource users do have "secure" tenure rights per the established lease arrangements, typically for up to 20 years.

Threats, Root Causes and Key Barriers

The major threats to high value arid ecosystems in Tajikistan's lower Amu Darya landscape are overgrazing (leading to land degradation, and loss of biodiversity), poor agricultural practices for agriculture (also leading to erosion and other forms of land degradation), illegal cutting of forests (most commonly for fuelwood), and illegal and unsustainable taking of natural resources (i.e. poaching, in various forms). The root cause of the majority of these threats is the massive poverty in rural areas of Tajikistan, which underpins the necessity of a short-term focus for livelihoods, while also driving limited individual and

institutional capacity for sustainable management of natural resources. Tajikistan is one of the poorest countries in the world; Tajikistan's Human Development Index for 2018 is 0.650, ranking 127th globally. The figure below summarizes the overall system of land use leading to land degradation, deforestation, and associated losses of biodiversity.
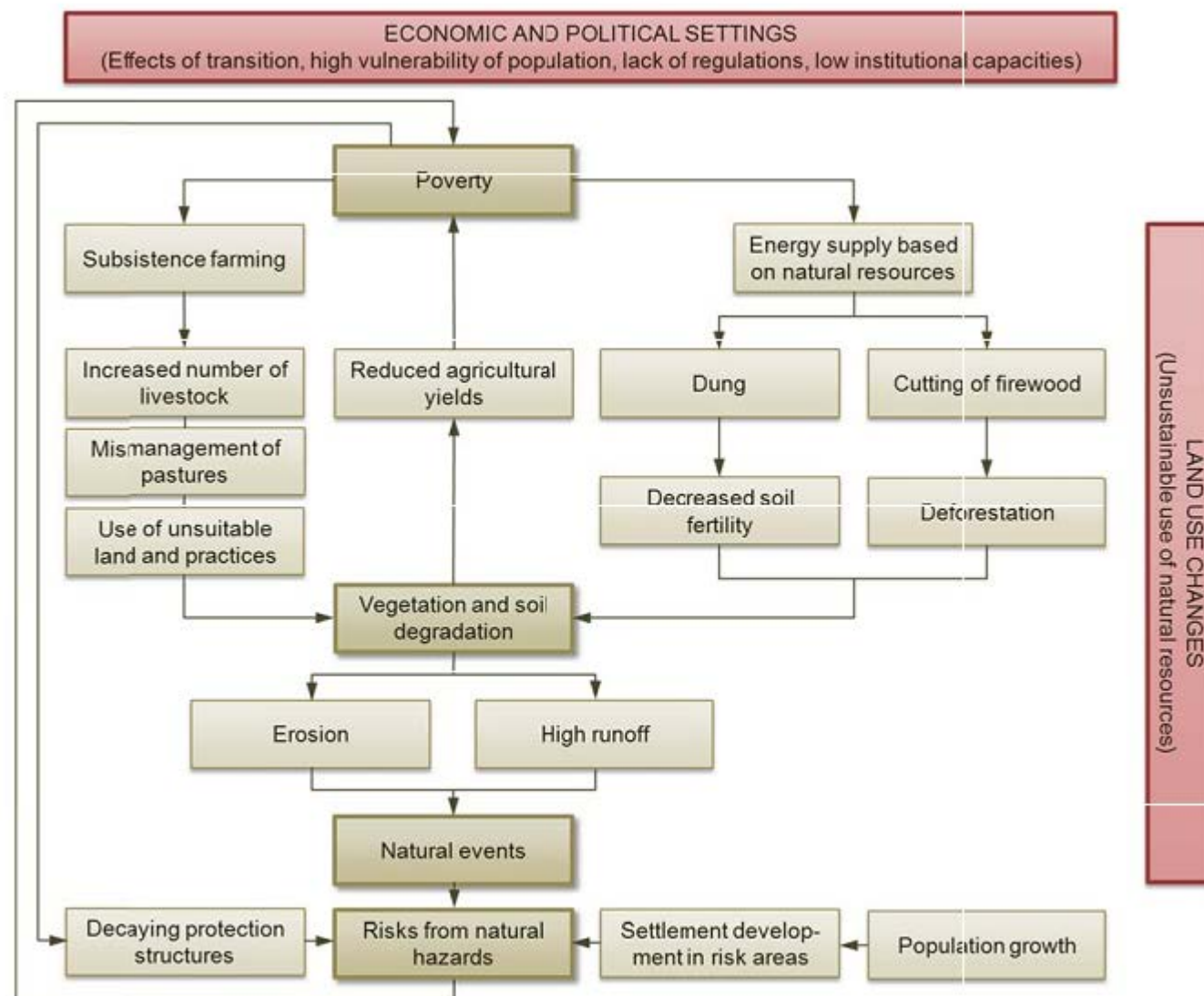
(Source: Strahm, 2011)

Forest Degradation: According to Global Forest Watch, Tajikistan's Khatlon province lost 2% of its forest cover from 2001-2017 (forest canopy >30%). While the major part of Tajikistan's forest loss was prior to 2000, illegal forest cutting remains a critical issue for the little remaining forest area. Due to lack of alternatives for cooking and heating, illegally cut firewood remains a source of fuel for rural populations.

Land Degradation: Due to the lack of arable land, large parts of the pastureland and hayfields on the hill slopes have been converted into crop fields, mostly without applying suitable soil and water conservation technologies. The cultivation of annual crops on steep slopes and poor soils in combination with improper land management including lack of erosion control, lacking regulations, frequent droughts and heavy rains leads to soil erosion and eventually a loss of soil fertility. The consequence is a vicious circle: Declining harvests are forcing people to reclaim even more land that is unsuitable for cultivation to ensure food supply, which leads to a further increase of soil degradation. The area used for growing grain in Muminabad extended by 20% between 2000 and 2005 alone (Strahm, 2011). The government does not keep statistics on land degradation, so the extent and nature of land degradation in Tajikistan is not well documented. Available estimates suggest that 82.3% of all land and 97.9% of agricultural land in Tajikistan suffers some level of erosion, with 88.7% suffering high/medium erosion. The UNECE estimated in 2004 that erosion affects 60% of irrigated land, and others estimate 97% of farmed lands in Tajikistan have been harmed by poor irrigation and salinization. Land degradation from erosion caused by overgrazing is estimated at 3m ha, or 85% of all pastureland. A 2011 expert assessment found that 90% of rainfed cropland shows signs of degradation, of which 40% is heavy degradation. Of the irrigated cropland, 22% of the area is estimated to show heavy degradation, and 38% light to medium degradation. Degradation in forest plantations affects around 70% of the area. Agroforestry systems are considered the least degraded, with heavy degradation occurring on 22% of the area, light to moderate degradation on 30% of the area, and 48% not showing degradation signs. Apart from economic losses, land degradation drives people to more heavily exploit areas remaining natural. This drives a severe encroachment threat for Protected Areas in the landscape and the species they host. Addressing land degradation therefore is important to relieve the load on high value ecosystems.

Poaching: There are no statistics on poaching in remote areas, including the foothill zones and other areas with high value arid ecosystems targeted by this project. Poaching in this instance means any illegal taking of natural resources, including illegal wood cutting, illegal plant harvesting, or illegal hunting of wildlife. Additional data on poaching will be collected as baseline data during the PPG phase.

The following barriers have been identified which prevent the government and communities from safeguarding globally significant biodiversity and ecosystem services in the region.

Barrier 1: Lack of capacity and information for long-term planning for sustainable land management and effective biodiversity conservation in production landscapes

The foothills of the Lower Amu Darya landscape are primarily used for subsistence and small scale agricultural livelihoods, both in terms of livestock and crops. The sustainable management of pasture lands and arable lands depends on a reasonable understanding of the status of these lands, and the effects that different land use practices have on them. Both types of information are generally lacking in the Lower Amu Darya landscape, at least in any sort of large

scale.

Land use planning takes place at only a rudimentary level or small scale, and does not take a long-term and sustainability-driven approach. The Tajikistan Republic "Law on Land Use" (#1343, 23.07.2017) regulates land use planning. As stipulated under the law, at the lower government levels (district, jamoat) there is an on-farm land management and inter-farm land management system of measures for the organization of territories of agricultural enterprises and dekhan (farmer) associations, and a system of legal, socio-economic and technical measures ensuring the redistribution of land, the formation of rational land use and land tenure, etc. Once land is designated for agricultural land use, the Ministry of Agriculture is primarily responsible for land use planning. Planning issues pertinent to rangeland biodiversity use, conservation, and functional activity, should be the responsibility of 'hukumats' (local government at the district level), with interagency coordination by the Ministry of Agriculture. There are units within the Ministry of Agriculture related to grazing and biodiversity who are also assigned biotechnical activities as diverse as seed production and measures to ensure the long-term sustainable use of forest biodiversity. The Ministry of Agriculture, together with the Pasture Trust, should join the NBBC to unite efforts to improve pasture biodiversity. The Committee for Land Management Geodesy and Cartography (CLMGC) handles land transfers and must do so according to the season of use and with proper cadastral registration. Such actions by existing state institutions could do much to improve the situation in Tajikistan's rangelands and pasturelands. In practice, at the lower government levels, such as at the district level, there is little effective land use planning, due to resource and capacity shortfalls. To the extent that long-term land-use planning does take place, it does not currently include biodiversity-related information, or make provisions for ensuring the maintenance of biodiversity.

With respect to sustainable pasture management, the lack of implementation of sustainable pasture management practices is driven by inadequate knowledge, low technical skills and capabilities and limited resources (equipment, financing, infrastructure). While there are some agricultural subsidy and micro-credit schemes, these tend to be focused on crop agriculture and do not provide sufficient incentive for a shift towards more sustainable forms of pastoralism. There is virtually no technical or extension support provided by public agencies to local livestock farmers. There is thus a critical need to provide both technical and financial support to facilitate and incentivise the adoption of more sustainable pasture management approaches, including inter alia: improved stocking rates; selective seasonal grazing; effective rotational grazing systems; supplemental feeding; adaptation of natural fire regimes; improved veterinary services; and value-added infrastructure and equipment.

Farmers suffer from lack of know-how about sustainable agricultural practices, and lack of capital for their implementation. Terraces created before and partly during Soviet times are often abandoned and conservation measures such as contour ploughing are largely not implemented. Where irrigation is possible, it is often applied in an uncontrolled way, which accelerates erosion and can trigger landslides. Farmers cannot afford fertilizers or to let the land recover in fallow cycles, which causes the soils to lose their productivity. Another problem is the distribution of cropland: According to the land reform of 1992, additional land was distributed to household plots and the corporate farms, the successors of former collective and state farms, were gradually converted into self-organized, mid-sized farms. In Muminabad District, these so-called dehkan farms cultivate about half of the arable land. Although land remains in exclusive state ownership, it can be leased for private use. In some of the dehkan farms, tenants only receive one-year contracts for a plot of land. This fosters the lack of incentives to conserve the productivity of the land, because the farmers are forced to maximize short-term profits and cultivate the soils in an unsustainable way, leading to soil impoverishment (Strahm, 2011).

The Forest Code does provide all the main practical elements of sustainable forest management, but these are not comprehensively implemented in practice, because of a lack of technical knowledge, limited experience of forest staff and/or institutional resource (e.g. funding, equipment) constraints. The existing forestry regulations are complex and often contradictory, and do not actively prevent illegal cutting of, and poaching in, forests. Little attention is being paid to mitigating the effects of forest wood-cutting on the ecological integrity and functioning of forest ecosystems, and there are only a small number of ecosystem-based forest rehabilitation and restoration efforts being tested and implemented in the country. Most state afforestation initiatives are currently limited to the planting of fruit tree plantations.

It has been estimated that more than 90% of the rural population use solid fuels (wood, coal or dung) for heating and cooking, and that almost 70% used wood as their principal fuel. Assuming that approximately 5 million people rely on wood as their principal fuel source, national fuel wood demand would be in the region of 15-20 million m^3 per annum. This is far beyond the production capacity of the country's remaining natural forests, especially in the Lower Amu Darya region, which has fewer forest resources than some other regions of Tajikistan. No fuel wood is currently being imported into the country, and the only legal domestic source of fuel wood is sanitary cutting and forest clearing operations. There is no official market for fuel wood, so potential buyers must approach the leskhoz to buy wood or use 'unofficial' ways to procure it. In 2009, sanitary cutting and forest clearing operations yielded only 9,245 m^3/year, less than 0.1% of the projected annual demand for fuel wood. There is also limited adoption of affordable, more-efficient technologies (e.g. energy-efficient stoves) and fuels (e.g. liquid fuels, bio-fuels) for heating and cooking in rural communities.

By governmental decision, 1.08 million hectares, or more than 60 percent of Tajikistan's State Forest Fund, are allocated for long-term use as pasturelands to agricultural enterprises. These areas are rich in forest and grass vegetation and were traditionally used as distant pasturelands in past decades. Although overgrazing and degradation of grass and forest vegetation have been observed in these areas, particular measures have not been taken for conservation and/or restoration of degraded vegetation (FAO, 2007).

Barrier 2: Limited human and financial resources in the management of SPNAs

While Tajikistan has 22% of its national territory covered by SPNAs, this is mainly due to one large SPNA, the Tajik National Park, in the high mountain regions of eastern Tajikistan, which covers more than 18% of the national territory. The 12 KBAs targeted under this project, are partially covered by SPNAs, though 4-5 KBAs are not covered by any SPNAs, and in total approximately 500,000 hectares of KBAs are not covered by SPNAs. Even though there are 7 existing SPNAs within the scope of this project, this does not mean that they are effectively managed to conserve their biodiversity values. The SPNAs in Tajikistan collectively face a shortage of human and financial resources, and conservation actions are only partially implemented, if at all.

The implementation and enforcement of laws and regulations relating the SPNA management is not at a high level, and is uneven throughout the country. Some SPNAs do not have dedicated staff (depending on the level of the SPNA), and for SPNAs that do have rangers, patrolling is carried out inconsistently, and not in a structured manner. Consequently the level of illegal activity in and around SPNAs is not controlled, and not well documented. In cases when illegal activity is detected, there is not a consistent or effective approach to prosecution or penalties (monetary or otherwise). The low level of enforcement is

exacerbated by limited infrastructure such as ranger stations, and inadequate equipment (e.g. binoculars, uniforms, packs) and transport for rangers. Ranger salaries are also low, and with harsh working conditions there are few financial (or other) incentives for staff to pursue a long-term career, with corresponding personal and professional capacity development. Individual and institutional capacity is lacking in terms of management, technical and professional skills. METT scores for the SPNAs within the scope of this project will be completed during the PPG phase; there are no previous historical METT scores for these SPNAs. However, SPNAs in other regions of Tajikistan have recorded baseline METT scores of "20" in recent years, and a similar level or lower is expected for the SPNAs in the scope of this project.

In terms of integration in the wider landscape, SPNA boundariers are not well demarcated or recognized by many stakeholders and resource users. In addition, there is typically little input by local resource users to SPNA management decision making. Poverty is high in rural areas, and local inhabitants depend on natural resources for their daily survival. It is necessary for SPNAs to shift away from the approach where local communities experience conservation efforts through enforcement, to a collaborative approach where financial and technical support provided to support the social and economic development of villages (such as nature-based tourism development, improved productivity of crops and pastures, development of community-based hunting packages and improved access to markets, etc.) is linked to specific pre-determined conservation outcomes (such as better control over poaching, more sustainable levels of fuelwood collection, reduction of livestock numbers in sensitive areas, adoption of non-destructive measures to control predators, etc.) in SPNAs.

Barrier 3: Poor Understanding and Awareness of Importance and Presence of Dryland Forest Biodiversity

There are low levels of awareness among local resource users about the significance of much of the biodiversity in the targeted SPNAs, although the value of many wild fruit and nut trees is recognized, though not necessarily in terms of their genetic significance. In addition, local decision makers also do not have high levels of awareness or understanding of the significance and role biodiversity plays in the ecological functioning of their territories, buttressed by SPNAs. On the one hand, the presence and importance of many rare species is not well documented; although there is frequently local knowledge about species that are particularly valuable for economic or social (e.g. medicinal) reasons, this knowledge is not systematically documented or aggregated in a consistent manner across the landscape. At the same time, what information does exist is not disseminated to either resource users or local decision makers in a strategic or cogent manner, which means that resource users and managers are not able to make rational and strategic decisions about how resources are consumed, managed, and sustained.

II.1a.2) the baseline scenario and any associated baseline projects

The policy framework for environmental protection in Tajikistan has changed significantly since the early 21st century. A number of new policy documents on environmental protection and sustainable development have been adopted, as well as some sectoral policy documents that include environment-related provisions. Several multilateral environmental agreements ratified by Tajikistan have also been incorporated in its legal system. Environmentally related

provisions can also be found in several sectoral laws, including in energy, tourism, transport and urban planning and construction. Yet, for many environmental strategies, programmes and plans, financing has not been secured, and therefore most of them have not been implemented. The Committee on Environmental Protection was established in 2004, and is the body under the Government that is responsible for environmental protection in Tajikistan.

In order to address the above threats to biodiversity and ecosystem services in the high value arid ecosystems, the State Committee for Environmental Protection is making investments with its limited central government funding, through the State Environmental Programme of the Republic of Tajikistan (conservation and sustainable use of biodiversity); State comprehensive program for the development of environmental education and public education of the Republic of Tajikistan (environmental awareness, training programs, biodiversity capacity building); Environmental Monitoring Programme of the Republic of Tajikistan (environmental monitoring); National Environmental Action Plan (SPNA system strengthening, environmental monitoring); and implementation of the National Biodiversity Strategy and Action Plan. In addition, the Forest Agency is committing resources to sustainable forest management through the Forest Development Programme of the Republic of Tajikistan (implementation of sustainable forestry principles in high value drylands forests, sustainable hunting). The Forest Agency also continues to invest in the national protected areas system, but financial and institutional resources in Tajikistan are extremely limited. The Ministry of Agriculture is addressing improved agricultural practices and land restoration through the State Program for the development of new irrigated lands and restoration of agricultural lands (sustainable agriculture, sustainable pasture management, agro-forestry, the development of agro-business).

Tajikistan is implementing various environmental-economic mechanisms, including payments for use of natural resources, which has been outlined at the legislative level. Practically all implemented projects in Tajikistan, especially the ones on land resources, water recourses and forest resources under implementation of ministries, agencies and private organizations are estimated as add-on to improving the baseline while implementing the projects funded by donors. The political will of the Government of Tajikistan is demonstrated by supporting such initiatives, which is showcased by giving privileges for agricultural projects by giving tax exemption for importing seeds and plant varieties to Tajikistan.

The lessons learnt from the UNDP/GEF Project "Sustaining Agricultural Biodiversity in the face of Climate Change" showcase the best practices of use of natural resources and its integration into the market. The developed market scenarios of use of mulberry and its distribution to international markets had kicked off the line of marketing the medical plants of Tajikistan and several other natural resources, especially dried fruits, by using the solar energy, originated from high mountain regions of Tajikistan.

The baseline scenario for further projects on environmental conservation can also be enriched from the best practices of projects implemented by UNDP, World Bank, FAO, GiZ on biosafety capacity building, agrobiodiversity conservation, pasture management and forest restoration.

The following table summarises existing donor funded projects that are relevant to the proposed project.

In terms of synergies and coordination, there are a number of steps that will be taken to ensure synergies and coordination with other relvant initiatives and development partners. All relevant stakeholders will be consulted on the project design during the PPG phase; this will conclude with a project design validation workshop at the end of the PPG phase. Once the project is approved, relevant stakeholders will then again be invited to participate in the project inception workshop. Relevant stakeholders will also be considered as candidates to serve as members of the Project Steering Committee, with a final determination on the composition of the PSC to be agreed by the Government of Tajikistan and UNDP. UNDP also participates in Tajikistan's donor coordination council, and information about the proposed project will be regularly disseminated in this forum. In addition, project updates will be shared with relevant stakeholders by email approximately quarterly.

Title	Budget	Objective/Focus/Coordination	Timeframe
State Environmental Program (State Committee for Environmental Protection)	$1 million USD/year	Conservation and sustainable use of biodiversity.	2009-2019, to be extended to 2030
Comprehensive program for the development of environmental education and public education (State Committee for Environmental Protection)	$1 million USD/year	Environmental awareness, training programs, biodiversity capacity building.	Originally to 2010; currently ongoing
Environmental Monitoring Programme of the Republic of Tajikistan 2013-2017 (State Committee for Environmental Protection)	$1 million USD/year	Despite the completion of the programme in 2017, about $ 1,000,000 is annually spent for monitoring of biodiversity in accordance with the Law of the Republic of Tajikistan "On Environmental Monitoring". Thus, $3.1 million will be invested in biodiversity monitoring during 2020-2023.	Originally to 2017; currently ongoing
Implementation of the National Biodiversity Strategy and Action Plan up to 2020 (State Committee for Environmental Protection)	$3.8 million USD	Funding will continue to be invested following 2020, with $3.8 million foreseen for the first three years of project implementation.	2020-2023
National Environmental Action Plan 2006-2011 (State Committee for Environmental Protection)	$8 million USD	SPNA system strengthening, environmental monitoring. Due to non-utilization of funds provided from various sources, the NEAP is to be updated and extended until 2030. $20 million from different sources of financing are foreseen in the NEAP for the improvement of lands and biodiversity, out of which $8 million to be allocated during 2020-2023.	Originally to 2011; currently to 2030

Forest Development Program (Forestry Agency)	$3.8 million USD	Implementation of sustainable forestry principles in high value drylands forests, sustainable hunting.	2020-2023
Program for Developing Specially Protected Natural Areas up to 2015 (State Institution for Specially Protected Natural Areas)	$2.5 million USD	Development of SPNAs.	Originally to 2015; currently 2020-2023
State Program for the development of new irrigated lands and restoration of agricultural lands (Ministry of Agriculture)	$4.5 million USD	Sustainable agriculture, sustainable pasture management, agro-forestry, the development of agro-business.	2020-2023
Biodiversity and ecosystem services in agrarian landscapes (GiZ)	4 million Euro	The project is part of the International Climate Initiative (IKI) of the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU). It sets out to strengthen individual and institutional capacities as well as to boost knowledge on increasing biodiversity and sustainable use of ecosystem services in agrarian landscapes. Public and private sector decision-makers are made aware of the importance of biodiversity and ecosystem services as cornerstones for the economic development of the agricultural sector. To some extent, the project also makes a direct contribution to conserving biodiversity. It implements pilot projects designed to restore ecosystems suffering from degradation and to safeguard and encourage sustainable use of biodiversity and ecosystem services. Deutsche Welthungerhilfe acts as an implementing partner for the project in Tajikistan. Synergies and coordination: This is the most relevant of all inititatives currently funded in Tajikistan through GiZ; the proposed project will draw on the lessons and good practices of each of the GiZ supported efforts. Under this particular initiative on biodiversity and ecosystem services, the integration of biodiversity and ecosystem services in the law on grazing land was achieved through support to a parliamentary working group. In addition, the project identified six biodiversity enhancing and ecosystem services conserving land use approaches, which are being piloted in Rasht an	2016-2020

		serving land use approaches, which are being piloted in Rasht and Ayni districts (outside the scope of the proposed project). The proposed project will support implementation and scaling-up of these land use approaches.	
Tajikistan Second Public Employment for Sustainable Agriculture and Water Resources Management Project (WB)	$45.9 million USD	The project is aimed at: (1) employment of population suffering from food insecurity by rehabilitation of irrigation and drainage infrastructure, (2) increasing production of agricultural crops as a result of improved irrigation and infrastructure, (3) supporting development of improved policy measures and institutions on water resource management to ensure better access to food products for low income people in the poor rural areas supported by the project. Synergies and coordination: The proposed project concept has been carefully developed to complement WB-funded activities, and not to overlap or duplicate; however, the proposed project will draw on the lessons and good practices of this WB project in the PPG phase, as relevant. The major focus of the WB project was on the rehabilitation and construction of the physical infrastructure of the irrigation network, which is outside the scope of the proposed UNDP-GEF project. The WB project is targeting 12 districts, the majority of which are outside the geographic scope of the proposed UNDP-GEF project, or which are not anticipated to be priority districts under the proposed project, as they do not encompass KBAs. The WB project has helped move forward with improved water management approaches that will be useful for the proposed project to build on, including a draft Water User Associations (WUAs) Law approved by the Lower Chamber of Parliament (Majlisi Namoyandagon) on May 14, 2019. The project has also helped initiate actual piloting of WUAs, which the proposed project will also potentially support in the targeted priority districts.	2012-2020
Building climate resilience of vulnerable and food insecure communities through capacity strengthening and livelihood diversification in mountainous regions	$10 million USD	This initiative will introduce adaption measures to address climate change effects leading to declines in agricultural yields, increases in food prices and reduced agricultural wages. It will focus on the most vulnerable and food insecure communities in the Rasht valley, Khatlon and Gorno-Badakhshan Autonomous Region (GBAO) regions. It will include an integrated approach to provide clima	2018-2021

of Tajikistan (World Food Programme, with Green Climate Fund funding)		te information services, capacity building, sustainable water management and resilient agriculture and forestry. Synergies and coordination: As with other initiatives listed above, the proposed project concept has been carefully developed to avoid thematically or geographically duplicating other initiatives as much as possible. This GCF-funded project does include two districts (Khovaling and Muminabad) that are within the geographic scope of the project, although the specific areas targeted are likely to be different (to be confirmed, and ensured, during the PPG phase). The proposed UNDP-GEF project will draw on lessons and good practices from this initiative. In particular, the proposed project will ensure that sustainable land use practices supported under the project are climate resilient, based on the experience of the WFP-GCF project.	
Climate Adaptation and Mitigation Program for the Aral Sea Basin (CAMP4ASB) (World Bank, with World Bank, Green Climate Fund, and national government funding)	$68 million USD	Scaling up the Climate Adaptation and Mitigation Program for Aral Sea Basin (CAMP4ASB) by providing support to adaptation activities in Tajikistan and Uzbekistan. Providing grants to the most vulnerable communities for climate resilient measures in priority areas, including to the poorest populations residing in risk-prone areas, and marginalized groups such as women. The CAMP4ASB Program is a World Bank Group program addressing both adaptation and mitigation support in the Aral Sea Basin. The program builds regional cooperation to the challenges of climate change. GCF investments will contribute to CAMP4ASB by addressing adaptation, initially in Tajikistan and Uzbekistan. This will target the poorest and most climate-vulnerable rural communities, benefiting farmers and village in particular. The facility will strengthen climate resilience and food security. Agricultural, land and water management practices will be implemented based on local agro-ecological conditions in order to strengthen climate change resilience. Investments via the facility will be demand-driven, but will include crop diversification, water resource management, rehabilitation of degraded land, conservation agriculture, livestock production improvements, agro-products processing, energy efficiency improvements and expansion of renewable energy sources.	2016-2021

		Synergies and coordination: This is a large and thematically wide-ranging umbrella program that includes an investment facility that has supported a large number of small family farms in Tajikistan in implementing climate resilient agriculture. Discussions will be conducted during the PPG phase to identify the key lessons and good practices from the CAMP4ASB initiative, including consultations with CAREC, the main execution partner. As previously indicated, key stakeholders and partners will also be potentially involved in the project communication and oversight mechanisms in order to ensure coordination.	
Promoting climate-adapted agriculture (CARITAS)	1,434,770 Swiss francs	The aim of the present project is to improve the living conditions of the rural population and contribute to the protection of natural resources in the east of the Kathlon region (Muminabad, Khovaling and Shurobad districts). Around 80 per cent of the Tajik population depend on agriculture and livestock farming for their livelihoods. Their income is often just enough for self-sufficiency. Climate change, lack of knowledge and outdated technologies have so far been obstacles to achieving an increase in income. The project promotes sustainable agriculture and improves the living conditions of poor farming families, particularly women. Courses are designed to provide the beneficiaries with knowledge about sustainability, productivity growth and marketing. Through close cooperation with the partners, it is possible to get better prices for the products and guaranteed sales volumes. Synergies and coordination: The proposed UNDP-GEF project will coordinate closely with this initiative, as there is some geographic overlap in the potential scope of the project. In addition, this project concept and PIF builds on some previous relevant efforts supported through CARITAS. The synergies and coordination between these initiatives will be further reviewed and analyzed during the PPG phase. The CARITAS project focuses more directly on agricultural value chains, while the proposed UNDP-GEF project focuses more on the conservation of biodiversity and ecosystem services, in relation to sustainable land use. The proposed project will identify potential synergies with the CARITAS project, and build on lessons and good practices.	01.09.2017 to 31.08.2020 (3 years)

Integrated natural resources management in drought-prone and salt-affected agricultural production landscapes in Central Asia and Turkey ("CACILM 2") (FAO, with multiple funding sources)	$76.0 million USD	The overall objective of "CACILM 2" is to scale up integrated natural resources management (INRM) in drought prone and salt affected agricultural production landscapes in the Central Asian countries and Turkey. Adoption of integrated landscape management approaches and INRM practices should help stabilize and even reverse trends of soil salinization, reduce erosion, improve water capture and retention, increase the sequestration of carbon, and reduce loss of agrobiodiversity, thereby reducing the desertification trend in terms of extent and severity. Synergies and coordination: The project will coordinate closely with this regional iniatitive. The major focus of CACILM 2 activities in Tajikistan is on climate adaptation and resilience of agriculture among small land holders. This includes capacity building for salinity monitoring, GIS monitoring, assessment of soils (salinity maps, degradation maps), assessments of vulnerability to climate change, timely cleaning of collector-drainage systems; wide introduction of bio-drainage technology; quality washing or use of planning technologies reducing salinity; increase of the soil productivity by soil enrichment with organic matters (organic fertilizers, crop rotation with pulses); scaling up areas with salt-resistant crops and introduction of new varieties (grain, forage, cultivated, herbs); and producing salt resistant varieties (halophytes) for biogas production. The majority of this focus is outside the scope of the proposed UNDP-GEF project concept, but relevant lessons and good practices will be incorporated in the project design during the PPG phase. Geographically the main focus of the CACILM 2 project in Tajikistan appears to be in the area of Kavan, which is outside the geographic focus of the proposed project.	2017-2021
Building Climate Resilience in the Pyanj River Basin (ADB, with PPCR funding)	$21.55 million	The Asian Development Bank is working with Tajikistan to help communities in the Pyanj River Basin prepare for the effects of climate change. The project aims to increase resilience to climate vulnerability and change of communities in the Pyanj River Basin. The project's impact will be improved livelihoods of Pyanj River Basin communities vulnerable to climate variability and change. The project's outcome will be reduced adverse effects of climate variability and climate change in 59 villages in 19 jamoats in the P	2013-2019

| | | anability and climate change in 39 villages in 19 jamoats in the P yanj River Basin. The project is protecting at least 1,700 hectares of land from floods; providing 1,450 hectares of land with irrigati on water; providing at least 4,150 households with a safe water s upply; and making microfinance services available to at least 1,0 00 households.

Synergies and coordination: This project is primarily an infrastruc ture project, but has the potential to provide synergies through im proved irrigation and sustainable land management in some of t he areas within the scope of the proposed project concept. The P yanj river makes up the southern border of Tajikistan (and the so uthern border of the Khatlon province), and provides the basis for a number of the KBAs within the scope of the proposed UNDP-G EF project. The assessment of further synergies and coordinatio n will be completed during the PPG phase. | |

II.1a.3) the proposed alternative scenario with a brief description of expected outcomes and components of the project;

The project's theory-of-change diagram can be found in the Annex E of the PIF.

To summarize the TOC: Poverty is identified a major cause for unsustainable management and environmental degradation, and lessons learned show that this cannot be addressed by capacity building and awareness raising alone, but requires investments in sustainable livelihoods and/or compensation schemes. The TOC diagram shows how project outputs can make the change, under corresponding assumptions. The project aims to address the poverty-environment nexus in all aspects of the project, including catalyzing community economic benefits from sustainable pasture and forest management. Therefore, within the available LD and BD funding, the three components below are investing directly on the ground into schemes that while providing alternative livelihoods to communities support long-term resilience of ecosystems. There is no expectation that a project of this size can completely address poverty in Tajikistan's lower Amu Darya landscape, which is why the project takes a highly strategic approach of targeting the geographic areas where human land-use activities are having the greatest impacts on critical ecosystems that provide key ecosystem services. The project activities under Outputs 1.2, 1.3, and 1.4 will include direct investments in sustainable livelihoods and potential compensation schemes. Under Output 1.2, the implementation of Joint Forest Management measures may include compensation schemes such as establishment of fast-rotation plantations to incentivize local communities from illegal cutting, and to create sustainable fuel supplies, and/or contracts to communities for directly managing the natural forest (and keeping them intact) for certain payments from Government. Under Output 1.3, for example, the project will invest in sustainable livelihoods by improving distant pasture transfers/stopovers, and better

watering facilities, with the aim to support incomes from livestock management. Under Output 1.4 the project will invest in sustainable livelihoods by potentially providing seed investments and planning support for the establishment of biodiversity-friendly agroforestry in strategic degraded land zones. These interventions are all interlinked through the strategic approach of catalyzing biodiversity-friendly sustainable land management in KBAs, and immediately adjacent sustainable use zones. All project activities are to be further developed and confirmed during the PPG phase.

The long-term solution for sustainable development and conservation of high value arid ecosystems in Tajikistan's lower Amu Darya landscape has multiple key goals. These include the effective conservation of biodiversity, and the maintenance of critical ecosystem services, including the productivity of lands for agricultural use. These ecological goals must be achieved within the context of supporting and securing sustainable and resilient livelihoods for local resource users, whose daily existence depends greatly on the integrity and productivity of these high value arid ecosystems. Therefore the long-term solution is one where government resource managers and local communities plan and implement integrated natural resource use practices that are biodiversity friendly, and support healthy soil and vegetation.

The project's innovative strategy leverages Key Biodiversity Areas within the wider landscape as the focal points for integrated sustainable land use management, with biodiversity benefits from mainstreaming. This approach is coupled with the use of protected areas as key mechanisms for conserving the most critical ecosystems within the wider landscape. The project strategy addresses the root causes and barriers described previously, by supporting resource managers' access to information about biodiversity distribution and about the dynamic carrying capacity of lands for livestock and crop production. In addition, the project strategy aims to develop the necessary capacity for implementing an integrated land use approach that provides safe havens for biodiversity, while supporting sustainable livelihoods.

Component 1 of the project focuses on addressing integrated sustainable management of biodiversity and land resources in the wider production landscape in and around high value arid ecosystems. The Lower Amu Darya is primarily a production plandscape, with 75% of the territory used for agricultural production. Therefore enhancing the sustainability of various forms of agricultural production is key for addressing the large-scale land degradation that exists in this region, which is primarily driven by poor land and water management, such as poor irrigation techniques, overgrazing, unregulated forest use and cutting. Key to the integrated approach is appropriate integrated spatial planning to determine optimum landuses for different soil types, ecosystems, and climatic conditions. The integrated approach unlocks a range of benefits, including improved biodiversity conservation through biodiversity-friendly land uses in and on the margins of KBAs, such as the use of agroforestry. The targeted high value arid ecosystems – the 12 KBAs indicated previously – cover 655,000 ha, and only about 25% of these areas are covered by formal protected areas. In any case, the protected areas are not fully exclusionary, and do allow types of anthropogenic use within their boundaries. Therefore, for these high value arid ecosystems it is critical that the agricultural production (both livestock and crops) be undertaken in an integrated, well-planned manner that ensures biodiversity is not threatened, and that land resources are not degraded. Therefore the first component of the project supports resource managers and resource users to identify potential conflicting and unsustainable land uses, and to plan and implement sustainable approaches, including the restoration of already-degraded lands.

Output 1.1: The project will support integrated spatial planning in 3 priority districts in order to mainstream biodiversity in land use planning. The priority districts will be identified during the PPG phase through an analysis of relevant key criteria. There are 12 districts that include portions of designated KBA areas (out of the approximately 24 districts in Khatlon province, which encompasses the lower Amu Darya landscape). During the PPG phase the exact number and specific districts to be involved in this activity will be confirmed. The project will work with district governments to create spatial plans (or update existing ones, in cases where they may already have been completed) that identify KBA areas within their territory, map land use, and identify zones and management practices for biodiversity-friendly land use (e.g. low-intensity rotational grazing, agroforestry, corridors and transition zones, etc.). The land use plans to be designed and launched under Output 1.1 will focus on land-uses that will ensure economic income for local communities without surpassing the carrying capacity of ecosystems. Output 1.2 specifically addresses dryland forest ecosystems as HCVF, and promotes steps for their sustainable management. The project will develop guidelines for the management of dryland HCVF, and will integrate corresponding management measures in the management plans for 2-3 forestry units (number and specific units to be confirmed at PPG phase). The total HCVF area covered is preliminarily calculated as 8,000 ha, and will be confirmed during the PPG phase; the definition of "forest" area depends on the density of canopy cover used to define forest. The forest area at >30% canopy cover in the areas with KBAs is approximately 2,750 ha (2010 data from Global Forest Watch), although the HCVF area calculated based on >10% canopy cover is expected to be much higher (and dryland forests are often defined as having even less than 10% canopy cover). Under this approach, the project will support measures to implement community-based joint forest management; this can include: fast-rotation plantations to deter local communities from illegal cutting and create sustainable fuel supplies, contracts to communities for directly managing the natural forest (and keeping them intact) for certain payments from Government. Additional details and specific activities to be implemented under the project to address the threat of unsustainable fuelwood harvesting in HCVF will be further elaborated in during the PPG phase based on more detailed baseline assessments of the specific project sites to be targeted. This is one of the outputs that will have a particularly strong focus on gender mainstreaming as well. The project will also support nurseries for critically threatened wild tree species, such as wild almond, wild pear, wild apple, and wild hawthorn. Output 1.3 focuses on the pasture zones within the KBAs. The project will work with local resource users in 2-4 priority pasture zones (covering ~70,000 ha) to develop and implement pasture management plans that ensure stable sustainable income from livestock management but so that the pasture carrying capacity is not exceeded, including techniques such as rotational grazing, and leaving some standing forage. The pasture management plans will have biodiversity considerations mainstreamed in grazing practices. This output involves benefits for hundreds of direct users, since the idea is to create, jointly with the communities, a system of pasture rotation, improve distant pasture transfers/stopovers, and better watering facilities, with the aim to maintain incomes from livestock management but without compromising the carrying capacity of the arid pasturelands. Through this process, it is preliminarily estimated that 22,000 ha of degraded pastureland (out of the 70,000 ha targeted in total) will be restored. Output 1.4 supports sustainable, biodiversity-friendly local livelihoods by restoring currently degraded lands to productive, biodiversity-friendly agricultural practices, such as agroforestry. Research on degraded land in Tajikistan has concluded that agroforestry is one of the least degraded types of land use in the country. This output will target key degraded areas in and around local communities within or adjacent to high value arid ecosystems, and will have a strong replication component to catalyze further up-scaling. This activity will also support sustainable and resilient livelihoods for local communities, with the additional benefit of reducing negative impacts on biodiversity

Component 2 of the project focuses on ensuring that the protected areas in the wider landscape function as they were intended, in order to conserve biodiversity and serve as a source of genetic diversity for ecosystems beyond their boundaries. There are 7 existing legally recognized protected areas in the scope of the project, covering approximately 157,671 ha in total. This component corresponds with GEF-7 biodiversity focal area objective 2-7, which states that the GEF will "address direct drivers to protect habitats and species and Improve financial sustainability, effective management, and ecosystem coverage of the global protected area estate." As previously discussed in the above section on "Threats, Root Causes and Key Barriers", the direct drivers of biodiversity loss are overgrazing, poor agricultural practices for agriculture (leading to various forms of land degradation), illegal cutting of forests (most commonly for fuelwood), and illegal and unsustainable taking of natural resources (i.e. poaching, in various forms). The project will analyze the integration of the legally recognized SPNAs in the wider landscape, and in relation to their KBA coverage, considering the presence and recognition by resource users of the SPNAs and

their buffer zones. To address the drivers of encroachment from livestock or other forms of agricultural encroachment (leading to various types of degradation), this component is closely integrated with Component 1, specifically the project activities on improving management of forests and pastures (Outputs 1.2 and 1.3). The project will ensure that SPNAs are recognized not just legally, but in reality in land management on the ground. In circumstances where certain types of land use, such as grazing, may be allowed within SPNAs or within adjacent high value ecosystems, the project will assist local resource users to develop land use approaches drawing on global best practices in order to avoid negative impacts on biodiversity. The project will address illegal cutting of trees for fuelwood through multiple possible activities, such as providing alternative fuel sources (e.g. designated fuelwood lots, using fast-growing trees of relatively lower conservation value, using other potential biomass-based fuel sources, leveraging additional public or other investments in solar or natural gas), and increasing fuel-use efficiency (e.g. energy efficient stoves, etc.). The government's long-term strategy for energy independence in Khatlon province is based on continuously progressive rural electrification, which is expected to receive major advancements over the next decade, as multiple large-scale hydropower plants are currently under construction within the province. At the same time, the project will discourage encroachment and illegal cutting in and around SPNAs through modified land use management regimes in SPNA buffer zones and corridors, and improved monitoring and enforcement of SPNA boundaries. All approaches will be supported and supplemented through community-outreach and education and awareness building activities under Component 3. Specific direct threats to the individual SPNAs targeted by the project will be further analyzed during the PPG phase, with the targeted project activities to be defined based on more detailed analysis of the baseline situation at the local level. The project will support strengthening the management effectiveness of the SPNAs through individual capacity development for the SPNA staff, and the provision of critical management infrastructure and equipment (e.g. for biodiversity monitoring, enforcement, etc.). In addition to the existing 7 legally recognized large-scale SPNAs, the project will test the approach of using legally recognized Plant Micro Reserves to effectively conserve highly endangered tree, shrub, and flowering plant species through community-based management. These rare species are crop wild relatives that are important for agrobiodiversity in the region. The high-value biodiversity found in many of the KBAs are rare and endangered plant and tree species, such as numerous wild tulips, and wild almond, hawthorn, pear and apple species. Rare plants and trees are often located in stationary small patchy areas that often simply need to be protected from grazing or fuelwood cutting. The project will work with local communities to identify and establish legally recognized "micro reserves" (1-100+ ha) that can effectively conserve these species without the cumbersome process of establishing large-scale protected areas that restrict land use across large areas.

Output 2.1 aims to improve the integration and management of existing SPNAs in the production landscape. This will be achieved by enhancing the knowledge base regarding the status, land use, and coverage of the SPNAs, and by identifying the specific areas of conflicting land use or other threats to biodiversity harbored in the SPNAs. The project will produce high resolution land use maps for the 7 targeted legally recognized SPNAs including buffer zones, and the surrounding land use. The results from this output will serve as key inputs for the integrated spatial planning activities under Output 1.1. Output 2.2 directly focuses on improving the management effectiveness of the 7 targeted legally recognized SPNAs covering 157,671 ha of high value arid ecosystems. The project will support measures such as support for community engagement and outreach, critical training and equipment for staff, and improved infrastructure necessary for the SPNAs to meet their biodiversity conservation objectives. During the PPG phase the project will conduct a capacity needs assessment of the staff and SPNAs in order to identify the priority areas for key investments. The project will also work to enhance the SPNA management plans to ensure they meet current international good practices. Under Output 2.3 the project will introduce the tool of legally recognized Plant Micro Reserves (PMRs) in Tajikistan (and Central Asia). This strategic mechanism and approach will be useful for the conservation of rare and endangered crop wild relative species. Large scale protected areas are necessary for biodiversity conservation in some instances, particularly when the species targeted is highly mobile, such as large mammals or migratory birds. However, in the case of plants, individual target species are typically stationary, and located in small patchy concentrations across the landscape. In this case, smaller targeted protected areas (1-100+ ha) may be used to effectively conserve key species across the landscape, without the challenges often presented by large-scale protected areas. This output primarily is relevant to and supports the GEF's strategy under

objective 1-4, relating to agrobiodiversity. Conserving rare and endangered crop wild relatives in-situ in the Lower Amu Darya region (within the Central Asia recognized Vavilov Center), will improve rural livelihoods, develop more sustainable agriculture practices, and improve ecosystem function and the provision of ecosystem services in production landscapes. Conservation of these genetic resources will also provide resilience and adaptability under changing climatic conditions. This approach allows continuing evolution and adaptation of cultivated plants, and also meets the needs of rural communities, especially women, who often depend on agricultural biodiversity for their livelihoods through its contribution to food security and nutrition, medicines, fodder, building materials and other provisioning services as well through support for ecosystem function. Women's participation will be particularly critical, given the primary role that women play in agrobiodiversity management. PMRs, while conserving crop wild relatives, will at the same time conserve non-agricultural endemic plants occupying the same ecosystems, generating biodiversity conservation synergies beyond just agricultural diversity. This output is also relevant to the GEF's strategy under objective 2-7 by increasing the ecosystem coverage of the global protected area estate. As previously discussed in the earlier section on the context of protected areas in Tajikistan, high value dryland ecosystems in Tajikistan are greatly under-represented in Tajikistan's national protected area network. The project does not anticipate greatly expanding SPNA coverage in terms of geographic area, but this output will make a significant contribution through highly focused and strategic coverage of critically endangered plant species, and importantly, testing the PMR mechanism as a promising strategy for the conservation of rare plants in Central Asia, which is recognized as a Vavilov center of origin for a variety of crop wild relatives. The project will work with local communities to identify and implement at least 5 PMRs totaling at least 500 ha. The project will support experts to identify concentrations of rare and highly endangered plants and trees. The project will work with local communities to identify areas that may be appropriate for establishing PMRs that can be monitored and enforced by local communities, without additional layers of administration and oversight. The PMRs will be legally recognized at the appropriate administrative level, and monitoring and enforcement arrangements will be organized through community-based approaches, facilitated through local community-based organizations or local government bodies. The specific details of the approach will be elaborated during the PPG phase, through further consultation with national experts and local communities. Potential PMR sites may be identified during the PPG phase. To help secure the PMRs the project may invest in some limited practical protection measures, such as partial fencing for PMRs.

Component 3 of the project is aimed at ensuring effective and efficient knowledge management, as well as strong project implementation through partnerships, coordination, and M&E. This component tackles the issues of poor awareness and understanding about dryland biodiversity, the documentation and awareness of Key Biodiversity Areas within the wider landscape, and the potential value of well-integrated and well-managemend SPNAs in conserving these areas. In addition, this component will support knowledge management through capacity development for LDN monitoring.

Output 3.1. will comprise the project's education and awareness efforts. These will be targeted at two levels: From one side the project will take an innovative approach of targeting institution-level decision-makers and policy stakeholders through policy briefs and targeted media efforts. To support the success of project activities at the site-level, the the project will also implement an education and awareness campaign for local communities in the high priority sites where a majority of project activities will be carried out. This will support achievement of outcomes through raising the awareness of local resource users about globally significant biodiversity, and measures to conserve biodiversity, including raising awareness about PAs within the landscape. This output will also include multiple forms of capacity strengthening for LDN monitoring in targeted areas, such as training for land managers on LDN monitoring methods, and support for rolling out national LDN monitoring in the targeted project areas.

<u>Output 3.2</u> encompasses the project's coordination with other initiatives, and project monitoring and evaluation, including the mid-term review and terminal evaluation.

II.1a.4) alignment with GEF focal area and/or Impact Program strategies;

The project is consistent with the objectives and will contribute to the outcomes and outputs of the GEF's <u>Biodiversity</u> focal area. By the end of the project 305,850 hectares of production landscape under improved management, excluding SPNAs (including 500 ha of PMR). 157,671 hectares of protected areas will be under improved management effectiveness.

The project is also supportive of the <u>Land Degradation</u> focal area strategies, as it focuses on improved integrated and use planning, and on practical improvements in soil and vegetation quality. As a result of its activities, 22,000 ha of land will end up with improved soil organic carbon content and vegetation cover, supporting the LDN principles and national targets. Further, 650 hectares of degraded High Conservation Value Forests will be restored through reforestation and establishment of agroforestry.

While the project is not directly participating in the <u>Dryland Sustainable Landscapes Impact Program</u>, the project is fully in-line with and supportive of the GEF's strategy developed through this impact program. The Lower Amu Darya landscape in Khatlon province is almost entirely semi-arid drylands. The landscape is primarily a production landscape, with 75% of the territory used for agricultural production. Therefore, enhancing the sustainability of agricultural production is key for addressing the large-scale land degradation that exists in this region, which is primarily driven by poor land and water management, such as poor irrigation techniques, overgrazing, unregulated forest use and cutting. Key to the integrated approach is appropriate integrated spatial planning to determine optimum land uses for different soil types, ecosystems, and climatic conditions. The integrated approach unlocks a range of benefits, including improved biodiversity conservation through biodiversity-friendly land uses in and on the margins of KBAs, such as the use of agroforestry. The project activities will be directly targeting small holders and pastoralists; in the northeast of Khatlon province (one of the expected priority area of the project) the average household landholding is 2-10 acres, and livestock sales represent the main source of income for most households. The project will improve the management of forest and land resources (under Output 1.2), including livelihood diversification through expansion of agroforestry (under Output 1.4), land restoration, sustainable land management, and sustainable pasture management (under Output 1.3). Water is a scarce resource in this dryland landscape, and therefore improving land management in targeted areas will increase resilience to droughts exacerbated by climate change. Increasing the sustainability of livelihoods through promotion of agroforestry will also increase resilience of local communities, and will improve food security by diversifying food sources.

II.1a.5) incremental/additional cost reasoning and expected contributions from the baseline, the GEFTF, LDCF, SCCF, and co-financing; and II.1a.6) global environmental benefits (GEFTF) and/or adaptation benefits (LDCF/SCCF);

State of ecosystems under baseline	Summary of GEF incremental intervention	Benefits

ine

Biodiversity

Baseline government support for the 7 protected areas in the landscape covering 150,000 ha will continue to be at the most basic level, and the SPNAs will continue to have low management effectiveness, failing to fully achieve their biodiversity conservation objectives. The SPNAs will continue to be inadequately integrated in the wider landscape through implementation of land use planning that fully mainstreams biodiversity considerations. Under the baseline situation the identified 12 high value arid ecosystems covering 655,000 ha of Tajikistan's lower Amu Darya landscape will continue to have their biodiversity degraded, as resource use is unsustainable and land use patterns do not adequately reflect biodiversity considerations. More than 8,000 ha of HCVF dryland forest in the landscape will continue to be degraded through overgrazing, with additional losses of already highly-depleted forest zones. Populations of threatened species are likely to continue decreasing due to loss of habitat, poaching, and poor natural regeneration. These include: numerous fruit and nut trees that are wild relatives of important agricultural varieties, including two species of wild almond (Amygdalus bucharica, Amygdalus vavilovii), two species of wild hawthorn (Crataegus darvasica, Crataegus neco	· Capacity strengthening for improved management effectiveness of 7 PAs covering >150,000 ha of KBAs in high value arid ecosystems · Establishment of at least 5 community-managed Plant Micro Reserves (PMRs) covering at least 500 ha, demonstrating the potential feasibility and effectiveness of this conservation approach for securing rare and endangered plant populations · Improvement in integration of PAs in wider production landscape, with 3 district level spatial land use plans mainstreaming biodiversity considerations · Improved monitoring and enforcement of natural resource use regulations in KBAs and other areas beyond SPNAs borders in 5 target districts. · Recognition in local development and resource-use planning of the establishment of a landscape-level approach to biodiversity conservation for the high value arid ecosystems in the lower Amu Darya landscape, with improved connectivity between PAs through	· Strengthened Tajikistan PA system with improved management effectiveness for >150,000 ha of existing SPNAs in the high value arid ecosystems · Improved conservation status of rare and endangered species within PA boundaries due to improved monitoring and enforcement · Management effectiveness of the existing (>150,000 ha) PAs in the lower Amu Darya landscape is increased by an average of [50-100]% over the baseline (measured by METT). · Biodiversity conservation principles integrated in territorial plans of 3 administrative districts (>250,000 ha), including the State Forest Fund territory managed by leskhozes and municipal pastureland territory in the two districts. · Conservation of globally significant crop wild relatives related to agrobiodiversity, through removal of threats (elimination of grazing, and elimination of illegal wood cutting) in 500 ha of stands and patches of highly threatened tree and plant species; resulting in increased protection of globally threatened a

pinata), three species of wild pear (Pyrus cajon, Pyrus tadshikistanica, Pyrus korshinskyi), and one species of wild apple (Malus sieversii). Also threatened are five species of wild tulip (Tulipa maximowiczii, T. praestans, T. rosea, T. subpraestans, T. tubergeniana), a wild poppy (Anemone bucharica) and wild iris (Iris hoogiana). Key threatened birds include the Saker falcon (Falco cherrug), Egyptian vulture (Neophron percnopterus), and MacQueen's bustard (Chlamydotis macqueenii).	buffer zones and corridors throughout KBAs (including HCVF stands) · KBAs in forest and pasturelands outside SPNAs are identified, recognized in management documents, and resource use is managed in accordance with biodiversity requirements. · Under-represented biodiversity is studied and monitored on a systematic basis.	griculturally significant · The project results contribute to CBD PoWPA (expansion of SPNAs, integration of SPNAs in wider landscapes, and community engagement schemes) and Aichi targets.

Sustainable Forest and Land Management

Continued degradation of rare and highly threatened wild fruit and nut trees in HCVF of lower Amu Darya landscape: Illegal wood cutting in forests in valuable ecosystems for fuel wood and local construction; Poorly managed grazing in forests causing low natural regeneration of forests; Forest lands encroachment for agriculture and settlements; Unsustainable harvesting of non-timber forest products.	· Sustainable use principles integrated in forest management plans for 8,000 ha of forests identified as HCVF; · Adjustment of volume, timing and mode of sanitary cutting to ensure ecological principles, and harvesting of non-timber resources in wild fruit and nut forests, in line with ecosystem carrying capacity principles; · Reforestation of 150 ha of degraded forests; · Support for natural regeneration in 500 ha of degraded forests; · Sustainable management of grazing in forest pastures to support natural regeneration; · Training of forest worth	· 8,000 ha of HCVF identified and put under SFM insuring stability of ecosystem functions, such as genetic reserves, and key habitats for biodiversity. · 650 ha of degraded forests regenerated. · Key biodiversity areas in forest zones identified, demarcated, and managed appropriately as SPNAs and buffer zones to ensure ecosystem cohesiveness and good habitat quality for threatened and globally significant plants and wildlife.

	· Training of foresters and communities in forest management planning and enforcement of HCVF standards.	
Pasture managers do not have capacity or data to implement sustainable grazing and land management practices in their respective pasturelands

Overgrazed pastures: exceeding carrying capacity by [1.5-2] times resulting in reduced provision of ecosystem services, leading to reduced economic and ecological productivity, and diminished livelihoods;

Livestock numbers continue to increase beyond ecological carrying capacity;

Increased extent of less palatable grass and plant species, indicating degradation of pasturelands;

Pasturelands in forest territory are not managed in a coordinated and cohesive manner;

Poor agricultural land management near protected areas;

Wildlife is negatively impacted by livestock presence in key biodiversity areas at critical times of year. | · Ecosystem services valued and incorporated in territorial planning based on multi-stakeholders engagement;

· Dynamic pasture quality inventory integrated annually into grazing plans;

· Sustainable pasture management practices implemented: rotational grazing to maintain soil upper layer; stimulate grasses for vigorous growth and healthy root systems through pasture watering and setting additional watering places and wells; increased investments in repair and maintenance of key pasture infrastructure (bridges) allows greater flock mobility; using the grazing process to feed livestock through maintaining soil cover and managing plant species composition to maintain feed quality.

· SLM best practices are applied across sectors and integrated management approaches are applied across different land use sectors in wider lower Amu Darya landscape as result of replication.

· Investments made in local v | · Competitive pressures between land uses in foothills pasture and forest landscapes reduced in productive lands of 3 administrative districts (>250,000 ha, including 70,000 ha of pasturelands);

· Improved vegetation cover, fodder productivity and pasture regeneration throughout 22,000 ha of degraded pastureland;

· Decrease in grazing pressure and improved condition of grassland ecosystems over 70,000 ha;

· Well-functioning ecosystem services, such as forage productivity at pastures, stable water flows, and reduced erosion;

· Enhanced security of agricultural livelihoods for 20,000 rural, mostly poor, inhabitants;

· Increased incidence of SLM approaches applied by small-scale holders leading to soil and vegetation quality improvements. |

	investments made in local v alue added processing to sup port sustainable and resilient livelihoods, serving as a sust ainable financial support mec hanism, and which could pro vide direct benefit to over 20, 000 residents in the 7-10 year s immediately after the proje ct.	

Capacity Development and Knowledge Management

Pasture managers do not have capac ity to implement sustainable land man agement in lower Amu Darya landscap e; Forest managers in areas with high c onservation value arid forest ecosyste ms do not have knowledge and capaci ty to apply HCVF approach to forest m anagement in State Forest Fund lands; Protected area managers in lower A mu Darya landscape do not have capa city for effective SPNA management; Baseline information on the distributi on, abundance, seasonality and recruit ment rates of rare and endangered spe cies remains incomplete;	· Provide data and knowledg e management tools to supp ort implementation of SLM; · Raise awareness of HCVF a pproach, and train foresters o n implementation; · Provide equipment and train ing for SPNA managers in lo wer Amu Darya to improve m anagement of SPNAs; · Host training sessions for r esearchers, scientists, acade mics, volunteers, students, N GO staff, government field st aff, etc. on biodiversity, includ ing monitoring and reporting; · Increase the coverage of ca mera traps, aerial surveys an d aerial photography for moni toring and reporting on rare a nd endangered biodiversity, a nd for enforcing regulations; · Facilitate the participation a nd involvement of national sc ientists, researchers, manage	· Increased understanding and awareness of resource users a nd extension staff in 3 priority districts on sustainable land m anagement practices · Increased management capa city of approximately 200 fore st management staff in unders tanding and awareness of HC VF management principles, su pporting sustainable forest ma nagement and biodiversity con servation · Enhanced management capa city of staff in 7 SPNAs (50-10 0 staff) for improved SPNA ma nagement, and improved moni toring of biodiversity in SPNAs covering >150,000 ha. · Improved data quantity and q uality on biodiversity, land stat us, and land degradation to fa cilitate improved management · Enhanced engagement of Taj ikistan in regional and global c

...rs and academics in regional/international biodiversity conservation initiatives.	...ooperation for improved management of resources, especially with countries down stream of the Lower Amu Darya river in Tajikistan.

Note: The PIF design has been developed in accordance with the **LDN Checklist developed by UNCCD** (https://www.thegef.org/documents/checklist-land-degradation-neutrality-transformative-projects-and-programmes-draft). Summary of project's adherence to the checklist:

Criterion A: Fundamental LDN principles:

- Use landscape approach: Lower Amu Darya river basin landscape (pls. ref Part II Target landscape, and maps).

- Promote no-net loss: Component 1 includes activities to support the no-net-loss national target for the landscape. Current indications are that the Government of Tajikistan is proceeding with defining a national LDN target with the support of other development partners; this will be further discussed and confirmed during the PPG phase. The project will support the target-setting process as much as is relevant, and then once a target is formalized, during the course of implementation the project will fully contribute to achieving the target. The project also support's the country's Bonn Challenge national target.

- Avoid-reduce-reverse hierarchy. The project applies integrated planning, which supports an approach of avoiding future degradation through appropriate planning. Output 1.1 will identify areas where productivity loss is going to be avoided, as well as areas that need mitigation or restoration. Concrete investment to reduce and reverse degradation is supported under Outputs 1.2, 1.3, and 1.4.

- Contribute to sub-national targets. Under Component 1, the project supports sub-national (landscape-based) target degradation targets and implements key activities to support achievement.

- Be site/country-tailored. The project has been fully tailed to the national and landscape context.

- Include LDN monitoring system: present as part of Output 3.1.

- Gender considerations and stakeholder engagement: Addressed, please see a corresponding sub-sections.

Criterion B. Deliver multiple benefits:

- link to multiple SDGs, focal area benefits and sustainable livelihoods: This is the essence of the project, its rational, objective and design are fully in line with the multiple-benefits philosophy.

- Provide economic incentives to local actors: The project incentivizes local actors away from destructive behavior through engaging them in alternative economic activities (e.g. Output 1.2 and 1.3), as well as biodiversity-friendly livelihoods under Output 1.4. Other incentive mechanisms are discussed in Section Private Sector Engagement.

- Base land decisions on the "assessment" approach: The integrated and multi-stakeholder nature of land use planning is fully evidenced form Output 1.1.

Criterion C. Promotion of inclusive governance:

- safeguard land rights of local users: As explained in the description of Output 1.1, the idea behind the integrated land use planning is exactly about ensuring that the rights of land users are respected while enabling them to derive maximum long term benefits form use of ecosystem products and services. UNDP has a Social and Environmental Safeguard Procedure (SESP) which screens projects (including for this criterion) and does not allow projects that do not comply.

- ensure prior informed consent; avoid forced displacement; put in place grievance redress mechanism: Addressed through UNDP SESP protocol (mentioned above).

- define gender responsive engagement: Addressed, as discussed in the corresponding subsection.

Criterion D. Promotion of scaling out:

- Employ science-based approaches and local knowledge: The project will be based on cutting-edge science and consideration of established good-practices in development of all of its outputs.

- Apply innovation: Addressed, please refer to the innovation sub-section.

- Capture and disseminate knowledge: Knowledge capture and dissemination is addressed through Component 3.

Criterion E. Enhance national ownership and capacities.

- employ awareness raising, public campaigns, education and capacity building: The project does this through Output 3.1, as well as through the fact that implementation of investment activities (e.g. Outputs 1.2, 1.3, 1.4) are clearly based in the current national baseline programs and co-financing.

- identify and obtain co-financing: This is addressed as part of a GEF standard for ensuring co-financing.

- ensure sustainability: Addressed, as per sustainability sub-section.

Criterion F. Promoting innovative financing:

- include/prepare for a component that leverages private sector mobilization: The project does this, as feasible within the context of the country, as further discussed in the Private Sector Engagement sub-section.

- foster income generation for communities: The project creates alternative income generation through agroforestry, engagement in regeneration of high conservation value forests, as well as improved livestock productivity from sustainable pasture management (Output 1.3).

II.1a.7) innovation, sustainability and potential for scaling up.

Innovation

The project includes multiple innovative approaches. The overall project strategy is highly innovative in the region; the project will leverage Key Biodiversity Areas as focal points for implementing an overall integrated sustainable land use approach that provides socio-economic, land restoration, and biodiversity conservation benefits. There are no other existing examples in the region where Key Biodiversity Areas form the foundation and starting point for rationalized land use (the Critical Ecosystems Partnership Fund also takes this approach, and is expected to begin operation in the region in late-2019). Perhaps the most innovative specific aspect of the project is the introduction of the concept of Plant Micro Reserves (PMRs), which has so far not been introduced anywhere in Central Asia. This is an effective alternative approach to protected areas that can be used to specifically target rare, endangered and highly valuable plant species, including agriculturally significant crop wild relatives. The PMR strategy introduces the concept that large contiguous SPNAs are not necessarily required for the effective conservation of some highly valuable species, if those species are in concentrated patchy areas throughout the landscape, as many plants are. This innovative approach, promoted through PMRs for the first time in Central Asia, can become a new modality for protecting endemic species and agricultural wild relatives. The engagement of local communities in the establishment and effective management of PMRs further enhances the innovativeness in Tajikistan. The project will leverage the latest in remote sensing technology and data to clearly identify and map KBAs and corresponding SPNAs in the wider landscape, in order to support local decision-makers in spatial land use planning that is sustainable and conserves critical biodiversity. Technology will also be applied in the project's activities supporting the strengthening of SPNA management effectiveness, as the project will support SPNA staff with the introduction of new technologies to enhance the efficiency and effectiveness of monitoring, patrolling and enforcement, including the use of camera traps, and possibly drones.

Sustainability

Sustainability of the project results will be ensured through attention to the four elements of sustainability – financial, institutional, socio-political, and environmental. Project sustainability will ultimately depend on ensuring the full ownership of the project outputs and activities by the responsible public institutions, and securing their long-term commitment (regulatory, policy, funding and resources) to scale-up and replicate best practices in biodiversity-friendly sustainable forest and pasture management. Sustainability will be secured through strengthened government commitment to both sustainable management of land resources, and the effective management of protected areas in the Lower Amu Darya landscape. Sustainability of the results achieved by projects are supported by support of local population, micro-credit organizations, local Agri industrial complexes and private contributions to projects in technical aspect and lands provided under implementation of projects. Support of other donors and international organization in implementing the joint activities, such as the small grants and establishment of micro-credit organizations through local banks with small interest. The enabling environment regarding sustainable land management is under constant progressive development in Tajikistan, with numerous recent advances in relation to pasture and forest management, as well as the national protected area network. For example, Tajikistan has adopted modernized forest management (2011) and pasture laws (2013) within the past decade, and the country remains on a path of continued improvement in the development of bylaws and regulations, and support for nation-wide implementation of these recently adopted laws. The national government is partnering with numerous development partners, including multilateral donors and civil society organizations to further this effort. This continued development of the enabling environment will fully support the socio-political and institutional and governance aspects of sustainability of the proposed project. Local communities and governments will be empowered with increased capacity in ecosystem and biodiversity data, mapping, and planning to continue implementing sustainable land use practices in and around KBAs.

In addition, government support for sustainable agriculture through the Ministry of Agriculture will further underpin the long-term sustainable land use in the project's target areas. In addition, the project's approach of strengthening the effective management of SPNAs within the wider landscape will be sustained through the government's ongoing strengthening commitment to the effective management of the national system of SPNAs. Institutional sustainability will be promoted in the project by strengthening and expanding the current capabilities of the key institutions that are directly responsible for the planning and management of protected areas, natural habitats, pastures and forests across the Lower Amu Darya landscape. It will assist in building a professional corps of well-trained, adequately resourced and properly equipped management, monitoring, enforcement, community and pastoral extension service personnel, forest business units, districts and jamoats. The PIU will, during the course of project implementation, iteratively develop an institutional sustainability plan to ensure that the different project investments in building the capacity of the targeted institutions are maintained (and scaled-up, if feasible and affordable) beyond the term of the project. Socio-economic sustainability will be enhanced in the project by improving the living conditions of rural communities. This will be achieved through the implementation of incentives to encourage an incremental shift to more sustainable land use (focused on grazing and forest use) practices. The project will facilitate the economic benefits of communities living around targeted KBAs to help reduce illegal and unsustainable activities. The project will also help rural communities to plan, source funding for and implement alternative livelihoods; in addition the project will support rural communities and local governments to establish woodlots, plant fruit and nut orchards and install alternative fuel and energy technologies to reduce pressures on forests for fuel and energy needs. The project will work through (and assist in establishing, where these have not yet been constituted) local governance structures - including Park Management Committees and Pasture User Associations - as means of improving the communication, collaboration and cooperation between tenure holders, rights holders, natural resource users and the relevant state, regional and local administrations. Environmental sustainability will be enhanced by reducing degradation of land and forest resources in areas around KBAs, to further support the maintenance and conservation of biodiversity. The project will also enhance the monitoring and enforcement of regulations and laws related to the conservation of biodiversity and management of SPNAs. The project will reduce pressure on forest resources through increased awareness and enhanced socio-economic benefits for local communities within the project's target areas.

Catalytic Role: Potential for Replication and Scaling-up

Replication of good practices developed by the project will be achieved through the direct replication of selected project elements and practices and methods, as well as the scaling up of experiences. The following activities have preliminarily been identified as suitable for replication and/or scaling up: (i) remote-sensing data based mapping of KBAs, degraded landscapes, and forests and pastures for sustainable use; (ii) implementation of the Protected Areas Management Effectiveness Tracking Tool to track SPNA performance and identify areas for strengthening; (iii) formalizing and implementing co-management agreements for SPNAs and forests; (iv) establishment of Plant Micro Reserves as a tested approach for conservation of rare and endangered plant species; (v) advanced monitoring and enforcement methodologies using new technologies such as geo-referenced monitoring, camera traps and possibly aerial devices such as drones; and (vi) application of agro-forestry as a mechanism to reduce and combat land degradation.

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[1] Source: "Appendix 4: Site Outcomes" in *Ecosystem Profile: Mountains of Central Asia Biodiversity Hotspot*, Critical Ecosystem Partnership Fund, August 27, 2017.
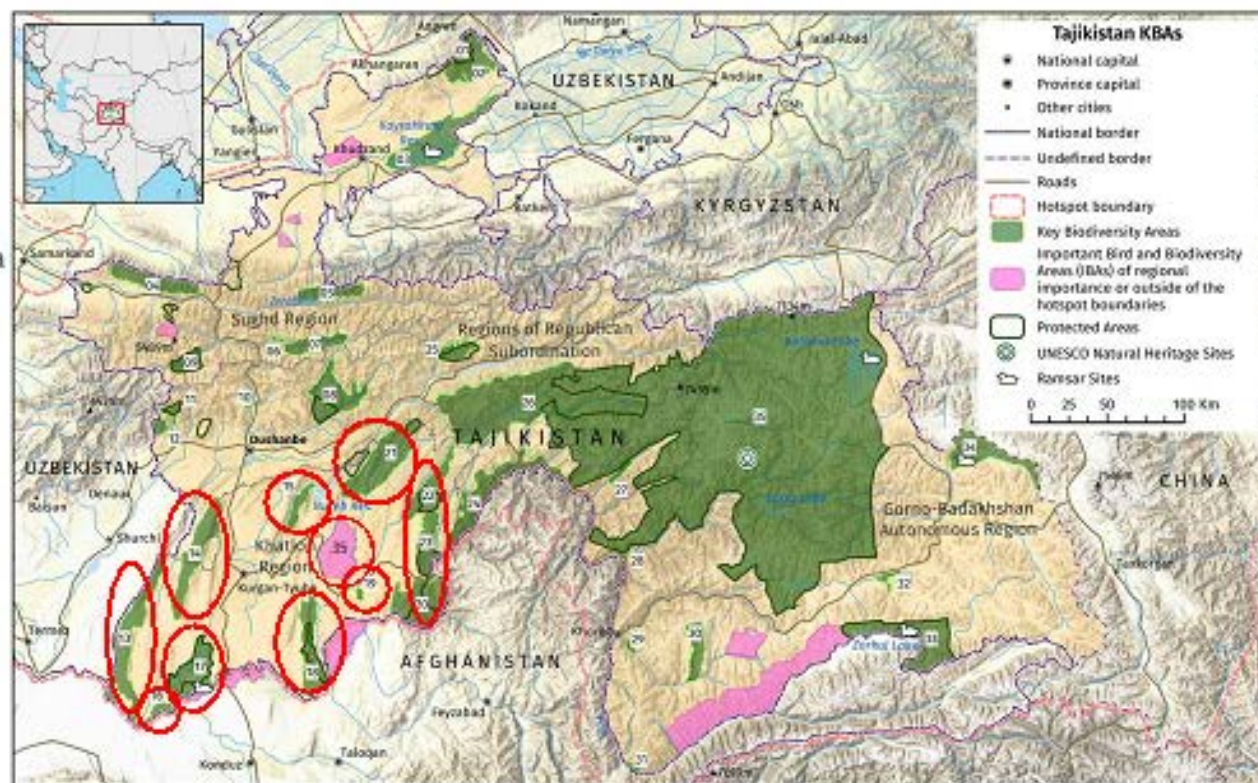
1b. Project Map and Coordinates

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

The project will take place in and around identified high-value ecosystems in the Lower Amu Darya basin, in Khatlon Province in Tajikistan. There are 12 identified high-value ecosystems. The project will have varying levels of intervention in each of these areas, with some targeted areas receiving more intensive interventions than others.

- ▶ 13. Tajik babatag - 85,000 ha
- ▶ 14. Gazimalik - 70,000 ha
- ▶ 15. Sarsaryak - 20,000 ha
- ▶ 16. Ayvaj - 22,000 ha
- ▶ 17. Tigrovaya Balka - 62,000 ha
- ▶ 18. Tajik Karatau - 60,000 ha
- ▶ 19. Khojamumin - 3,000 ha
- ▶ 20. Kushvoristan - 83,000 ha
- ▶ 21. Baljuvan - 94,000 ha
- ▶ 22. Muminabad - 46,000 ha
- ▶ 23. Dashtijum - 40,000 ha
- ▶ 35. Dangara - 69,441

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

Indigenous Peoples and Local Communities

Civil Society Organizations

Private Sector Entities

If none of the above,please explain why: Yes

The project concept was developed based on consultations with national government stakeholders, and with other multi and bilateral organizations that are currently active with relevant ODA activities in Tajikistan. The project concept is based directly on Tajikistan's identified national priorities for biodiversity conservation and land degradation, as outlined in the NBSAP and other strategic policy documents related to biodiversity conservation and land degradation. These policy documents have been developed through comprehensive participatory processes, involving input from various types of stakeholders, including those listed above. At this stage of project concept development, it has not been necessary to conduct a further round of consultation with stakeholders for project identification. All relevant stakeholders will be fully consulted during the PPG phase, which will be conducted in a fully participatory manner.

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.

The project preparation phase will be a fully participatory process, with frequent stakeholder consultations at various levels. Early in the project development process a comprehensive stakeholder analysis will be conducted to ensure all relevant stakeholders are identified and engaged. The preparation team will regularly meet with the key government partner, the State Committee for Environmental Protection. The preparation team will work particularly closely with the National Biodiversity and Biosafety Center (NBBC). Other national government stakeholders will also be regularly consulted, particularly the Ministry of Agriculture, specifically the seeds dept and pasture dept. At the sub-national level, the project preparation team will conduct field missions for consultations with local government at the district (rayon) and sub-district (jamoat) level in order to ensure the project is structured in a way that aligns with and supports local development priorities and addresses key barriers at the local level. The project will also consult with local resource users to collect detailed and specific data about local resource use, and critical local development issues. Local consultations will be conducted a minimum of 2-3 times in each targeted KBA. At the start of the project preparation process the project development team will hold a series of introductory workshops to present the general concept to local stakeholders, and receive initial feedback. Additional inputs will be collected in a one-on-one basis throughout the preparation period. The project preparation team will then hold a project validation workshop toward the end of the preparation process to present the final draft project framework to all stakeholders, and receive any further final feedback, which will then be incorporated in the final project design. Civil society organizations will also be frequently consulted during the project preparation process, with consultations at the national and local level.

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).

The project will be fully in-line with and supportive of both the GEF's and UNDP's gender mainstreaming policies. A full gender analysis will be completed during the PPG phase, which will be the basis of a project Gender Strategy and Action Plan. UNDP's gender mainstreaming strategy requires gender disaggregated indicators, and these will be included in the project results framework. There are numerous ways in which gender dimensions are relevant to the project. The project addresses multiple types of agricultural land use, all of which have important gender dimensions, as they relate directly to the sustainability of local livelihoods. The project will work to improve the sustainability of livestock grazing in and around KBAs. Although women are not typically directly involved in livestock grazing, they can be involved in decision-making about grazing plans, and in the processing of livestock products. The project will also work on improving land and water management in key areas. Women do typically have a more direct role and higher level of involvement in the production of food crops. The project will ensure that project activities relating to improved land management, such as local trainings and local decision-making mechanisms have appropriate and adequate gender representation. The project will also be working on improving management of protected areas, and will also ensure the engagement of women in decision-making bodies related to protected areas, such as local management boards. Considering the important role of women in land use decision-making, the project activity on establishing Plant Micro Reserves will specifically ensure the input of women resource-users in the establishment and management of the PMRs. In addition, the project will also work to ensure appropriate gender equality and women's empowerment in project implementation mechanisms, such as on the Project Steering Committee, and amongst the projet team of national experts and consultants involved in implementation. The following gender-related project interventions are proposed, subject to the findings of more detailed assessment during PPG:

•   ensure women (and youth) actively involved in designing and planning all outputs and activities to enable their knowledge and innovation to be fully integrated into KBA strategies and management plans;

•   safeguard equitable access of women to skills development, training, technical and financial support;

•   reduce risks of exposure of women (and children) to agricultural inputs potentially harmful to human health (e.g. pesticides) by promoting alternatives;

•   project technical and financial support to ensure that benefits are widely accessible to women living in KBAs and their peripheries;

•   promote and sustain meaningful representation and active involvement of women in local, district and national committees, coordinating mechanism and other decision-making or networking platforms;

•   promote the employment of female professionals and technicians in public institutions and agencies; and

•   seek equitable representation of women on the project team and project board.

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.

In 2015, there were around 276,000 taxpaying registered firms consisting of 32,000 companies, 88,000 individual entrepreneurs working with a patent, 32,000 individual entrepreneurs working with a certificate, and 124,000 dehkan farms paying single tax. The majority of these entrepreneurs are engaged in the agricultural sector, small traders and service providers. The project will directly engage and involve local small holders in the agricultural sector, which are by and large the main relevant private sector actors with respect to sustainable land use in the rural areas targeted by the project. The project will focus on partnering with small holders and agricultural producers to reduce impacts to biodiversity and land degradation resulting from unsustainable agricultural production. The project will work with small holders to identify and implement land use practices that have lower environmental impacts (e.g. agro-forestry), and introduce sustainable land management practices (e.g. rotational grazing). The project will also support local communities to strengthen their value chain approach, through catalyzing public-private partnerships for facilities and equipment to increase value-added production of agricultural products. Key partners in private sector collaboration will be the Jamoat Resources Centers and microcredit institutions (e.g. Imdodi Hutal and Rushdi Zaravshon microcrediting organizations). These are locally-based organizations established specifically with the purpose of assisting local communities in gaining access to resources and projects in the area of sustainable development. They serve as an interface between central government agencies, local administrations, micro financiers, and people on the ground. The Jamoat Centers are well placed to provide a conduit between project activities and local resource users. They will be useful in helping communities engage with project activities, and providing information and advice during implementation.

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)

Identified Risks and Category	Impact	Likelihood	Risk Assessment	Mitigation Measures
The modification of resource management regimes (e.g. forests, pastures, agricultural lands, biodiversity) toward long-term sustainability could affect short-term access and use of resources by local communities, including the rural poor and women.	Moderate	Not likely	Moderate	Mitigation measures are inherently included in the scope of the project as part of the execution of project activities. The project will constantly work with all relevant stakeholders to ensure that these risks are minimized. In addition, the project will support the implementation of sustainable resource use, including protected area management, in accordance with al l norms, policies, procedures and laws of Tajikistan, as well as international norms in relation to land tenure and all associated rights. In any instances where economic displacement may occur the project will be working with stakeholders to provide compensation, offsetting support, and mitigation in relation to affected resource users.
National and local government institutions responsible for the management of protected areas, pastures and forests do not have adequate capacity to support, maintain and enforce working agreements with communities, pasture users' groups, and forest users' groups living in and near KBAs	High	Moderately likely	High	The project will seek to significantly strengthen and expand the current capabilities of the key institutions responsible for the planning and management of SPNAs, pastures and forests across the high value arid ecosystems of Tajikistan's Lower Amu Darya landscape. The project will support the development of well-trained and properly equipped management, monitoring, enforcement, community liaison and pastoral and forest groups staff in the targeted SPNAs, lesk hozes, district administrations and jamoats of the target communities. The UNDP PMU will develop an institutional sustainability plan to ensure that the different project investments in building the capacity of the targeted institutions are maintained (and scaled-up, if feasible and affordable) beyond the project

				up, if feasible and affordable) beyond the project.
Low levels of coordination and cooperation between public institutions, tenure holders, rights holders, land owners, NGOs/CBOs and natural resources users leads to conflicts over any changes in use rights in SPNAs and high value arid ecosystem pastures and forests	Moderate	Moderately likely	Medium	The project is building on almost a decade of cooperation with communities and local and regional authorities in the implementation of biodiversity conservation initiatives under the framework of a UNDP-GEF-CEP/NBBC partnership. This work suggests that a high level of engagement and local ownership among local stakeholders will be maintained in this project, with careful attention given to stakeholder consultation, participation and conflict resolution. The project will work closely with the administration of the targeted SPNAs, leskhoz, khukumats, jamoats and dehas in ensuring the effective involvement of all affected stakeholders in the implementation of project activities. The project will specifically work through (and assist in establishing, where these have not yet been constituted) the coordinating structures of Park Management Committees, Pasture User Unions (PUUs) and Participatory Forest Management (PFM) committees as an institutional mechanism to improve the communication, collaboration and cooperation between tenure holders, rights holders, natural resource users and the relevant state, regional and local administrations. The project will also strengthen the knowledge and skills base of protected area, pasture and forest users and managers in order to facilitate a more collaborative approach in the planning, implementation and enforcement of sustainable forest and pasture management practises. A full stakeholder participation plan will be prepared as the project is further developed.
Climate Change Risks: Increased aridisation and shifting of ecological zones in high value arid ecosystems in the foothills and low mountains of the Lower Amu Darya landscape, as a result of the effects of	Moderate	Moderately Likely	Moderate	Attention to the current and potential impacts of climate change will be built-in to all aspects of the project, and the project team will work with all partners and stakeholders to apply the best available climate change forecasts data for Tajikistan's lower Amu Darya basin, and will ensure that all project activities and plans take potential future climate impacts into co

climate change. The expected project impacts of the conservation of endangered and threatened species, restoration of degraded land, and sustainable management of forest and pasture resources could be sensitive to changing climatic conditions in the future.				nsideration. For example, the project's support for the sustainable management of forests and pastures will review climate data and climate change projections as part of the development and implementation of sustainable management measures. The project will also identify potential gaps in the existing system of SPNAs in order to effectively conserve biodiversity, considering the potential for ecosystem change and ecological shifts due to climate change impacts. The project's work to establish sustainable land use practices, such as the promotion of agro-forestry systems, will also be grounded in the best available and most recent climate science relevant for this region of Tajikistan. As part of the project's work on strengthening the management effectiveness of SPNAs it will also strengthen environmental monitoring capacities in order to better track the future effects of climate change within SPNAs and the targeted KBAs more broadly. Also, for example, the design and establishment of the Plant Micro Reserves will be carried out keeping future climate change scenarios in mind, which will be particularly important for rare plant species.

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.

Institutional Structure

As a GEF-funded project, the project will be implemented fully in line with GEF policies and guidelines.

National Executing Agency: The National Biodiversity and Biosafety Center will be the national Executing Agency.

The project organization structure will consist of a Project Board, Project Assurance, Project Management and Implementation Units (PMU and PIU) and at the national level. Roles and responsibilities will be as described below.

Project Board: The Project Board (PB) will be responsible for making management decisions for the project, in particular when guidance is required by the Project Coordinator. It will play a critical role in project monitoring and evaluations by assuring the quality of these processes and associated products, and by using evaluations for improving performance, accountability and learning. The PB will ensure that required resources are committed. It will also arbitrate on any conflicts within the project and negotiate solutions to any problems with external bodies. Based on the approved Annual Work Plan (AWP), the PB can also consider and approve the quarterly plans and approve any essential deviations from the original plans. The project will be subject to PB meetings at least twice every year. The first such meeting will be held within the first six months of the start of full implementation. At the initial stage of project implementation, the PB may, if deemed advantageous, wish to meet more frequently to build common understanding and to ensure that the project is initiated properly.

To ensure UNDP's ultimate accountability for project results, PB decisions will be made in accordance with standards that shall ensure management for development results, best value for money, fairness, integrity, transparency, and effective international competition.

Members of the PB will consist of key national government and non-government agencies, and appropriate local level representatives. UNDP will also be represented on the PB, which will have appropriate representation in terms of gender. Potential members of the PB will be reviewed and recommended for approval during the Local Project Appraisal Committee (LPAC) meeting. In addition, PB meetings will be open to observer organizations, which can comment and provide input on project activities, and potential decisions, although only PB members will have decision-making powers. The PB will contain three distinct roles:

Executive Role: This individual will represent the project "owners" and will chair the group. It is expected that the National Biodiversity and Biosafety Center of the Committee for Environmental Protection under the Government of the Republic of Tajikistan will appoint a senior official to this role who will ensure full government support of the project.

Senior Supplier Role: This requires the representation of the interests of the funding parties for specific cost sharing projects and/or technical expertise to the project. The Senior Supplier's primary function within the PB will be to provide guidance regarding the technical feasibility of the project. This role will rest with UNDP Tajikistan represented by the Resident Representative. Any role in the project undertaken by UNDP is in line with UNDP's status as GEF implementing agency. No UNDP project functions mentioned herewith will lead to creation of "execution support", or any charges to the project beyond UNDP's role as the GEF Implementating Agency.

Senior Beneficiary Role: This role requires representing the interests of those who will ultimately benefit from the project. The Senior Beneficiary's primary function within the PB will be to ensure the realization of project results from the perspective of project beneficiaries. This role will rest with the other institutions (key national governmental and non-governmental agencies, and appropriate local level representatives) represented on the PB, who are stakeholders in the project.

Project Assurance: The Project Assurance role supports the Project Board by carrying out objective and independent project oversight and monitoring functions. The Project Assurance role will rest with the Programme and Policy Analyst in charge of Environment/Energy and Disaster Risk Management of UNDP Tajikistan, and its Programme Oversight and Support Unit (POSU.)

National Project Management (PMU) Unit: The day-to-day administration of the project will be carried out by a full-time Project Manager (PM), with the support of a Project Administrative Assistant (PAA) and a Project Financial Assistant (PFA). Field-based technical support and oversight will be provided by Field Coordinators, the organization of which will be determind during the PPG phase. Collectively the PM, PFA PAA and the FCs will comprise the Project PMU. The PM has the authority to administer the project on a day-to-day basis on behalf of the NBBC and UNDP, within the constraints lain down by the Steering Committee (SC).

Project Implementation Unit (PIU): PIUs will be established in the field closer to key project sites. The exact location and mechanisms will be determined during the PPG phase.

Coordination

Implementation of the proposed project will be fully coordinated with a number of on-going relevant GEF-financed initiatives, in order to avoid duplication and increase synergies and effectiveness. At regional level, strong coordination will be sought with the project *"Central Asian Countries Initiative for Land Management (CACILM) II."* At the national level, the project will coordinate closely with the UNDP/GEF project *"Conservation and Sustainable Use of Pamir Alay and Tian Shan Ecosystems for Snow Leopard Protection and Sustainable Community Livelihoods"*, which is focusing on high mountain ecosystems. The project will also use the lessons from the recently completed UNDP/GEF projects *"Sustaining Agricultural Biodiversity in the Face of Climate Change"*, and *"Strengthening Capacity for an Environmental Information Management and Monitoring System in Tajikistan".* The project will contribute to national biodiversity conservation and management with the monitoring data compiled from the research and biodiversity inventory, as well as further monitoring updates from existing PAs and targeted communities, thus contributing for the regular country reporting to three Rio Conventions.

The project will also coordinate closely with other relevant work by multilateral, bilateral, and civil society partners (e.g. World Bank, Asian Development Bank, GiZ, FAO, GCF, Caritas, Swiss Development Cooperation) as indicated in the baseline project table above. The scope of this proposed project has been carefully designed to be thematically synergistic with other current ongoing efforts in Tajikistan, and to avoid any geographic overlap in the target region.

7. Consistency with National Priorities

Is the Project consistent with the National Strategies and plans or reports and assesments 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

- National Bio Strategy Action Plan (NBSAP)

- CBD National Report

- Cartagena Protocol National Report

- Nagoya Protocol National Report

- UNFCCC National Communications (NC)

- UNFCCC Biennial Update Report (BUR)

- UNFCCC National Determined Contribution

- UNFCCC Technology Needs Assessment

- UNCCD Reporting

- ASGM National Action Plan (ASGM NAP)

- Minamata Initial Assessment (MIA)

- Stockholm National Implementation Plan (NIP)

- Stockholm National Implementation Plan Update

- National Adaptation Programme of Action Update

- Others

The project is highly relevant to and consistent with Tajikistan's national priorities related to biodiversity conservation and land degradation, as outlined in key national policy documents. Most significantly, the project is closely related to the National Biodiversity Strategy and Action Plan of Tajikistan (2014-2020). The project supports improved policies for use of natural resources, forest conservation, improves the management of protected areas and raises the engagement of communities in their management, all of which are priorities within NBSAP. The improved management of the ecological network proposed by Component 2 of the project is in line with the National Plan for the implementation of the Program of Work on Protected areas of the Convention on Biological Diversity: it covers the key ecological gaps identified under the POWPA work plan, integrates SPNAs into the wider landscape and involves communities in conservation efforts. The need for conservation of rare plants and other biodiversity of the of the high value arid ecosystems Lower Amu Darya is prominent in Tajikistan's

5th National Report to CBD. It also demonstrates an integrated approach to the improved management of SPNAs for under-represented ecosystems (i.e. arid ecosystems), covering a number of topics, ranging from technical aspects (capacity building of existing and new protected areas, harmonization of SPNA management planning, development and implementation of a comprehensive monitoring system for biodiversity and ecosystems) to socio-economic dimensions (support for alternative income-generating activities for local communities such as ecotourism, and apiculture, to integration of SPNAs with biodiversity conservation and sustainable land use in adjacent areas. The project directly supports the achievement of Aichi Target 12: By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained. Through the landscape approach it substantially contributes to the following Aichi Targets:

·   Target 5: By 2020, the rate of loss of all natural habitats, including forests, is at least halved and where feasible brought close to zero, and degradation and fragmentation is significantly reduced.

·   Target 11: By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.

·   Target 15: By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.

The project is also relevant to and supportive of Tajikistan's National Action Plan (2001) under ethe UNCCD. In particular the project supports the following objectives from the NAP: 5.4 Development of a series of maps on the processes of desertification; 5.5 Raising the role of the local population, non-governmental organizations, and including women's organizations to combat desertification; 5.8 Remote methods for the study of desertification; 5.10 Development of recommendations and proposals for rational land use; 5.11.1 Soil cover; 5.11.2 Flora and Fauna; 5.11.3 Forest resources; 5.11.5 Protected areas; 5.12 Improvement of anti-erosion methods to combat degradation.

National LDN Target: Tajikistan does not currently have a national LDN target, though this is currently under development, and completion of the national LDN target-setting process is expected during the PPG phase of the currently proposed project. Therefore during the PPG phase the project team will further assess and analyze the project's contribution to the national LDN target. Regardless of the actual value of the target, the project will make a notable contribution. It is currently expected that 48,000 ha of pasture land will be put under sustainable management, with an additional 22,000 ha of degraded pastureland restored. In addition the project will help avoid future degradation in 7,350 ha of HCVF, while restoring 650 ha of degraded HCVF forest.

In addition, Tajikistan has joined the Bonn Challenge, with a pledge of 0.07 million hectares of land restored. With a planned 22,650 ha of land to be restored, the project will make a significant contribution toward the achievement of this goal (approximately 1/3rd of the pledged amount); the specific target amount of land restored with support of the project will be confirmed during the PPG phase.

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 project has multiple elements that will contribute to the knowledge management approach. Each project output will include the documentation of lessons learnt from implementation of activities under the output, and a collation of the tools and templates (and any other materials) developed during implementation. The Project Manager will ensure the collation of all the project experiences and information. This knowledge database will then be made accessible to different stakeholder groups in order to support better future decision-making processes in mainstreaming biodiversity and sustainable land management in Tajikistan and more consistent adoption of best practices. The project will also disseminate information through relevant websites such as government ministry websites and the UNDP Country Office website, and produce and distribute quarterly updates to stakeholders, in order to further facilitate the dissemination of this information. Results from the project will be disseminated within and beyond the project through existing information sharing networks and forums. The project will identify and participate - as relevant and appropriate - in scientific, policy-based and/or any other networks, which may be of benefit to project implementation though lessons learned. The project will identify, analyse, and share lessons learned that might be beneficial in the design and implementation of similar future projects. There will be a two-way flow of information between this project and other projects of a similar focus.

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
Mr. Davlatsho Gulmahmadzoda	GEF OFP, Chairman of the Committee of Environmental Protection	Committee of Environmental Protection	8/27/2019

ANNEX A: Project Map and Geographic Coordinates

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

The project will take place in and around identified high-value ecosystems in the Lower Amu Darya basin, in Khatlon Province in Tajikistan. There are 12 identified high-value ecosystems. The project will have varying levels of intervention in each of these areas, with some targeted areas receiving more intensive interventions than others.

- 13. Tajik babatag - 85,000 ha
- 14. Gazimalik - 70,000 ha
- 15. Sarsaryak - 20,000 ha
- 16. Ayvaj - 22,000 ha
- 17. Tigrovaya Balka - 62,000 ha
- 18. Tajik Karatau - 60,000 ha
- 19. Khojamumin - 3,000 ha
- 20. Kushvoristan - 83,000 ha
- 21. Baljuvan - 94,000 ha
- 22. Muminabad - 46,000 ha
- 23. Dashtijum - 40,000 ha
- 35. Dangara - 69,441