United Nations Development Programme
Country: Kazakhstan
PROJECT DOCUMENT[1]

Project Title: Improving sustainability of the PA system in desert ecosystems through promotion of biodiversity-compatible livelihoods in and around PAs

UNDAF Outcome(s): UNDAF Outcome 2: By 2015 communities, national and local authorities use more effective mechanisms and partnerships that promote environmental sustainability and enable them to prepare, respond and recover from natural and man made disasters.

Expected CP Outcome (s): Government, communities and civil society practice an integrated approach to natural resources management in national and regional perspectives

Expected CPAP Output (s): Government, educators, communities, civil society and academic community practice national and local authorities use more effective mechanisms and partnerships that promote environmental sustainability and enable them to prepare, respond and recover from natural and man made disasters.

Executing Entity/Implementing Partner: Committee for Forestry and Hunting
Implementing Entity/Responsible Partners: Committee for Forestry and Hunting

Brief Description

The project objective is to enhance the sustainability of protected areas in globally important desert and semi-desert ecosystems by expanding their geographic coverage, promoting a landscape approach and supporting biodiversity-compatible livelihoods in and around PAs, focusing on regions of Ile Balkhash, Ustyurt and Aral-Syrdarya desert and semi-desert ecosystems. The long-term solution to addressing the threat of loss of desert and semi-desert ecosystems takes a more strategic landscape-based approach to protected area expansion and management of the least-represented desert and semi-desert ecosystems in Ile Balkhash and Southern Kazakh desert areas. The solution relies on three key elements. The first element relates to expansion of the PA estate to include desert ecosystems, accompanied with management plans for the PAs, financing, and permanent and fully staffed management units. Secondly, the solution depends on a high degree of integration of these protected areas with buffer zones, wildlife corridors and other areas of the broader productive landscape. Finally, the solution depends on engagement of local communities in activities that bring income on the one hand and ensure a biodiversity dividend on the other, as well as their participation in PA management.

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PIMS #	4855
Start date:	September 2013
End Date	August 2018
Management Arrangements	NEX
PAC Meeting Date	TBD

Total allocated resources:	$23,543,293
• Regular	
o UNDP (grant)	$600,000
• Other:	
o GEF	$4,364,000
o Government	$9,379,147
o IFAS	$45,520
o NGO	$754,000
o Private sector	$1,286,667
o Other	$2,032,952
• In-kind contributions	
o Government	$3,250,807
o IFAS	$140,000
o NGO	$286,200
o Other	$1,304,000
o UNDP	$100,000

[1] For UNDP supported GEF funded projects as this includes GEF-specific requirements

Agreed by (Government):

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List of acronyms

ACBK	Association for Biodiversity Conservation in Kazakhstan
APR/PIR	Annual Project Review/Project Implementation Report
ATLAS	UNDP Financial system
BD	Biodiversity
BTOR	Back To the Office Report
CACILM	Central Asian Countries Initiative for Land Management
CAREC	Central Asia Regional Environmental Center
CBD	Convention on Biological Diversity
CDRs	Combined delivery reports
CFH	Committee for Forestry and Hunting
CP	Country Programme
CPAP	Country Programme Action Plan
ENO	Scientific background report
FE	Final Evaluation
FFI	Fauna and Flora International
FFSA	Fund for Financial Support of Agriculture
GEF	Global Environment Facility
GIS	Geographic information system
GiZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
ha	hectares
hwt/ha	yield capacity per hectare
IA	Implementation agency
IBA	Important Bird Areas
IFAS	International Fund for Saving the Aral Sea
IUCN	International Union for Conservation of Nature
kg	kilogram
KSUA	Kazakh State University of Agriculture
LD	Land degradation
M&E	Monitoring and Evaluation
MEP	Ministry of Environmental Protection
METT	Management Effectiveness Tracking Tool
MoA	Ministry of Agriculture
MTE	Mid-Term Evaluation
NEX	National Execution
NGO	Non-government organization
PA	Protected Area
PAPC	PA Public Committee
PB	Project Board
PES	Payments for Ecosystem Services
PM	Project Manager
PMU	Project Management Unit
PoWPA	Programme of Work on Protected Areas
PPR	Project Progress Report
QPR	Quarterly progress report
RBC	River Basin Council
RBM	Results-based Management
RBOs	River Basin Organizations
RCCs	Rural Consumer Cooperatives

RSPB	Royal Society for the Protection of Birds
SBAA	Standard Basic Assistance Agreement
SLM	Sustainable land management
TEO	Technical economic background report
UNDP	United Nations Development Programme
UNDP DRR	UNDP Deputy Resident Representative
UNDP RCU	UNDP Regional Coordination Unit
UNEP	United Nations Environment Programme
UNOPS	United Nations Office for Project Services
US$	U.S. dollars
WWF	World Wildlife Fund

SITUATION ANALYSIS

1. Biodiversity and wider landscape significance of desert ecosystems: Kazakhstan is the largest land-locked country in Central Asia spanning 271.73 million hectares. Desert ecosystems make up most of the country covering 136.3 million hectares or about 50% of the country's territory (Table 1). Deserts are found in the Caspian lowlands, Mangyshlak peninsula, Ustyurt plateau, southern Turgay mesa and Kazakh melkosopochnik (Eastern Betpak-dala and Pribalhashe), Turan lowland (Aral), Kyzyl-Kum, Moin-Kum deserts, Alakol and Ili depressions, foothills of the Northern Tien Shan, and the Alatau and Jungar Tarbagatay mountains in the south. They provides habitat for 151 threatened species (out of 800 listed in the country, which is the second highest after forests); 27 rare vegetation communities (out of 79 rare vegetation communities in need for protection, which is the highest number, followed by forest communities at 22); 51.4% of all bird species; and 65.2% of all reptile species.

2. Of the 4 desert ecosystem sub-types, this project focuses on the Southern deserts and the mountain-valley deserts (which is a sub-type of Foothill deserts). The Southern deserts include the arid Ustyurt Plateau, the Kyzyl Kum desert and the sand massifs of "Bolshie Barsuki", "Malye Barsuki" and "Aral Karakum" covering 30.3 million hectares of typical dry desert ecosystem in the Ural-Caspian and Aral-Syrdarya river basins. They are home to two Global 200 Ecoregions, a number of Important Bird Areas (IBAs), the largest threatened mammals such as goitered gazelle (*Gazella subgutturosa*), onager (*Equus hemionus*), Pallas's cat (*Otocolobus manul* or *Felis manul),* caracal (*Caracal caracal),* near-threatened ground squirrel species, several jerboas, and the endemic desert dormouse (*Selevinia betpakdalaensis*).

Table 1. Kazakhstan's main ecosystem types

Main ecosystem type	Total size (ha)
Forest	5,800,000
Steppe	110,200,000
Desert	***139,300,000***
Northern deserts	***40,000,000***
Central deserts	***51,200,000***
Southern deserts	***30,300,000***
Foothill desert	***17,800,000***
Mountains	18,600,000
Others	830,000
Totals	**274,730,000**

Source: 4th National Report to CBD (2009)

3. The Ustyurt Plateau is a temperate desert lying between the Caspian and Aral Sea and covers an area of about 200,000 km^2. It is shared between Uzbekistan and Kazakhstan and is one of the most ancient and unique landscapes of Eurasia. The landscape is a mosaic of eroded hills, shallow basins and extensive escarpments up to 150 meters in height, with no permanent streams or open fresh water sources. According to the UNEP aridity index, much of the landscape is classified as a drought zone, susceptible to degradation and desertification. Ecologically, the plateau is globally significant and has a high degree of endemism owing to its geological age and isolation.

4. Historically, the Ustyurt was the realm of nomadic cattle-breeders and a major route on the Silk Road. The soviet period with its collectivized agriculture almost brought an end to nomadic traditions. However, the plateau's isolated location and harsh climate meant that much of the Ustyurt remained 'undeveloped'. Since the development of the first gas pipelines in the 1970's, the region has experienced significant periods of in and out migration. Perestroika marked the beginning of the largest and most damaging flux in the local population. Since 2000 Kazakh urbanites have migrated to the Ustyurt seeking work in the gas, oil and associated infrastructure industries.

5. A mosaic of vegetation communities occurs, determined by microclimatic variations, lithology, substrate, ground water availability and salinity. Gypsum-tolerant dwarf shrubs dominate on grey soils of plateau sites, including many endemic taxa. A number of halophyte species of the genera Salsola (e.g. *Salsola*

chivensis and *S. ustjurtensis*) are endemic, whilst Malococarpus crithmifolius, Euphorbia sclerocyathium and Tulipa buhseana are listed as endangered. Approximately 300 vertebrate species inhabit the plateau including 35 endangered species of fauna. Larger mammal species have been steadily depleted during the 20th century. Both the Wild Ass (*Equus hemionus*) and Central Asian Cheetah (*Acinonyx jubatus venaticus*) have become extinct on Ustyurt (Mallon 2007). The plateau harbours one of only five remaining populations of Saiga Antelope (*Saiga tatarica*) worldwide. The Ustyurt saiga is the least studied of all populations and numbers are declining dramatically. Goitered Gazelle (*Gazella subgutturosa*) once occurred in large numbers but have declined through illegal hunting. Other significant mammal species include the Ustyurt Urial (*Ovis orientalis arkal*), caracal (*caracal caracal*), Pallas's cat (*Otocolobus manul*), Marbled polecat (*Vormela peregusna*) and Brandt's hedgehog (*Paraechhinus hypomelas*) and many species of desert-adapted rodents, which are endemic to Central Asia. Breeding populations of Houbara Bustard (*Chlamydotis undulata*), Saker Falcon (*Falco cherrug*), Lesser Kestrel (*Falco naumanni*), Eastern Imperial Eagle (*Aquila heliaca*) and Black Vulture (*Aegypius monachus*) are all declining. At least 27 species of reptile have been recorded, 25% of which are endemic. Regionally threatened species include Four-lined Rat Snake (*Elaphe quatuorlineata*), the desert monitor and Horsfield's tortoise.

6. The mountain-valley desert ecosystem (sub-type of Foothill deserts), found in the Ile Balkhash region, exhibits unique landscape diversity by combining high mountains, vast arid desert valleys (Moinkum, Taukum, Sary Essik Atyrau, Karakum sandy and saline areas), delta ecosystems of the Ile River with small wetlands and depression, tugai forests, and grasslands in between. The Ile River drains the northern Tian-Shan mountains and enters Lake Balkhash, creating a delta of approximately 817,000 hectares, which consists of an extensive network of river channels, bordered by dense riparian scrub, lakes of standing and running water, reed beds and desert areas. The typical wetland area of approximately 168,000 hectares is the largest in Kazakhstan. The small wetlands and lakes attract hundreds of thousands of migratory birds (*Anas, Anser, Rufibrenta, Chettusia).* The region is home to IUCN threatened species that are particularly vulnerable to spatial habitat changes and degradation as they rely on different habitats of the desert ecosystem for breeding, nesting and foraging. Currently, this area hosts breeding sites of such globally threatened and near-threatened bird species as the Dalmatian pelican (*Pelecanus crispus*), white-headed duck (*Oxyura leucocephala*), ferruginous duck (*Aythya nyroca*), eastern imperial eagle (*Aquila heliaca*), lesser kestrel (*Falco naumanni*), houbara bustard (*Chlamydotis undulata*), Pallas's sandgrouse (*Syrrhaptes paradoxus*), Pallid harrier (*Circus macrourus*), black-winged pratincole (*Glareola nordmanni*), white-winged woodpecker (*Dendrocopus leucopterus*) and palebacked pigeon (*Columba eversmanni*).[2] Two of the native fish species, (*S. a. argentatus* and *P. schrenki*) are globally threatened, and *S. a. argentatus* is almost extinct. Being the largest drainage basin in the arid regions of Central Asia, the Ile Balkhash region supports the livelihood activities of approximately 3.2 million people, including those residing in the city of Almaty. It is important for livestock agriculture, irrigated farming (rice cultivation and forage production), commercial fisheries, and sport fishing and hunting. In addition to storing water for summer irrigation, the Ile Balkhash basin generates electricity to power the largest metropolitan area in the watershed, the city of Almaty. The remaining tugai forest and wetlands in the Ile Balkhash area and Southern deserts are important "oases" for the livelihoods of rural communities. Tugai forests within desert landscapes, including some patches of unique Asiatic poplar wooded areas, cover approximately 80,000 hectares, of which approximately 15% suffer from severe degradation.

7. Threats to desert ecosystems: Kazakhstan's desert ecosystems, however, continue to be under threat of habitat loss and degradation (tabular description of threats is in Annex 8). As confirmed by the 4th National Report to the CBD, the biodiversity index of desert and semi-desert ecosystems has dropped by 66% in the past decade primarily due to **unsustainable farming practices** (crop and rice production) and **extensive resource use** (grazing, wood and grass harvesting). Widespread monoculture practices are by far the leading cause of the gradual degradation of habitats, flora and fauna, and desiccation of small wetlands in the mountain-valley deserts, such as the Ile-Balkhash ecosystem. The Kapchagai hydropower reservoir, built along the middle reaches of the Ile River in 1966, led to the proliferation of water-dependent crops, like rice, and to inefficient irrigation practices along the lower reaches of the river. Satellite images of the Ile delta from 1972 and 2001 show the gradual desiccation of many small wetlands and ponds that served as critical

[2] IUCN 2010. IUCN Red List of Threatened Species. Version 2010.4. <www.iucnredlist.org>

habitat for 125 migratory bird species (88 of which use the Balkhash Lake and its adjacent landscapes for wintering), 50 mammal, and 20 native fish species.[3] Inefficient irrigation due to wasteful use of irrigation water or leakages negatively affected the soil structure, causing waterlogging, salinization, leaching of essential soil nutrients, and wind erosion. In Southern deserts, particularly in the Aral-Syrdarya area, farmers tend to modify natural river beds by "straightening" them in order to increase the water flow to rice paddies that are widespread along the Syrdarya River and its tributaries. Coupled with inefficient and unsophisticated farming methods and the use of chemical fertilizers, this has led to degradation and alteration of original river ecosystems and desiccation of small wetlands in the area.

8. **Overgrazing** is one of the main causes of habitat destruction in the Aral-Syrdarya (Southern deserts) and in the Ile Balkhash (mountain-valley subtype desert) areas. A tendency of replacing sheep with goats, largely for economic reasons, and an increase in livestock numbers have left grazing lands bare of vegetation and topsoil more susceptible to wind erosion. In the Aral area, degrading rangelands have made ecosystems highly susceptible to droughts, resulting in insufficient re-vegetation, widespread aerial transportation of sand and salt, formation of salinized or "solonchak" lands and change in species composition. Overgrazing around settlements exacerbates land vulnerability, forcing multiple livestock smallholders to move further into marginal lands. Further, deteriorated rangeland infrastructure at distant pastures leaves a herder with no choice but to continue this unsustainable grazing practice around settlements. Overgrazing in the vulnerable poplar (*Populus pruinosa* –Kazakh endemic) and Tugai forests in the Ile delta has resulted in deterioration of these unique wooded ecosystems, soil compaction, and loss of typical Tugai species.

9. **Unsustainable fishing and hunting** is on the rise in the Southern deserts and the Ile-Balkhash area. Unsustainable fishing largely stems from the worsening economic situation in the country and has become a source of income for low income populations in both areas, while only middle and high income people can afford the purchase of needed equipment and machinery for hunting. The uncontrolled poaching of goitered gazelle (*Gazella subgutturosa*) and koulan has contributed to a significant drop in their populations since the break-down of ranger patrolling groups in 1990s. Unsustainable hunting and fishing destabilize population size, cause disturbance for birds during nesting times, and can jeopardize conservation efforts of PAs in both areas. The saiga antelope is a keystone species of the Ustyurt and can be regarded as an indicator of the sustainable use and health of the ecosystem. Saigas play a key role in the maintenance of the steppe biodiversity and rangeland productivity, but have become Critically Endangered (IUCN ver. 3.1) over the last decade, with the global population decreasing by more than 95%. The greatest impact to saiga is from relentless poaching by local communities, for its meat and horn, driven by demands from the Chinese medicine market. Returns from the illegal trade in saiga horns provide a much needed source of cash income for local people, fuelled by the high unemployment, estimated to represent 10% of total household revenues. The rapid decline of the saiga and dependent large raptor communities on the plateau correlates to the decline in state nature protection and social security systems and increasing industrial development. Neither the establishment of the Saigachy Zakaznik in Uzbekistan in 1991 nor a temporary legislation on banning saiga hunting has halted the dramatic loss in population numbers.

10. The major factor affecting waterfowl, other birds and general wildlife in the delta of the Ile River is the **increasing annual burning of reeds and riparian trees** by local hunters, fishermen and farmers to provide fresh areas for fishing, grazing, harvesting of reeds and open areas for hunting muskrats (*Ondatra zibetica*).

11. The **illicit cutting of saxaul trees by local communities** for self-consumption as fuel and for sale has led to a dramatic reduction of the area and diversity of wooded zones. Tree cutting puts at risk the survival of some bird, reptiles and mammal species, because their distribution is closely connected with these islets of wooded vegetation. Uncontrolled harvesting of sagebrush (*Atriplex cana,* fodder plant for saiga antelope), tulips and ornamental flowers, as well as of medicinal plants for commercial purposes, are on the rise.

12. Besides the issue of the Aral Sea's demise, which will continue to have significant impacts on climate, ecology, society, and economy of the region, the major threats facing the Ustyurt landscape today stem from change in land use management after the breakdown of the Soviet Union, **indiscriminate and unsustainable development of extractive industries and high unemployment**. As a result degradation, reduction and fragmentation of habitats are common as is poaching, primarily of ungulates. Recent road and rail network

[3] http://www.grid.unep.ch/activities/sustainable/balkhash/index.php

development, the construction of gas pipelines and associated infrastructure with little consideration for the mitigation of environmental impacts are damaging and fragmenting habitat in some of the most sensitive areas of the plateau. Localized pollution due to poor disposal of waste materials also has a detrimental impact on the quality of surrounding habitats. An increasing matrix of structures is forcing change of ancient migration routes and breeding grounds of migrating species. Based on expert knowledge, population numbers of migrating populations of goitered gazelle, koulan and saiga can be reduced by some 30 to 40% as a result of the infrastructure-fragmented landscape. In addition, change in the quality of people's life since the collapse of the Soviet Union have been dramatic and characterized by high levels of unemployment and a loss of social support systems, thus forcing an increasingly unsustainable reliance on natural resources.

13. In the Ile Balkhash basin, **land development for tourism and recreation** is another sector that competes for land use with hydropower, agriculture (irrigated farming, pastures, concentrated animal farms), fisheries, waste treatment facilities, landfills, sand, clay, marble and gravel mining, cement production, and multiple small and medium-size businesses (e.g. car maintenance and wash services, gas stations). Proximity to the largest metropolitan city of Almaty and the oblast capital of Taldykorgan, makes the area particularly vulnerable to unsustainable tourism and recreation activities. Human-caused fires, degradation of spawning and nesting grounds, contamination of areas of high biodiversity value with domestic waste, cutting of saxaul and Tugai forests all represent a non-exhaustive list of negative and long-lasting effects of unsustainable tourism.

14. In addition to irrigation-related problems, **open-air biological-weapons tests** involving anthrax and other pathogens were performed on the main island in the Aral Sea until the early 1990's. Some remote areas here formerly served as testing grounds for biological weapons with potentially long-lasting negative effects for biodiversity in the region.

15. **Invasive species** have negatively affected the biodiversity of the Aral Sea as well. On the eve of oncoming ecological catastrophe connected with diversions of riverine waters for extensive irrigation development, the Aral Sea had been subject to many exotic species introductions. While biodiversity had increased by fourteen species of fishes and four species of invertebrates, only a few of these species had commercial value or could serve as a food for fishes. Many species of fishes were introduced accidentally and only increased the pressure on the nutritional chain without giving benefits to the fisheries.

16. National Protected Area System: To provide some protection to natural ecosystems, Kazakhstan has a network of protected areas which consists of 5 national-level PAs (State Nature Reserves, State National Nature Parks, State Nature Rezervats, State Natural Sanctuaries, and State Reserved Zones), nature monuments and botanical gardens (see table below for details). The 5 national-level PA categories are under the direct or indirect responsibility of the Committee for Forestry and Hunting (CFH). Of these five PA categories, the most important for nature conservation are the first three (State Nature Reserves, State National Nature Parks, and State Nature Rezervats), all of which have administrative offices based in the vicinity of the PAs, as well as rangers patrolling within the PAs. These 'managed' PAs currently cover 5.8 million hectares, or 2.13% of Kazakhstan.

Table 2. Kazakhstan's Protected Area System, by Category

Categories of protected areas	Number	Area (ha)	% of territory	IUCN category	Management authority
State Nature Reserves (Zapovedniks)	10	1,610,973	0.59	Ia	CFH
State National Nature Parks	12	2,379,055	0.87	II	CFH
State Nature Rezervats	4	1,815,177	0.67	II or Ib	CFH
Sub-total	26	5,805,205	2.13		
State Natural Sanctuaries (Zakazniks)	34	5,979,777	2.2	IV	CFH, PAs with status of juridical person
Nature Monuments	26	6,614	0.0024	IV	PAs having juridical status, regional state forestry administrations or territorial inspections of CFH
State Reserved Zones	5	11,312,420	4.15	IV	CFH, OkhotZooProm State Enterprise (operating

					under CFH)
Botanical gardens	5	424	0.000015	IV	PAs having juridical status, regional state forestry administrations or territorial inspections of CFH
Sub-total	70	17,299,235	6.35		
Total	96	23,104,440	8.48		

Source: Official list of protected areas from the Government of Kazakhstan dated 17 October 2011

17. Of particular relevance to this project is the fact that notwithstanding the ecological values of Southern desert and mountain-valley desert ecosystems and the threats they face, these ecosystems remain under-represented in the national PA system. Desert ecosystems are the second least-represented natural habitat of Kazakhstan, after steppe. As can be seen from the table below, three of the five categories of desert ecosystems have less than 5.5% representation**.** The northern desert (dry steppe) is smallest at 1.2%[4].

Table 3. Coverage of desert and semi desert ecosystems in national PA system

Desert and semi-desert ecosystems	Estimated remaining area of natural habitat, ha	Number of PAs*	Hectares protected	PA as % of total remaining area of natural habitat **
Foothill deserts	14,800,000	11	3,347,331	22.6
Central deserts	51,200,000	13	3,675,887	7.2
Southern deserts	30,300,000	3	1,591,800	5.3
Mountain-valley subtype	>3,000,000	4	99,704	3.3
Dry steppe (Northern Desert)	40,000,000	16	481,689	1.2

* PAs often consist of different ecosystems and thereby might be counted more than once here.
** Calculations assume that PAs consist of 100% natural habitat.
Source: 4th National Report to CBD, GEF-UNEP-WWF-«ECONET Central Asia»; Landscape and biological diversity of the Republic of Kazakhstan. Almaty, 2005 (updated by national experts in 2012)

18. Baseline programs: Under the baseline situation, the Government will be pursuing a number of programs that have a bearing on the conservation of desert ecosystems. Chief among these is the Natural Resources Program (henceforth referred to by its name in the Kazakh language, Zhasyl Damu) for the 2010-2015 period with an approved budget of US$ 1,405 million[5]. Zhasyl Damu is coordinated by the Committee for Forestry and Hunting (CFH), who is also the proponent and the national executing agency of this GEF proposal. The overall objective of the program is to cover basic investment costs for protection of the country's environment and for rehabilitation of degraded sites. The program has 4 components, of which one is a US$ 44 million PAs Expansion and Creation component that is aimed at increasing the Protected Areas System to over 9% of the country's territory. However, at present, the PA component of *Zhasyl Damu* allocates resources primarily for limited research activities and for basic infrastructure costs at the existing desert and semi-desert ecosystem PAs. Through this proposal, the Government is seeking GEF incremental assistance in doubling the area of protection for the least-represented desert and semi-desert ecosystems and ensuring the highest quality of management. The Government has committed to re-allocating resources within the *Zhasyl Damu* program to ensure adequate co-financing for the GEF incremental funding (see sub-section "Co-financing from baseline programs" for further details).

19. The other baseline program of relevance to this project is the micro-credit program for support of rural communities (*Tabigi Orta*, 2010-2015). Tabigi Orta is partly funded by the Ministry of Agriculture and partly through a self-sustaining funding mechanism, and is managed by the JSC Fund for Financial Support of Agriculture (FFSA). The objective of this program is to assist rural communities in accessing credit. The overall budget of the program is over US$ 100 million. The program provides loans between US$ 30,000 and 200,000 to rural populations at effective annual interest rates in the range of 6.26 to 11 percent, primarily for mainstream agriculture (arable farming, grazing), payable in 3 years in 3 equal installments. During 2009-2010 some 10,000 rural villagers drew on the funds from FFSA. The program has extensive experience in

[4] The ongoing UNDP/GEF project "Steppe conservation and management" addresses threats to biodiversity and the representation of the northern desert (dry steppe) in the national PA system and therefore it is not a focus of this project.
[5] US$ 1,050 million is from the national budget and US$ 355 million from local budgets.

working with communities in and around almost 25 protected areas all over the country. Some of the micro-credit programs have brought positive benefits for PAs (e.g. sustainable grazing, honey-making, replacement of wood fuel use by solar collectors, etc.). Conditional to the GEF agreement for this project, the partners of this proposal (UNDP, Government, and FFSA) have agreed to establish a dedicated micro-credit line to support biodiversity-compatible activities of communities in and around the desert and semi-desert ecosystems.

20. Co-financing from baseline programs: By agreement with the Government, allocation of resources from the Zhasyl Damu baseline program could be increased by up to US$ 10 million. Apart from covering the basic and operational cost of the existing desert and semi-desert PAs, this co-financing would ensure investment costs for the newly created PAs in the Ile-Balkhash and Aral-Syrdarya basins, and in the Ustyurt plateau. Funding could co-finance ecological studies of the ecosystems at these PAs, and finance research on targeted species (threatened, endemic or typical desert species as indicators: Persian gazelle (*Gazella subgutturosa*), koulan (*Equus hemionus*), manul (*Felis manul*), desert lynx (*Felis caracal*), and desert monitor (*Varanus griseus*). This co-financing is relevant to Outputs 1.1 and 1.3 (creation and expansion of PAs), 2.1 (species management plans for the wider landscape), and Output 2.4 (biodiversity monitoring system). The manager of the second baseline program (FFSA) has committed to allocate up to US$ 1.5 million for capitalization of a new micro-credit line "biodiversity-compatible livelihoods in and around PAs" that would focus on supporting communities in and around the desert and semi-desert PAs. This will support the project's planned activities in Outcome 3 and establish a financially sustainable basis for providing local communities with alternative livelihoods in desert and semi-desert pilot areas.

21. These programs in the baseline scenario are significant insofar as they provide basic support for existing desert and semi-desert PAs and a framework for socio-economic development for local communities. However, the territorial coverage of desert protected areas and buffer zones remains inadequate from a conservation perspective. Local communities and businesses continue to pursue biodiversity-incompatible livelihoods that undermine conservation efforts.

22. The long-term solution to addressing the threat of loss of desert ecosystems needs to take a more strategic landscape-based approach to protected area expansion and management of the least-represented desert and semi-desert ecosystems in Ile Balkhash and Southern Kazakh desert areas. The solution relies on three key elements. The first element relates to expansion of the PA estate to include desert ecosystems, accompanied with management plans for the PAs, financing, and permanent and fully staffed management units. Secondly, the solution depends on a high degree of integration of these protected areas with buffer zones, wildlife corridors and other areas of the broader landscape. Finally, the solution depends on engagement of local communities in activities that bring income on the one hand and ensure a biodiversity dividend on the other, as well as their participation in PA management. The key barriers to the long-term solution are described below.

23. Barrier 1: The current PA system falls short in terms of its bio-geographic representation, with desert ecosystems being currently under-represented. Even more than steppes, deserts have historically been considered wastelands from a pure economic perspective. Another reason for the under-representation of deserts within the national protected area system is that the system's historic development was driven by a concern to conserve specific species and unique features, as opposed to maintaining ecological integrity and ecological processes. For example, the Ustyurt area harbors three types of ecosystems (steppe, Northern deserts, and Southern deserts), yet the existing PAs in this area provide protection only to steppe and Northern desert habitats. Similarly, the four existing natural sanctuaries in the Ile-Balkhash area largely extend protection to the southern coastline of Lake Balkhash, leaving most of the mountain-valley desert ecosystem unprotected. While expanding the PA system in general, and the coverage of desert ecosystems in particular, is an established Government priority, the baseline approach to this expansion has as of yet not been carefully prioritized. Under current prioritization, some of the desert PAs may only be established after 5-7 years, and in the intervening time they will continue to degrade and see declines in populations of species they currently harbor. The second weakness of the PA system is in terms of resource allocation and availability for the existing PAs. Government baseline investment has been sufficient to cover basic infrastructure and operational cost of key staff. However, the allocation of resources is not based on strategic PA management assessment tools (like METT), which creates disparities in the capacities of management units. While Central and Foothill desert sub-systems have relatively strong management, the PAs in the

Southern and Ile Balkhash regions have sub-optimal management and enforcement, and are not effectively mitigating threats to biodiversity. The existing PA management units in Ustyurt, for example, have old infrastructure, limited staff, and patrolling capacities that are inadequate for protection of the vast desert areas that they cover. Management units are unable to patrol Southern desert habitats, control poaching and communicate with local communities on biodiversity regulations and resource use practices. Similarly, in the Ile Balkhash region, of the 6 existing PAs, only 1 (Altyn Yemel) is legally established as a "juridical body", the remaining five lack a management structure of their own, and therefore need to be managed by CFH, PAs having juridical status or the local forestry administration. The assigned staff (from the CFH Almaty Oblast Inspection and the Bakanas Forestry) is insufficient in number and performs no active resource management, limiting efforts to passive protection and prosecution. Rangers face difficult working conditions, low salaries, have to cover vast areas, and have inadequate equipment supply and facilities.

24. Barrier 2: Kazakh deserts shelter important migratory mammals and birds, whose status depends on a landscape-level approach to conservation, combining strict conservation in breeding/ nesting areas with sustainable use in the remaining areas. Yet, at the moment, PA design and expansion decisions are not considering the broader, landscape-level processes. For example, the design of PAs and conservation activities at the existing desert PAs in Southern Kazakhstan has focused on concentration points of ungulates only in typical steppe areas, neglecting to assign protection status or limit economic activities in the adjacent Southern Desert ecosystems, on which these mammals heavily depend for migration. Due to this lack of conservation continuity within the Ustyurt landscape, conservation of threatened migrating ungulates (saiga, goitered gazelle) has been ineffective, both from PA cost-effectiveness perspective, as well as from the perspective of ungulate population sustainability. In yet another example, the land-use regime negatively impacts vast nesting and foraging areas of over 100 bird species (flamingos, glossy ibis, golden eagle, scavenger vulture, falcon, bustard, eagle owl) located next to the existing two sanctuaries along the southern coastline of Lake Balkhash. There are no buffer zones or corridors around a single desert PA, where economic activities would be regulated and aligned with conservation priorities. The land-use plans of neighboring districts sanction economic activities without any corrections for the biodiversity of the desert PAs. For example, planning for water use, irrigation, and agriculture are all activities that come into conflict with biodiversity in the Ile delta, but have never been reconciled. To a significant extent the problem stems from the lack of proper monitoring and research on desert biodiversity, which should develop evidence and options for economic restrictions and alternative scenarios. The category of natural sanctuary (zakaznik) could serve as a tool but this has not been used to establish buffers and corridors to maintain landscape-level ecological processes. Establishment of a zakaznik does not require the removal of land from its current uses, but instead may involve the introduction of regulations and restriction of uses which jeopardize the values for which the zakaznik was established. It is up to the oblast-level administration (akimat) to establish the regulatory regime and associated limits. For example, a zakaznik established due to its zoological importance may restrict or ban hunting within its boundaries. Zakazniks can be established for varying timeframes, as follows: (i) permanent, (ii) long-term (more than 10 years), (iii) short-term (less than 10 years). In principle, regulations promulgated by Zakazniks may operate on a seasonal basis, e.g., hunting can be restricted or banned during goitered gazelle migration seasons.

25. Barrier 3: Collaborative management in PA governance in Kazakhstan remains a gap. PA co-management with local communities in areas where excessive grazing or poaching is the highest, although declared by law, have not been tried in practice. There are very few PA public councils or joint boards, and none in the desert regions specifically. Even though population density in desert regions is low, poaching, illegal removal of tugai forests and other forms of resource use by the local population remain key concerns requiring specification of resource use thresholds, monitoring and enforcement on the one hand, and economic incentives for alternative uses on the other. Both parts of the equation are currently missing. Local communities are disconnected from PA planning and management. There is neither dialog with local communities, nor enforcement systems to control poaching, logging of tugai forests and other forms of destructive behavior. In terms of incentives for maintaining ecosystem services, there is no experience with PES schemes in Kazakhstan. There is a need for a critical mass of pilot projects and environmental and economic assessments of ecosystem services relevant to the Kazakh context to complement PES theory and methodology. Financial support for sustainable use in the form of micro-credits has been gaining popularity in the country (grant funding from donors can no longer be recognized as a sustainable mechanism). This is

especially the case in areas where income has been gradually rising and with it the borrowing capacity of people. In rural areas, however, access to micro-credit remains a problem. While for mainstream agriculture (arable farming, rotational grazing) more credit is available, alternatives that would at the same time be biodiversity friendly lack credit availability.

STRATEGY

26. The Government of Kazakhstan is requesting GEF incremental assistance to remove these barriers to the above-described long term solution to conservation of desert and semi-desert ecosystems. The project objective is to enhance the sustainability of protected areas in globally important desert and semi-desert ecosystems by expanding their geographic coverage, promoting a landscape approach and supporting biodiversity-compatible livelihoods in and around PAs, focusing on regions of Ile Balkhash, Ustyurt and Aral-Syrdarya desert and semi-desert ecosystems. The project has been designed to realize this by addressing the 3 barriers outlined above.

27. The alternative scenario funded by GEF and co-financing resources is expected to result in key modifications to the baseline scenario that will generate global environmental benefits (biodiversity conservation and sustainable land management). A comparison of the baseline project with GEF-project scenarios and associated global benefits are presented in the table below:

Situation resulting from baseline	Alternative to be put in place by the project	Global benefits
With current funding priorities under the Zhasyl Damu baseline program, funding will be sufficient to cover the support of existing desert and semi-desert PAs, but insufficient to expand protection to under-represented species and ecosystem sub-types. Integration of PAs in the wider landscape will not occur. Community engagement in PA management will remain limited. About 60% of the currently unprotected desert ecosystems (especially Southern, Central and mountain-and-valley) deserts are predicted to degrade in the next 10 years due to arable farming, excessive grazing, and poaching. Number of threatened species in desert ecosystems is likely to stay around 150. Populations of threatened mammals goitered gazelle (*Gazella subgutturosa*), Pallas's Cat (*Otocolobus manul* or *Felis manul)* are likely to decline. Endemic vegetation communities of many mountain-and-valley deserts (esp. in Ile Balkhash) might lose up to 30% of their current coverage, resulting from unabated economic activities (e.g. unsustainable water management) in the surrounding landscapes (caused by practices listed in the threat analysis above). The Micro-credit program of FFSA will issue credit to support mainstream agriculture which has negative or no positive impact on biodiversity.	PA estate contains representative samples of mountain and valley and Southern Kazakh Deserts. At least 5.3 million ha of globally important desert habitats put under protection by 2020, with PA management units fully capacitated for effective management. Compliance of economic resource-users with biodiversity standards is monitored and enforced in and around the newly established PAs. Species and habitat integrity within PAs protected from negative surrounding influence through buffer zones and corridors, wherein economic activities are adjusted Desert biodiversity is studied and monitored on a systematic basis. Communities engaged in PA planning and operations through Public Councils. Thresholds set and enforced for use of resources by local communities. The FFSA microcredit program runs a dedicated biodiversity micro-credit facility (capitalized at US$ 1.5 million) with at least 5% of registered land users and low-income rural households in targeted rural areas around PAs benefitting from it. This serves as a lasting mechanism for funding economic activities of local communities that are beneficial to biodiversity. This will catalytically help to replicate the experience reaching out to about 3,000 recipients in the 7-10 years immediately after the project.	**BD**: Improved bio-geographic coverage of PA system: by 2020 an additional 5.3 million ha of the least represented desert and semi-desert ecosystems added to the PA estate Restoration of 2,202 ha of wetlands of international importance and 18,048 ha of riparian forests Population stability of following indicator species: Goitered gazelle, koulan, argali, Pallas's sandgrouse, Ustyurt argali, houbara bustard (see project framework for baselines and targets) Improved management effectiveness of targeted PAs (METT score increase by 25%) Contribution to CBD PoWPA (expansion of PAs, integration of PAs in wider landscapes, and community engagement schemes). **LD**: Integrated land-use planning under implementation at 9 million ha of desert landscapes, ensuring preservation of ecosystem functions Improved rangeland management over 84,000 ha (Replication potential 0.5 million ha) Restored water-table at 2,202 ha of degraded wetlands. (Replication potential 12,000 ha) Restoration and sustainable management of 18,048 ha of riparian forest curbs soil erosion of the river channel and prevents excess deposition of sediment to the Ile River and the Balkhash Lake. (Replication potential 100,000 ha). Reduction of the size of the area heavily affected by soil erosion by at least 15% in the Ile Balkhash area and 20% in Aral Syrdarya area

Situation resulting from baseline	Alternative to be put in place by the project	Global benefits
		Unwanted plant species in at least 4 rangeland monitoring plots are less than 5% surface coverage

OUTCOME 1: PA SYSTEM OF KAZAKHSTAN CONTAINS REPRESENTATIVE SAMPLES OF DESERT AND SEMI-DESERT ECOSYSTEMS UNDER VARIOUS CONSERVATION REGIMES AND IS EFFECTIVE IN PROTECTING ECOSYSTEMS AND ECOLOGICAL PROCESSES.

28. Under Outcome 1, the project will expand coverage and improve effectiveness of the PA estate in Aral-Syrdarya, Ustyurt and Ile Balkhash desert and semi-desert areas (see table below for summary). Representation of the Southern desert ecological zone in the national PA system will, thus, increase from the present levels of 1,591,800 ha (5.3% of ecological zone) to at least 5,243,832 ha (17.3%). Representation of the Mountain-valley desert ecological zone in the national PA system will increase from the present levels of 99,704 ha (3.3% of ecological zone) to at least 1,732,208 ha (57.7%).[6] The project will work within the framework of the Government's current PA expansion program under *Zhasyl Damu* (2010-2014)[7], by supporting the development and implementation of the desert and semi-desert ecosystem components of the program. It will also lay the groundwork for the next phase of *Zhasyl Damu* (2015-19). The Committee on Forestry and Hunting (CFH) will lead this component, in cooperation with regional and local authorities and local communities. The outputs are described below.

Output 1.1: Two new and two expanded PAs that include areas identified as high biodiversity value desert and semi-desert ecosystems are gazetted (under Zhasyl Damu 2010-14)

29. Two new desert/ semi-desert PAs – Ile Balkhash State Nature Rezervat and Mangistau State Reserve Zone – will be established. Two existing PAs – Barsakelmes State Nature Reserve/ Zapovednik and Altyn Yemel State National Nature Park will be expanded to include desert and semi-desert ecosystems (see Table 4 for areas in hectares and location of PAs). Legal establishment of these new and expanded PAs will require the preparation and adoption of two documents: a Scientific Background Report or 'ENO', and a Technical Economic Background Report or 'TEO'[8]. The ENO will go through the "ecological expertise" process of approval in the Ministry of Environmental Protection. The draft TEO will be agreed with and approved by CFH regional offices, local government and city authorities (akimats) and land users through meetings and public hearings. Completion and adoption of these reports will be followed by announcements in the official gazette. This output is fully co-financed by the Government.

Table 4. Proposed PA Expansion under the Project

UNDER ZHASYL DAMU 2010-2014									
Target ecosystem	**Target region**	**New PAs**			**Expansion and strengthening of existing PAs**			**New wildlife corridors**	
		Name	*ha*	*Province*	*Name*	*ha*	*Province*		*ha*
Mountain-valley desert subtype (subtype of Foothill deserts)	Ile-Balkhash	Ile-Balkhash State Nature Rezervat	442,296	Almaty	Altyn Yemel State Nature Park (current area: 467,040)	460,208	Almaty	Between existing Altyn Yemel State National Nature Park and the new Ile Balkhash State Nature Rezervat	700,000
Southern desert	Aral-Syrdarya				Barsakelmes State Nature Reserve (current area:	5,770	Kzylorda		

[6] These are minimum figures. Refined targets will be developed during the formulation of the PA expansion plan for 2015-2019.
[7] In Kazakhstan, government financing programmes for PAs operate in five-year cycles.
[8] ENO stands for 'Estestvenno-nauchnoje obosnovanie' and TEO for 'Tekhniko-ekonomicheskoje obosnovanie.'

					160,826)				
	Ustyurt plateau	Mangistau State Reserve Zone	2,676,262	Mangistau					
	TOTAL		3,118,558			465,978			700,000
Total increase in 2010-14 period (new PAs, expanded PAs and wildlife corridors)									4,284,536
UNDER ZHASYL DAMU 2015-2019									
Target ecosystem	**Target region**	**New PAs**			**Expansion and strengthening of existing PAs**			**New wildlife corridors**	
		Name	*ha*	*Province*	*Name*	*ha*	*Province*		*ha*
Mountain-valley desert subtype (of Foothill deserts)	Ile-Balkhash	Arganaty (area estimate is tentative)	30,000	Almaty					
Southern desert	Ustyurt plateau				Ustyurt State Nature Reserve (current area 223,342; expanded area estimate is tentative)	220,000	Mangistau	Between Barsakelmes and Ustyurt State Nature Reserves (area estimate is tentative)	750,000
	TOTAL		30,000			220,000			750,000
Total increase in 2015-19 period (new PAs, expanded PAs and wildlife corridors)									1,000,000

Output 1.2: Establishment of a formal wildlife (green) corridor, connecting migratory routes of goitered gazelle, argali and saiga in the Ile-Balkhash area (under Zhasyl Damu 2010-14)

30. A wildlife corridor will be established in the Ile-Balkhash area with various protection regimes. The corridor will be created to improve the effectiveness and sustainability of PAs in the area, mainly the existing Altyn Yemel State National Nature Park and the new Ile Balkhash State Nature Rezervat. Kazakhstan's PA Law endorses establishment of wildlife corridors and states that protection regimes within the corridor are to be defined by its passport[9]. It is expected that the corridor will consist of a network of zakazniks to protect important habitats (e.g. calving areas) of goitered gazelle, koulan, argali and saiga, connected with areas for seasonal protection along migration routes. The PA Law allows for low-impact, biodiversity-friendly activities within the corridor. But during certain times (e.g. migration, rutting & lambing) the protection regime becomes strict disallowing human disturbances. The PA Law also requires that any territorial/ city planning and management, of which the corridor is a part, be approved by CFH.[10]

31. Key steps for identification and legal establishment of the corridor will include: (i) defining the conservation objectives of the corridor; (ii) identifying criteria that the corridor must satisfy; (iii) assessing various options for linking priority areas for conservation with key landscape-scale ecological processes against these criteria; (iv) defining the corridor; (v) drafting and adopting an ENO for the corridor, as

[9] A PA 'passport' is an official document that has to be developed within 6 months of the PA's official establishment using the endorsed ENO & TEO as the basis. It contains the following information: name of PA, its type & category, administrative body that assumes management over PA, if it is not registered as a legal entity; geographical location, description and coordinates of its boundaries, total area in hectares, PA map with key infrastructure & facilities, indicator species, description of historical/cultural monuments, a list of land users residing in the buffer zone, a list of eligible and non-eligible economic activities & practices in certain parts of the PA.

[10] Kazakhstan has very limited experience with creation and management of corridors. CFH has formally established only one wildlife corridor in the Kazakhstani sector of Altai-Sayan and is in the process of establishing a corridor in the steppe zone Irgiz-Turgai-Zhylanshyk. So, this is a learning-by-doing experience, and the project will ensure that international expertise is shared with national experts in this regard.

stipulated by Article 81 of the PA Law[11]; (vi) developing a financial sustainability assessment and strategy for landscape-level management efforts, including the potential for community-based eco-tourism, etc.; (vii) drafting amendments to the PA Law and other related bylaws to formalize the process of the wildlife corridor creation and operation.

32. The information needs for this output (maps, gap analysis, monitoring of target species for protection) will be met by the ecological monitoring and decision support system that is to be established under Output 2.4. A consultative process will be followed throughout. This will include an inception workshop to discuss the overall vision of the project and to discuss planned activities within the area. This will be followed by more focused planning workshops with stakeholders and decision makers at the oblast and rayon levels, including with land use planning agencies. Targeted workshops and meetings will also be held with local level stakeholders and focus groups (farmers, hunting area managers, board of elders, *Akims*, NGOs, women's groups, etc.) for information sharing, asset and land use mapping, participative zoning, etc.

33. At the conclusion of this process, a formal wildlife corridor will be ready for operationalization. The corridor will be approved by regional authorities (Oblast *akimats*), or administrations of cities of republican importance, which, in this case, is Almaty City. Unlike with PAs of IUCN categories I and II, a Government Resolution is not required. The corridor will be proposed by CFH, subject to approval of ENO, and it is expected to fall under the authority of the Altyn Yemel PA.

Output 1.3: At least one new and one expanded desert PAs gazetted, and one wildlife corridor created (under Zhasyl Damu 2015-19)

34. In 2014, the next five-year plan of the Government's PA expansion programme (2015-2019) will be formulated, presenting a major opportunity to integrate new and innovative thinking, based on best international practices, into the PA expansion strategy. This output will focus on supporting the Government in the definition of this expansion process, as well as its implementation.

35. The design of the PA expansion plan will begin with a comprehensive assessment of the existing PA establishment process and its implications for PA expansion within the desert and semi-desert region, and be based on a detailed gaps analysis that assesses ecological and representation gaps under the baseline PA system and identifies cost-effective opportunities for closing them. The design will be informed by landscape-level information being developed under Outcome 2. It will also carefully consider the need for multiple PA types, including alternative institutional models, to achieve landscape-level conservation goals. Based on the above inputs, CFH will finalize its proposal for PA expansion under the new phase of Zhasyl Damu (2015-2019), including locations, types and areas of new PAs[12].

36. Together with its partners, the GEF will support implementation of this new phase of the Government's PA expansion plan. This will include support for the legal establishment of one new PA (tentatively, Arganaty zone in the Ile Balkhash pilot area as the most suited habitat for goitered gazelle), the extension of one existing PA (tentatively, Ustyurt State Nature Reserve) and creation of one wildlife corridor within the Southern desert region. The corridor is expected to be between Barsakelmes and Ustyurt State Nature Reserves for protection of saiga calving areas and migration routes in the Ustyurt Plateau along the border with Uzbekistan (the area in hectares will be determined during project implementation following preparation of the ENO). In supporting the preparation of key documentation for legal establishment, namely ENOs and TEOs, the GEF will speed-up the process as well as bring international expertise to bear. Together with co-financing, it is expected that implementation of the PA expansion plan for 2015-2019 will result in a minimum increase of 1 million hectares in PA coverage within the desert and semi-desert region by the time of GEF project completion.

Output 1.4: Management plans developed for new and expanded PAs

37. Management plans will first be developed for the already existing Altyn Yemel State Nature Park (Ile-Balkhash area), Barsakelmes State Nature Reserve (Aral-Syrdarya area), and Ustyurt State Nature Reserve (Ustyurt Plateau). Development of these management plans will begin immediately upon approval of

[11] The Law does not require a TEO for corridors.
[12] CFH must have valid justifications for proposing certain areas for protection, which will be provided by ENOs.

expansion of these PAs[13]. The PA administrations will be assisted in management and business planning, assessment of conservation and research priorities (e.g. wildlife migration patterns) and development of threat-reduction activities, including those from climate change. Experiences, lessons learned and methodology of this planning process will be used and applied for the future planning processes of the two new desert PAs (Ile-Balkhash State Nature Rezervat and Mangistau State Reserve Zone). The lessons will also be applied to management planning for the wildlife corridor connecting the Altyn Yemel State Nature Park and the Ile Balkhash State Nature Rezervat that is to be established in 2013-2014 (Output 2.3)[14].

38. The plans will include a description of the conservation objectives of the PA, zoning and management strategies for the different zones, and a business plan. Participatory planning methods will be used to raise awareness and to create knowledge within the local communities about the function, management, potential and significance of the protected areas. PA Public Committees (created and operationalized under Output 3.1) will review and provide feedback on PA management plans for the Ile-Balkhash State Nature Rezervat and Altyn Yemel State Nature Park (Ile-Balkhash pilot area) and the Barsakelmes State Nature Reserve (Aral-Syrdarya area). The project will support the entire participatory planning process, which will include planning meetings with oblast and rayon administrations, CFH, land user groups (livestock breeders, hunters, fishermen, agriculturalists, women, etc.), NGOs and PA administrations. Particular emphasis will be placed on informing the local population about the existence and boundaries of the PA, its functions and benefits, and the importance of (and means for) their participation in the development of PA management plans and assessment of PA performance[15].

Output 1.5: Enforcement and monitoring capacities of PA administrations at target desert and semi-desert PAs improved

39. The project identifies unsustainable use of wildlife and biodiversity resources as a key threat to biodiversity in target PAs. In particular, poaching and unsustainable fishing destabilize population size, cause, for example, disturbance for birds during nesting times and ungulates during migration, thus jeopardizing overall conservation efforts within the PAs.

40. The existing PA management units in Ustyurt and Syrdarya areas (Southern desert), for example, have old infrastructure, limited staff and limited number of vehicles for patrolling. As such, management units are unable to patrol habitats in Southern deserts, control poaching and communicate with local communities on biodiversity regulations and resource use practices. All this renders the PA's protection efforts ineffective and leaves the majority of threats to biodiversity unaddressed. Similarly, rangers in the Ile-Balkhash area perform rather limited passive protection and prosecution—with no active resource management elements—due to insufficient number of staff, inadequate equipment supply and machinery to cover vast areas. The enforcement capacity of two zakazniks in the Ile-Balkhash that cover over 400,000 ha is rather weak and is performed by 14 inspectors of CFH Almaty Oblast Inspection and 8 inspectors of the Altyn Yemel National Nature Park. Both management authorities lack a sufficient number of vehicles and other types of machinery as well as staff for effective patrolling the territory of zakazniks.

41. The experience of the UNDP supported GEF-funded PA projects in Kazakhstan (covering wetlands, mountains, forests and steppe ecosystems) has highlighted the need for paying particular attention to training rangers and other field staff in planning, monitoring, conflict resolution and enforcement. Therefore, under this output, the project will provide training and equip rangers and patrolling groups with means for surveillance, interception, and prosecution to ensure adequate enforcement in target PAs. The project will also purchase equipment to enhance biodiversity research and monitoring capacities of the expanded and new PAs. Altogether, the GEF is expected to contribute US$ 327,000 or 14 % of the total PA needs estimate for

[13] It is anticipated that by the time the project holds its inception workshop, the expansion of Altyn Yemel and Barsakelmes will be at the final stage. Thus, the project could start to work on these management plans at project inception.
[14] PAs and corridors that are to be established under the next phase of Zhasyl Damu (2015-2019) – namely Arganaty and the corridor between Barsakelmes and Ustyurt – will most likely be officially gazetted by the end of the project, with management planning taking place post-project.
[15] This stems from the METT assessment for target PAs that highlighted the issue of limited knowledge of residents and land users of the PA boundary and general awareness of PA functions.

equipment and machinery. A complete list of needed equipment for rangers and other field staff operations can be found in Annex 10.

Output 1.6: METT accepted as the official performance assessment tool to gauge effectiveness of all PAs in the national system

42. This output will not only ensure that the Management Effectiveness Tracking Tool (METT) is used as a performance assessment tool for the target PAs of the project, but also institutionalize it as the official performance assessment tool for all PAs in the national system. CFH will be assisted in mandating the use of the METT to assess management effectiveness of PAs in the country. The PA Law (Article 26) requires that PAs assess their performance under the previous management plan before producing a new one. However, as yet, no standard methodology exists to meet this requirement. UNDP has piloted the use of METT within its biodiversity conservation projects for several protected areas. CFH has recently approached UNDP for assistance with integrating METT into the nation-wide process of assessing PAs.

43. The project will use the METT template as a standard (to allow for PA comparison across the globe), but the template may be extended to include additional sections that better serve monitoring functions/ needs of CFH and PAs in Kazakhstan. In particular, the project will: (i) summarize all past experience in the country related to the use of METT; (ii) develop process and functions charts to allow CFH and PA administrations to map the sequence of activities and associated responsibilities in the process of METT completion; (iii) assess the monitoring and reporting needs of CFH and PAs administrations to comply with the METT; (iv) develop METT quality-check guidelines for PAs and CFH; (v) draft a set of internal rules/ ordinances to institutionalize the METT process; (vi) pilot METT as a mandatory exercise in three target desert PAs — Barsakelmes and Ustyurt State Nature Reserves, and Altyn Yemel State National Nature Park — along with training of CFH and PA staff; (vii) revise the proposed process and rules, as needed, based on results of pilot applications; (viii) draft and endorse amendments to the PA Law to mandate the use of METT across the national PA system.

Output 1.7: Institutional effectiveness and staff capacities for conservation and sustainable use of the sub-system of desert and semi-desert PAs improved

44. This output will extend capacity building efforts from the target PAs to the overall sub-system of desert and semi-desert PAs. A catalog of skills and competencies required for management of different categories of desert and semi-desert PAs will be developed. Based on the skills compendium, a set of occupational standards will be developed to help ensure that required skills are appropriately distributed among the profiles of staffing positions within the system (and eventually among the individuals filling those positions). Having identified key core skills and competencies for desert and semi-desert PA management, and allocated them among staffing profiles, the next step would be to assess and identify options for human resource development in the desert and semi-desert protected areas in order to address key gaps in competencies. This process will involve, inter alia, a review of human resource development and training in PA institutions in Kazakhstan and especially the ones undertaken as part of other UNDP/ GEF PA-related projects.

45. Based on all of the above, the project will design training and development programs for raising key competencies of current PA managers in the background, principles, techniques and practices of PA management in desert and semi-desert environments. The training program will also address the risk that climate change poses to desert and semi-desert environments and the opportunities presented by Ecosystem-based Adaptation in this regard. The program will be jointly developed with the Kazakh State University of Agriculture[16] (KSUA) and CFH. Practitioners from other countries with relevant experience will be invited to provide lectures on specific topics[17]. In addition, a list of trainers with a proven record will be compiled for

[16] KSUA already provides some professional training for PA staff but on an ad-hoc basis due to limited financing. The quality of this training has been assessed by participants as low largely due to the poor quality of invited lecturers/ trainers and training materials. In part, this negative feedback prevents CFH from obtaining regular financing for a program of continuous specialist training for PA and CFH staff.

[17] During the PPG phase, staff of CFH regional administrations expressed a particular interest in learning from practitioners from other countries. The staff referred to a particular instance when a former PA manager from England who visited the office to conduct a Terminal Evaluation of a UNDP/GEF project shared some practical solutions for effective PA management and community

the use of KSUA and CFH in the future. KSUA will provide training facilities while CFH will cover training costs, except for the costs associated with the design of the training modules, and the travel and accommodation of international trainers that will be covered by GEF. By project end, CFH will officially endorse the professional training and apply for regular financing.

46. The project will also support CFH in opening up lines of communication with schools in the project's target areas (through talks, educational materials, etc.) to enhance understanding of desert and semi-desert conservation and management, including the role of PA and non-PA actors in their maintenance.

47. In parallel with the above capacity building efforts, the project will look at the issue of accountability, both individual and organizational. At the level of individual staff, the project will look at CFH's system of assessing staff performance and develop pilot efforts to introduce new performance measurement tools for desert PA managers and staff and integrate them with the METT (Output 1.6). Where possible, these will be linked to tangible indicators associated with PA management, financial performance, etc.

Output 1.8: A graduate course of study on PA management (MS equivalent) designed jointly with and delivered by the Kazakh State University of Agriculture (KSUA)

48. Following the collapse of a well-established system of continuous professional training that existed during Soviet times, no specialist training has ever fully replaced it[18]. The professional capacities of management and staff in most PAs of Kazakhstan are relatively low. This is particularly true for target PAs in desert and semi-desert ecosystems. In the Barsakelmes State Nature Reserve, for example, the PA science & conservation department consists of a former ranger who has little knowledge and understanding of the department's scope of work. Low salaries partly contribute to this problem. But even with a salary raise, undergraduate and graduate level institutions are producing no fresh graduate professionals who can be employed in the PA sector. Existing undergraduate programs train future professionals for the forestry sector but none for the PA sector per se.

49. The project will, therefore, partner with KSUA in developing a graduate course of study on PA management. The project will summarize the experience and lessons learned from the UNDP/UNOPS/GEF global project on supporting country early action on protected areas. In particular, the project will review training modules on PA management available through "ConservationTraining"[19] (www.conservationtraining.org). The modules will be adapted to current and future needs of the PA sector in Kazakhstan. International expertise and the experience of practitioners from CIS countries, Russia in particular, will also be brought in. For the graduate course, the project will assess the existing market for relevant undergraduate/ graduate programs in terms of student enrollment and status in the labor market, potential interest of prospective or current students in working as PA managers, etc. This analysis will feed the design process for better tailoring of what the graduate course can offer to a potentially interested segment of the student population. Jointly with KSUA, Association for Biodiversity Conservation in Kazakhstan (ACBK), and the NGO Naurzum, the project will perform a nation-wide outreach campaign in the form of organized seminars and presentations targeting prospective students for the graduate program. While the project will provide technical assistance with the design and promotion of the course, KSUA will ensure endorsement and inclusion of the course in the official list of available graduate programs of the University. Implementation of this Output will be linked to Output 1.7 above.

OUTCOME 2: LANDSCAPE-LEVEL CONSERVATION PLANNING AND MANAGEMENT ARE DEVELOPED AND IMPLEMENTED IN TARGET DESERT AND SEMI-DESERT ENVIRONMENTS

50. This outcome will demonstrate techniques for increasing the effectiveness of desert and semi-desert PAs by enhancing the conservation-friendliness of intervening landscape areas. It specifically aims to

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engagement as an informal session.

[18] In the late 90-ies, the National Kazakh University named after Al Farabi and the KSUA ran BA equivalent courses on PA management. Due to low enrollment rates, both institutions had to close these courses after a few years. The course's unpopularity among prospective students largely stems from the PA sector being considered as a low-prestige employer at the time of the economic crisis, and from the course content being disconnected from PA sector realities and future needs.

[19] This online training program was created by the Nature Conservancy within the framework of UNDP/UNOPS/GEF global project on Supporting Country Early Action on Protected Areas.

capitalize on synergies between sustainable land management and biodiversity conservation. Improving territorial landscape-level planning to maintain ecosystem services; demonstration of SLM practices in rangelands, tugai and wetlands; and operationalization of a wildlife corridor will combine such that the whole is greater than the sum of the parts. Implementing SLM practices will not only improve biodiversity within the demonstration sites but will have wider implications by reducing threats to biodiversity within protected areas and maintaining landscape-scale ecological processes. The expected total landscape area to be brought under sustainable productive use is about 9 million hectares[20] in the Ile Balkhash and Aral-Syrdarya regions through biodiversity-compatible territorial planning. Demonstration of restoration and sustainable use will occur over an area of 100,000 ha. To enable the emergence of a matrix of conservation-friendly land uses, the GEF will provide incremental support for the development and implementation of tools for landscape-level conservation planning and management in target regions.

Output 2.1: Territorial development plans employ the landscape management approach to inform and plan conservation and restoration of key ecological functions and processes of natural and productive desert and semi-desert landscapes in pilot rayons around target PAs in Ile Balkhash and Aral-Syrdarya regions

51. This output builds on the ongoing trend in Kazakhstan of gradual transfer of planning and development of local policies and plans from central government to regional/ local authorities. The project will work with the oblast and rayon level offices of CFH, Land Management Agency, Ministry of Environmental Protection (MEP), as well as with local authorities of two pilot rayons (Balkhash rayon in the Ile-Balkhash area and Aralsk rayon in the Aral-Syrdarya area) to devise planning frameworks that focus on the economic potentials (rather than the constraints) of safeguarding and maintaining ecosystem services in the rayons. The project will use the experience of UNDP/GEF projects on wetlands and steppe conservation and that of ACBK in implementing this output.

52. The Law on Land in Kazakhstan envisages soil and climatic zoning at the rayon, oblast, and national levels that designates land use regimes for each area. Yet, implementation of this requirement lacks systematic monitoring by enforcement institutions which leads to unsustainable use of land and other natural resources and their subsequent degradation. Also, in Kazakhstan, territorial planning is performed for tax purposes solely. The current planning system fails to use an integrated approach that factors in the needs of ecosystems for sustaining their services in the long run, in addition to the needs of other sectors of the economy.

53. Under this Output, the Project envisages the following activities on territorial landscape level planning in the Balkhash and Aralsk rayons of the Ile-Balkhash and Aral-Syrdarya target areas, respectively: (i) identification of functional zones in pilot rayons considering natural ecosystem types based on collection and processing of primary data on natural characteristics (ecosystems, vegetation, distribution of key species), natural and anthropogenic processes (erosion, degradation, etc.), socio-economic data (population, settlements, current land use practices, etc.)[21]; (ii) identification and spatial assignment of appropriate land use types using participatory planning methods that consider the needs of stakeholders, local knowledge and development priorities of target rayons; (iii) identification of existing and potential conflicts among different land-users, and between land-users and ecosystems, and development of measures to mitigate or eliminate such potential or existing conflicts, with proposed measures being agreed with stakeholders; (iv) development of a GIS-based land use concept[22] and its dissemination to relevant government bodies; the planning document will contain recommendations (including GIS-based maps) for different types of land use given development priorities of rayons and ecosystems' potential23; (v) land-use planning results will be communicated to relevant oblast and rayon administrations and integrated into the management plans of the

[20] Areas of Balkhash and Aralsk rayons selected as pilots for landscape level planning frameworks

[21] This data will be used for GIS modeling under activity (iv).

[22] The GIS-based land use concept will include landscape (natural & cultural), soil, wildlife, biome maps. Each map will include categories of importance (high-, medium- and low-value) along with sensitivity analysis. The land use concept will balance development priorities (economic & social) with conservation objectives in the area given the current status of ecosystems (habitat & species status, degree of degradation and sensitivity, available ecosystem services).

[23] The land use concept will provide the framework for determining sustainable natural resources use practices that are relevant for the designated regime of each functional zone and these will be demonstrated in target rayons (Output 2.2 and Output 3.2)

PAs in target areas; this activity will be linked and coordinated with activities under Output 1.4 related to development of PA management plans; (vi) environmental and social impacts of demonstration projects will be assessed, and lessons learned summarized to inform the next cycle of territorial planning; (vii) capacity building of local government institutions and authorities, non-government organizations, PA staff, and other landscape actors in landscape planning and management to sustain the project's results in the long run; the Project will organize workshops, seminars and exchange tours to share experiences on application of landscape planning and management around the Korgalzhyn and Alakol State Nature Reserves (UNDP/GEF completed wetlands project), and the newly created Altyn Dala Rezervat (UNDP/GEF ongoing steppe project); (viii) if needed, the project will assist in drafting amendments to the Land Law as well as internal or inter-agency instructions related to territorial landscape level planning; (ix) finally, the project will summarize results of the pilot territorial planning exercise and will produce a "how-to" guide for replication purposes.

Output 2.2: Demonstration of sustainable and replicable resource use practices to reduce threats to biodiversity and preserve ecological functions of productive landscapes around target PAs in the Ile-Balkhash and Aral-Syrdarya regions

54. The project will demonstrate methods for restoration and sustainable use in three types of production landscapes – rangelands, saxaul and riparian forests, and wetlands. Degraded rangelands extending over 84,000 hectares in the Ile Balkhash basin and Ustyurt plateau will be rehabilitated. Participatory biophysical and socio-economic resource mapping will be undertaken to identify the potentials of the various ecozones for livestock rearing in pilot areas, which have historically been livestock breeding regions (see Annex 6for details on demonstration sites and activities). On-the-ground investments will be undertaken to improve soil quality, increase the mobility of livestock, and counterbalance livestock grazing pressures on rangelands in desert and semi-desert ecosystems (for example, investments in soil improvement, improvement of hydrological regime, re-seeding, drilling of wells, restoration/ maintenance of access roads).

55. Investments will also be made in restoration and sustainable use of riparian forests. Within the financial and temporal limits of the project, approximately 18,048 hectares of these riparian ecosystems (comprising saksaul, tugai, polar groves) will be restored and brought under sustainable management (see Annex 6 for details on demonstration sites and activities). In particular, demonstration projects will aim to restore conditions for natural reforestation of riparian forests through provision of adequate protection and management of target areas outside PAs. A study on the state and propagation rates of these forest ecosystems will precede the restoration activities. Within these demonstration activities, the project will pilot community engagement and negotiation mechanisms on sustainable resources use that can be replicated in other parts of the country.

56. The project will also invest in restoration and sustainable use of wetland habitats. Within the project's funding and temporal boundaries, the Government commits to restoration and sustainable use of 2,202 hectares of degraded wetlands (see Annex 6 for details on demonstration sites and activities). The restoration will focus primarily on the degraded wetlands in the historic parts of Ile River delta. This will help to expand the nesting and resting grounds for globally threatened migratory birds, as well as provide benefits for local communities in terms of livelihood opportunities (for example, sustainable farming with limited artificial irrigation, grazing, fishing and recreation), as well as improved water supply. From a technology perspective, wetland rehabilitation will rely on closing ditches and canals with dykes thus re-wetting, in a controlled manner, the old river delta and subsequently regulating water levels in wetland areas for biodiversity and livelihood purposes. A study on optimal water levels will precede the restoration activities, in order to have clear understanding of dyke parameters from a hydrological perspective.

57. Results and lessons learned of demonstration projects will be presented at rayon, oblast, republic levels and international conferences, as well as in printing materials for wider outreach. Also, the project will organize training workshops for the target audience (e.g. farmers/ herders, Rural Consumer Cooperatives (RCCs), hunting area managers, extension services, etc.) to build their capacity and skills for implementation of demonstration projects. Finally, the project will arrange for site visits for journalists and the production of documentary films on the successful application of an ecosystem approach to productive landscape management in the Aral Syrdarya and Ile Balkhash target areas.

Output 2.3: Operationalization of a wildlife corridor in the Ile-Balkhash pilot area with species and habitat maintenance plans that are in line with development and conservation objectives of the rayon-level development plans (ref. Outputs 1.2, 1.5, 2.1)

58. Under this output, support will be provided for operationalizing the wildlife corridor designed under Output 1.2. While precise elements of support are difficult to specify with certainty, given their dependence on the design process under Output 1.2, they are expected to include the following activities.

59. The operationalization of the wildlife corridor will begin with the development of the corridor management plan that will include a description of the conservation objectives of the corridor, zoning and management strategies for different zones, and a business plan. The corridor management plan will contain a section on habitats and species management. The development of this section will be closely linked to activities under Output 2.1 and 2.4. The project will support the entire participatory planning process, which will include planning meetings with oblast and rayon administrations, CFH, the Almaty Oblast inspection of CFH, Almaty oblast and rayon land management offices, land user groups (livestock breeders, fishermen, agriculturalists, women, etc.), hunting area managers, eco-tourism operators, local communities, NGOs and PA administrations. The existing PA public committee (PAPC) in the Ile-Balkhash area (Output 3.1) will be used as a platform for public consultations to seek inputs and accord of stakeholders of the corridor management plan. The PAPC will as well monitor implementation of the plan and provide recommendations for adaptive management. In addition, a public awareness is planned to disseminate information and create knowledge within the local communities about the function, management, potential and significance of the wildlife corridor.

60. The project will look at ways to incentivize biodiversity friendly and sustainable practices on part of the corridor stakeholders. As such, biodiversity-friendly land uses, for example ecotourism (possibly community-based), mobile livestock management, sustainable and adapted management of hunting areas, will be identified and proposed for implementation. The project will demonstrate implementation of PES/reward schemes for hunting concessions operating within the corridor (Outputs 2.2 and 3.2) as well as the use of sustainable land management practices in productive landscapes within the Ile-Balkhash corridor (Output 2.2). It is expected that pilot schemes will enhance the sustainable management and use of wildlife within the hunting concessions which cover a high percentage of the areas outside PAs[24] as well as creating systems for the sustainable management of pastures. Close cooperation with two GIZ projects on sustainable use of wildlife and natural resources in Central Asia and pasture management, which may soon be merged into a single programme, is expected to create important synergies in this regard. Following implementation of the proposed pilot schemes, and if needed, the project will draft amendments to the Law on Wildlife Use related to the functioning of hunting concessions in the wider productive landscapes and monitoring of their activities.

61. As part of implementation of the corridor management plan mobile groups will be established to ensure protection of saiga, goitered gazelle and koulan along their migratory paths as well as other kinds of wildlife in the area. Patrolling rangers of existing hunting areas within the corridor will also be engaged for co-monitoring and enforcement activities. The project will provide capacity building for PA patrolling groups to improve their enforcement and surveillance skills (Output 1.5 on enforcement & monitoring capacities of PA and corridor staff).

Output 2.4: Ecological monitoring and decision support system to inform desert and semi-desert conservation and land use planning in the Ile-Balkhash pilot area

62. This will be developed in partnership with Government (Ministry of Environmental Protection's oblast- and rayon-level offices, CFH, and Land Use Agency's oblast- and rayon-level offices), ACBK and WWF. Implementation of this output will build on and be closely linked to the ongoing work of the Government of Kazakhstan and UNDP on creation and operationalization of a biodiversity monitoring system in 4 pilot

[24] For example, 99 hunting concessions operate in Almaty Oblast covering an area of 4.22 million hectares. The hunting areas have 332 units of equipment, means of communication, and cordons for rangers. In Kyzyl Orda Oblast, 22 registered hunting concessions cover an area of 4.42 million hectares.

PAs.[25] The creation of such a system and its application within the Ile Balkhash pilot area will help to eliminate important information barriers to effective management of desert and semi-desert zones. Among other benefits, the system will provide data for the definition of wildlife corridors and other land use planning decisions (Outputs 1.2, 2.1). For biodiversity conservation, it will represent an important tool for adaptive management in the wider productive landscape, providing visual displays of quantitative information (maps, graphs, tables) that can be presented at government or public meetings.

63. The system will offer support in the following areas: (i) coordinating and harmonizing different data collection and monitoring systems such as those of hunting areas, local administrations/ akimats, local land users, CACILM, CFH, the Land Use Agency, NGOs, international research institutes and organizations (e.g. WWF) and the Information Center at MEP; (ii) providing data and analysis for use by decision making and planning agencies (data and tools are likely to include gap analysis; key species monitoring; data on habitats, migration and distribution of goitered gazelle, koulan, and saiga; landscape diversity inventory and mapping; analysis of key anthropogenic and natural threats to biodiversity conservation for adaptive management, etc.); (iii) development of monitoring data quality protocols and institutional arrangements.

64. It is expected that the Environmental Information Center in the MEP will run this ecological monitoring system. Cooperation between the MEP Information Center, the Land Use Agency, CFH and the hunting areas will be important for success. These four agents are key repositories of ecological information (BD, land resources, wildlife, habitats). Each agency undertakes data collection and monitoring relevant to its mandate with little synergy amongst them. This output will ensure cooperation and coordination between these agencies through the vehicle of the ecological monitoring and decision support system. Work under this output will involve cooperation with various national and international research institutions, with these institutions contributing their survey and field data while the ecological decision support system will provide a snapshot of gaps in ecosystem, habitat, species inventory & analysis. The system will be piloted in the Ile-Balkhash area, as discussed above, before being disseminated at a national level towards the end of the project.

OUTCOME 3: COMMUNITY INVOLVEMENT IN CONSERVATION AND SUSTAINABLE USE OF BIODIVERSITY IN AND AROUND PAS IS ENHANCED

65. This outcome will demonstrate effective mechanisms and tools for engagement of local communities and other non-PA actors in PA management. The project will develop the capacities of local communities and authorities to participate in protected area management. Local authorities will also gain experience with public participation in biodiversity conservation. The project will incorporate lessons on community engagement learnt from the completed UNDP/GEF projects (on conservation of agro-biodiversity, and wetlands conservation) and a project funded by the Government of Norway (on integrated water resources management) in Kazakhstan. The project will support PA Public Committees for Ile Balkhash and Aral-Syrdarya areas, and will assist the PA administrations and local communities in working out sustainable biodiversity management arrangements, including thresholds and incentives for sustainable resource use in and around PAs. The CFH, together with local governments and communities, are expected to play a key role in implementation of this outcome.

Output 3.1: PA Public Committees, acting as a stakeholder engagement mechanism for transparency in PA planning and management, piloted at target PAs in Ile-Balkhash and Aral-Syrdarya

66. Establishing PA Public Committees (PAPC) is a novel concept in Kazakhstan. While there is some in-country experience, it is still limited. Therefore, the project will first undertake crucial ground work for institutionalizing PA Public Committees in Kazakhstan. The Barsakelmes State Nature Reserve and Altyn Yemel National Nature Park will be the initial pilot PAs for determining best approaches to mobilize stakeholder participation in PAPCs. UNDP will draw on its experience with stakeholder engagement mechanisms in the context of River Basin Councils (RBCs). In the case of RBCs, at each meeting a certain

[25] This UNDP/GoK project started in 2012 and aims at creating a basis for transforming the existing unsophisticated biodiversity monitoring system into an advanced automatic search system on biodiversity in Kazakhstan by developing a set of relevant GIS-based software and databases.

number of issues are selected for discussion and the composition of participants depends on these topics. Key stakeholders remain the same while additional stakeholders with relevant backgrounds are invited to cover topics for discussion. This has proven to be a cost-effective approach that has worked well for stakeholders. A similar approach will therefore be followed for the Public Committees.

67. The overall plan and schedule for the creation of PAPCs will include: (i) determination of a preliminary list of potential PAPC participants – Government, NGOs, water and land user groups, private sector (hunting/ fishing areas, tourism agencies, small businesses, enterprises), etc.; (ii) dissemination of basic information materials on PAPC's role and functions to potential participants; (iii) organization of area visits and meetings for consultations on the role, status and importance of PAPCs; (iv) determination of local expectations of PAPCs and local persons who can help with establishment and further strengthening of a PAPC; (iv) development of incentives to ensure efficient functioning of the PAPC; (v) consultations on and selection of potential PAPC members; (vi) preparation and implementation of the initial meeting for establishing the PAPC with potential members; (vii) follow-up discussions of founding documents of the PAPC with members; (viii) first full meeting of PAPC[26]; (ix) development and approval of the PAPC short- and mid-term work plans; (x) second meeting of PAPC; (xi) development of the PAPC financial exit strategy; (xii) continuing training and consultation for PAPC members during the project.

68. Training related to PAPC creation and operation will include, but not be limited to, the role of public in and participatory approaches to government management; a legal framework for public engagement; what is a Public Committee and how it can be created; strategic planning; effective management of public meetings; how to make effective presentations; how to deliver talks at public meetings; financing of PAPCs (sources of financing and mechanisms for accessing it).

69. In addition, a public awareness programme is planned to disseminate information on what a PAPC is and how it may be used for transparency in PA operations. This is intended to help attract potential members of the public and other non-government stakeholders. Finally, the project will summarize results of pilot PAPCs and will produce a "how-to" guide on PAPC creation and operationalization. If needed, the project will draft amendments to the PA Law related to creation and management of public committees for the purpose of PA management.

Output 3.2: Compensation or reward schemes for long-term sustainable biodiversity use in and around target PAs piloted among PA management, local communities, conservationists, hunting/fishing areas, tourism operators and other non-PA actors

70. CFH and PA managers are becoming more aware of the importance of balancing and coordinating the use of different ecosystem services not only within the PA boundaries but also among various actors in the wider landscape. However, there is no experience with PES schemes in Kazakhstan. A critical mass of pilot projects and environmental and economic assessments of ecosystem services relevant to the Kazakh context are needed to complement PES theory and methodology. The GEF's support in developing such pilots under this output will add incremental value. This output will set thresholds and create incentives for sustainable resource use around target PAs by engaging non-PA actors in a voluntary agreement on rewards for ecosystem services. It is expected that at least two agreements will be concluded and implemented under this Output.

71. The Central Asia Regional Environmental Center (CAREC) will partner with the project in implementing this output. CAREC has produced a brief summary and analysis of opportunities for reward schemes or PES application in Kazakhstan[27]. Of the nine opportunities identified in the report, sustainable environmental practices such as pasture rehabilitation and management, conservation and protection of land and water resources in agriculture, and wildlife and forest management stand out as the most relevant. The project will build on CAREC's experience[28] and utilize its expertise in advocating the use of reward schemes for long-term sustainable biodiversity use in and around target PAs.

[26] The first task of the established PAPCs will be to review management plans of the Barsakelmes State Nature Reserve and Altyn Yemel National Park.
[27] Summary of Recommendations on Payments for Ecosystem Services in the Republic of Kazakhstan, CAREC, Almaty, 2011 (32)
[28] CAREC has been active in advancing PES in Central Asia and already generated some positive experience and lessons learned

72. The project's mode of work under this Output will include: (i) environmental and economic assessment of fragile ecosystems and identification of ecosystem services suitable for reward schemes on biodiversity conservation in productive landscapes around target PAs; (ii) consultations and selection of partners ('buyers' & 'sellers') for a particular ecosystem service, and identification of the partners' realistic expectations from the proposed scheme; (iii) drafting an agreement (e.g. a grazing lease agreement) with shared responsibilities and accountability as well as a list of expected social and environmental benefits; (iv) preparation and implementation of the initial meeting of partners to negotiate the agreement; (v) monitoring of and guidance on agreement implementation; (vi) a summary and analysis of lessons learned (both positive and negative) in implementing pilot reward schemes, and assessment of economic, social and environmental values of proposed schemes; (vii) demonstration of results of pilot reward schemes to local authorities, PA administrations, Ministry of Agriculture, Ministry of Environmental Protection and CFH via site visits, conferences, workshops and seminars; (viii) preparation of (a) recommendations on the application of PES/ reward schemes in the Kazakhstani social and economic context, (b) clear guidance on how to implement PES/reward schemes at the local level given the project experience, (c) recommendations on necessary revisions to the legal framework to institutionalize the use of PES/reward schemes in Kazakhstan; (ix) submission of recommendations to the government for inclusion in the Zhasyl Damu Government Program; (x) training on PES methodology, negotiation skills, threats & problem analysis, etc., aimed at developing the capacity of parties involved in the agreements under Activities (ii)-(v); and (xi) awareness raising among a wider range of stakeholders to enhance public understanding of ecosystem services and the use of PES or reward schemes for maintaining such services long-term.

Output 3.3: Biodiversity microcredit line under the Fund for Financial Support of Agriculture (FFSA) specifically to support sustainable livelihoods of rural communities in and around PAs

73. Under this Output, jointly with the FFSA, the project will launch a biodiversity micro-credit line. This will expand the FFSA's existing portfolio of microcredit products to include support for sustainable livelihoods of rural communities in and around PAs, with a particular focus on desert and semi-desert ecosystems. The institutional arrangements, disbursement and collection system already exist at FFSA and will be used for this new micro-credit program. The project staff will only exercise control over the scope of activities to be performed by the borrower.

74. It is expected that at least 5% of registered land users[29] and low-income households[30] around target PAs will benefit directly from the biodiversity microcredit line. The microcredit line budget will total US$ 1.5 million with GEF contributing US$ 0.5 million and FFSA contributing US$ 1 million. The program will use an annual interest rate of 4%[31] to rural community members and businesses, payable by end of the project. Additional terms and conditions will be specified for each credit subject to the approval of a business plan. FFSA will allocate an additional US$ 0.5 million to cover operational costs of the microcredit program. The incremental GEF resources will provide: (i) assistance in marketing of the scheme to local communities and businesses; (ii) assistance to villagers in feasibility assessment and application process; (iii) guidance on implementation of specific activities; and (iv) monitoring of contractual arrangements.

75. The PPG phase confirmed a menu of activities suitable for implementation in target desert communities through micro credits. This includes: (i) indigenous sheep breeding and wool-making, (ii) sustainable fisheries (relevant for Ile Balkhash and Aral-Syrdarya communities), (iii) ecotourism/agro-tourism in and around protected areas, (iv) production of fodder in unused and degraded lands through adoption of minimum and no-tillage technologies, seed procurement, forage production, etc.; (v) rehabilitation of pasture infrastructure (e.g. reconstruction of herders' facilities, wells) for the use of remote pastures; (vi) development of renewable sources of energy in remote pastures (e.g. the purchase of solar panels); (vii)

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from PES application in Kyrgyzstan. In 2011, CAREC received several grants for wider introduction of PES schemes in Kazakhstan benefiting from previously matured schemes in Southeast and South Asia, such as Indonesia, the Philippines, Vietnam, China, India, Nepal and Vietnam.

[29] These include individual entrepreneurs and farm holders or farms

[30] 'Low-income rural households' refers to a category of the rural population that relies on personal subsidiary plots and cattle as the main source of income

[31] This is the lowest possible interest rate available on the microcredit market in Kazakhstan. For example, FFSA currently issues loans with effective annual rates in the range of 6.26 to 11 percent.

efficient irrigation (e.g. drip irrigation, land leveling equipment for efficient rice irrigation), (viii) support to milk and other livestock products processing; (ix) sustainable hunting practices around target PAs through wildlife-friendly management.[32]

76. The major steps under this Output will include: (i) conclusion of an agreement with FFSA that creates a legal and institutional framework for the functioning of the microcredit program; (ii) endorsement of the list of eligible alternative and sustainable livelihood activities for target areas; (iii) preparation and dissemination of the information package on the biodiversity microcredit program and its terms to potential borrowers (e.g. via meetings, information leaflets and posters, workshops & seminars); (iv) consultations with prospective borrowers on alignment of their project with list of eligible activities; (v) screening for and approval of thematically relevant business proposals before the release of microcredit; (vi) M&E of the microcredit program via site visits and review of FFSA regular reports; (vii) summarize and publish results and lessons learned of the microcredit program; (viii) conclusion of an agreement with FFSA on continuation of this biodiversity microcredit program before project completion. For more details on the FFSA/UNDP/GEF biodiversity microcredit product along with the feasibility assessment of the microcredit market in Kazakhstan, please refer to Annex 7.

Socio-Economic Benefits including Gender Dimensions:

77. Socio-economic benefits: Outcome 2 of the project aims to demonstrate sustainable resource use at pilot wetland, riparian forest and rangeland sites. These demonstration activities will be undertaken under the umbrella of integrated land use planning (Output 2.1) and will optimize the economic revenues of local land users in the medium to long-term. For example, it is expected that annual incomes of local communities participating in the measures on pasture management will increase by 20% over the baseline and average dry forage harvest is expected to increase to 2 hwt/ ha.

78. Outcome 3 of the project is dedicated to engaging local communities and land-users in conservation and sustainable use of biodiversity and land resources. The local authorities (rayon and village akimats) as well as representatives of local populations (e.g., livestock breeders, hunters and agriculturalists) will participate in PA public committees (Output 3.1) and will ensure engagement of local communities in protected area planning and management, starting from an inception workshop to discuss the overall vision and planned activities within the areas and continuing through the development of management plans and their implementation.

79. Output 3.2 will set thresholds and create incentives for sustainable resource use around target PAs by engaging non-PA actors in a voluntary agreement on rewards for ecosystem services. It is expected that at least two agreements will be concluded and implemented under this Output.

80. Under Output 3.3, the project will provide microcredits for the development of sustainable income generating activities of rural communities in the Ile-Balkhash, Aral-Syrdarya and Ustyurt areas, allowing communities to maintain a decent level of income while mitigating potentially adverse impacts on specific species and ecosystems as a whole. For this, the project will target approximately 5% of low-income rural households and registered land users residing/operating around the target PAs (including a wildlife corridor in the Ile-Balkhash area) of Almaty, Kzylorda and Mangistau oblasts. The project will also provide a range of alternative employment opportunities including seasonal engagement of ex-poachers in PA patrolling and monitoring of key ungulate species.

81. Gender benefits: UNDP/GEF's review of in-situ conservation projects (e.g. for conservation of agro-biodiversity or wetland ecosystems) has revealed that women have become a key partner in rural communities as they are more receptive to new concepts and more willing to shift to biodiversity-friendly practices, provided that they generate enough income for the household. Outcome 3 of the project envisages a micro-credit facility to support sustainable rural livelihoods. The project team estimates that up to 5% of registered land users and low-income rural households (about 400 beneficiaries in absolute numbers or over 6,000 people) can potentially benefit from obtaining microcredit, and at least 55% of the beneficiaries are expected to be women. For example, one of the high potential activities to be supported by the fund is wool

[32] This list of eligible activities is not comprehensive and may be revised subject to approval of the Project Steering Committee.

making based on sheep of native breeds. This activity has traditionally been "in the hands of women". Therefore, by giving it a boost in the target region, the micro-credit program will address women's poverty in the first place. Women will receive guidance for this and other relevant activities eligible under Outcome 3. They will also be encouraged to participate in the PA public committees (Output 3.1). See Annex 9 for additional details on gender benefits generated by the project.

82. Cost-effectiveness: The objective of the project is to enhance the sustainability of protected areas in globally important desert and semi-desert ecosystems by expanding their geographic coverage, promoting a landscape approach, and supporting biodiversity-compatible livelihoods in and around PAs. To realize this objective in the most cost-effective manner, project design has been shaped by the following principles:

i. *Diversified strategy that does not focus on PAs alone*: The project strategy is to improve the effectiveness of PAs in Kazakhstan's desert eco-region by not just focusing on PAs but also defining buffer zones, connecting corridors, and sustainable land use in intervening landscapes. This comprehensive approach will ensure that PAs can be more effective in conserving target species thus making financial investments in PAs more beneficial.

ii. *Deploying strategic performance assessment tools to guide resource allocation*: The project will ensure that the allocation of scarce resources across PAs is based on strategic PA management assessment tools (METT), so that resources are allocated where they are needed the most and help realize cost efficiencies.

iii. *Modeling the stakeholder engagement mechanism on existing mechanisms*: The PA public committees will be modeled on existing experience with River Basin Councils, wherein instead of having multiple committees (one for each separate issue), 2 area-based committees will consider a range of issues, with the composition of participants depending on the topics for discussion. A core group of key stakeholders will, however, remain the same. This has proven to be a cost-effective approach that has worked well for stakeholders.

iv. *Selecting pilot sites for demonstrating sustainable land use in intervening landscapes in ways that help realize cost efficiencies*: Among the criteria used to identify pilot sites (see Annex 6 for other criteria used in site selection), there were several aimed at ensuring that project benefits can be realized in a cost-effective manner, be it by combining efforts with other partners (for example ensuring that landowners and/or users are willing to provide co-financing, and there is alignment with relevant government strategies and programs to ensure complementary financing), or ensuring that pilot sites are relatively easily accessible for hosting visits/ tours for exchange and dissemination of experience that can help amplify the impact of the project's investment.

v. *Costs of sustainable land management activities outweigh the economic, environmental and social returns*: The costs for restoration and sustainable land management activities are relatively small, and they will provide sustainable income and the multiplier effect in the project areas and beyond for several decades. With an average yield increase of dry forage of 5 hwt/ ha, forage harvest is expected to increase to 2 hwt/ ha. It is expected that the pilot activities in the area of 84,000 ha will result in the production of 173,820 hwt of fodder or 1,738,200 kg of gain that amounts to approximately US$ 5.6 million, which is 1.7 times more than the costs of restoration measures (US$ 3,186,070).

vi. *Piloting the use of a market-based mechanism, with its inherent efficiencies, for realizing environmental benefits*: The project will design and implement at least 2 compensation or reward schemes for long-term sustainable biodiversity use in and around target PAs piloted among PA management, local communities, conservationists, hunting/fishing areas, tourism operators and other non-PA actors

vii. *Building on an existing micro credit facility*: The project will piggy-back on the existing micro credit facility of FFSA to deliver credit for local sustainable land use activities that generate biodiversity and land degradation benefits. The project will thus be able to avoid additional costs associated with designing the operational delivery mechanism. It will simply tap into the existing institutional, financial and operational platform of FFSA, and not have to create this from scratch.

Stakeholder Analysis:

Stakeholder group	Roles and responsibilities in the project
GOVERNMENT	
Committee for Forestry and Hunting (CFH) of the Ministry of Agriculture	This Committee is under the Ministry of Agriculture It is the key government institution responsible for regulating biodiversity, including the establishment and management of protected areas It is the national executing agency of the project Its Deputy Chairman will head Project Board meetings It will coordinate and seek approval of feasibility studies for creation of new and expansion of existing desert PAs Oversee the actual establishment/ expansion of PAs, including negotiations with local authorities and stakeholders, through its regional offices Seek approval of amendments to existing forest legislation on corridors, buffer zones, and a stakeholder consultation mechanism for PA management Provide training facilities for the project's capacity building activities Ensure relevant staff from CFH participates in the project's capacity building efforts Ensure that its monitoring and data collection systems are harmonized with the decision support system developed under Output 2.4 Ensure that its territorial organizations participate in restoration of wetlands and sustainable management of saksaul & riparian forests
Committee for Fishery of the Ministry of Agriculture	This Committee is responsible for government control over protection, reproduction and use of fish resources and other aquatic species, and development of fisheries. The Committee and its territorial organizations will contribute to development of landscape-level planning frameworks, implementation of wetlands and small lakes restoration projects, and its representatives are expected to sit on PA public committees in two target regions.
Committee of Water Resources and its territorial organizations (RBOs) of the Ministry of Agriculture	This Committee and its territorial organizations, Balkhash-Alakol and Aral-Caspian River Basin Organizations (RBOs), are responsible for management of water resources to meet the needs of water users of different sectors of the economy in an environmentally sustainable and economically optimal way. The Committee and its two territorial RBOs will contribute to development of landscape-level planning frameworks, implementation of wetlands and small lakes restoration projects, and its representatives are expected to sit on PA public committees in two target regions.
Ministry of Agriculture	Develops and implements state policy and programs on agriculture, forestry, fishery, water resources management, wildlife reproduction and use, PA management. The Ministry will contribute to development of landscape-level management plans and implementation of SLM pilot projects. The Ministry currently develops a government program "Development of Distant Pasture Livestock Breeding for 2013-2016" funds from which are expected to complement GEF funding for proposed pilot activities on improved rangeland rehabilitation & management. This complementary funding will address issues such as water supply, livestock development, rural finance, access to markets, and improvement of herder skills. Its representatives will sit on the Project's Board and will oversee the implementation of sustainable use alternatives in rangeland and agricultural productive landscapes.
Ministry of Environmental Protection (MEP) – oblast- and rayon-level offices	Current role of the Ministry of Environment Protection (MEP) is to develop state policies and programs on environmental conservation and sustainable development, and coordinate with the Secretariat of the CBD. One of the key players in development of planning frameworks that focus on the economic potentials (rather than the constraints) of safeguarding and maintaining ecosystem services in the rayons. Ensure that its monitoring and data collection systems under its Environmental Information Center are harmonized with the decision support system developed under Output 2.4 MEP and its Oblast branches are responsible for Environmental impact assessments, which are needed for any of the planned activities related to conservation or use of nature resources.
Land Use Agency (oblast- and rayon-level offices)	At national level, the Agency for Land Resources Management is responsible for development and implementation of state policy and programmes on land use planning and land management, geodesies and cartography. Oblast branches of the Agency for Land Resources Management are responsible for key decisions related to zoning and allocation of land use permits for agriculture, mining, etc at oblast level. One of the key players in development of planning frameworks that focus on the economic potentials (rather than the constraints) of safeguarding and maintaining ecosystem services in the rayons Ensure that its monitoring and data collection systems are harmonized with the decision

Stakeholder group	Roles and responsibilities in the project
	support system developed under Output 2.4
Administrative Units at the new PAs (Ile-Balkhash, Mangistau, Arganaty) and existing PAs (Altyn Yemel, Barsakelmes, Ustyurt)	Key beneficiaries of activities on protected area expansion and strengthening management effectiveness Coordinate negotiations with oblast/ rayon administrations and other relevant government agencies regarding zoning arrangements and the creation of buffer zones and corridors, as well as adaptive landscape management to ensure that the PA is managed in tandem with the management of production activities occurring in the larger landscape
Oblast Akimats	Grant official endorsement of land use projects for PAs of local importance and wildlife corridors Allocate land for planned PA of republican importance Disseminate the project's lessons learned related to landscape-level planning and management and advocate for replication of this ecosystem approach throughout Oblast
Aralsk rayon akimat of Kzylorda Oblast	Lead the development and implementation of the landscape-level management plans by providing coordinating inputs of all stakeholders; Assist with creation of and contribute to the work of a PA Public Committee in the Aral-Syrdarya target area Co-finance demonstration projects in Zhanakurylys, Karateren and Bogen rural districts related to sustainable land and pasture management. In particular, the rayon akimat will apply for funds of the MoA program on development of distant pastures for livestock breeding to complement GEF financing.
Balkhash rayon akimat of Almaty Oblast	Lead the development and implementation of the landscape-level management plans by providing coordinating inputs of all stakeholders; Assist with creation of and contribute to the work of a PA Public Committee in the Ile-Balkhash target area Co-finance demonstration projects in Akdalinsk, Berekinsk and Akkol rural districts related to sustainable land and pasture management. In particular, the rayon akimat will apply for funds of the MoA program on development of distant pastures for livestock breeding to complement GEF financing.
Fund for Financial Support of Agriculture	Expand its existing portfolio of microcredit products to include support for sustainable livelihoods of rural communities in and around PAs, with a particular focus on desert and semi-desert ecosystems. Contribute US$ 1 million to the biodiversity microcredit line with additional US$ 0.5 million to cover operational costs of the microcredit program
NGOs	
Association for the Conservation of Biodiversity in Kazakhstan (ACBK)	Invited to contribute their research and expertise on advocating for conservation of desert ecosystems and its species Support the project in developing an ecological monitoring and decision support system to inform desert and semi-desert conservation and land use planning in the Ile-Balkhash pilot area Support the project in developing the capacity for monitoring and enforcement of resource use regulations at target PAs
Central Asia Regional Environmental Center (CAREC)	Provide its research, experience and expertise on developing reward schemes (or PES) in Kazakhstan
Fauna and Flora International (FFI)	Invited to contribute their research and expertise on advocating for conservation of desert ecosystems and its species
Royal Society for the Protection of Birds (RSPB)	Invited to contribute their research and expertise on advocating for conservation of desert ecosystems and its species Support the project in developing the capacity for monitoring and enforcement of resource use regulations at target PAs
Frankfurt Zoological Society	Invited to contribute their research and expertise on advocating for conservation of desert ecosystems and its species
World Wildlife Fund (WWF)	Invited to contribute their research and expertise on advocating for conservation of desert ecosystems and its species Support the project in developing an ecological monitoring and decision support system to inform desert and semi-desert conservation and land use planning in the Ile-Balkhash pilot area Support the project in developing the capacity for monitoring and enforcement of resource use regulations at target PAs
Local NGOs	Support mediation between the FFSA and local communities in accessing and implementing the micro-credit projects Involved in advocacy and public awareness activities
PRIVATE SECTOR	

Stakeholder group	Roles and responsibilities in the project
Local industries and entrepreneurs	Participate in consultations and provide inputs to the development of the landscape-level management plans for further implementation Contribute to PA management by sitting on the PA public committee
Hunting and Fishery Managers	Contribute to the development and implementation of the landscape-level management plans as being key repositories of ecological information on biodiversity, land resources, wildlife, and habitats Contribute to PA management by sitting on the PA Public Committees in respective target regions Ensure that its monitoring and data collection systems are harmonized with the decision support system developed under Output 2.4 Engage patrolling rangers of existing hunting areas for co-monitoring and enforcement activities within the established wildlife corridor in the Ile-Balkhash area Hunting area "Kop-Kuduk" will implement a demonstration project on restoration and sustainable management of saksaul forests in the Aral-Syrdarya area
Rural consumer cooperatives and communities	Actively engaged in the development of income-generation activities (through Public Councils) at the PAs and corridors that are a focus of the project Actively engaged in sustainable use demonstrations at pilot sites For sustainable rangeland demonstration activities, will contribute labor and other inputs
ACADEMIA/ RESEARCH	
Kazakh State University of Agriculture	Leads on project's capacity building efforts related to improving the capacities of government staff for conserving target high biodiversity value desert and semi-desert PAs in light of climate change Designs with project experts and delivers a graduate course of study on PA management (MS equivalent) Support project activities related to training land users in monitoring
Forestry Institute and Kazlesproekt (State project design institute under CFH)	Contribute their research, experience and expertise for training and site visits related to monitoring
State enterprise "Science & Production Center on Land Resources Management" and its regional offices in Kzyl Orda, and Kzyl Orda State University	Support project activities related to implementation of demonstration projects on sustainable land and pasture management, and monitoring land degradation
Kazakh Research Institute of Livestock Breeding and Fodder Production	Support project activities related to implementation of demonstration projects on sustainable land and pasture management, and monitoring land degradation

Coordination with Other Initiatives:

83. Over the past few years, UNDP has been supporting the Government of Kazakhstan in developing and implementing several GEF-funded biodiversity and land management projects aimed at strengthening the mountain and wetland protected area systems, demonstrating in-situ conservation of agro-biodiversity, good practice in livestock management, and landscape approaches to steppe conservation and management that promote both the ecological integrity of ecosystems and rural livelihoods.

84. The ongoing steppe conservation project has contributed considerable knowledge on the migrating ungulates, which also inhabit the desert ecosystems. This has generated (and will continue to generate) biological knowledge important for setting up effective PAs, buffer zones and corridors, both in steppe and desert ecosystems. The two project teams will collaborate closely by attending each other's steering committee meetings, and this collaboration will be facilitated by the UNDP Country Office.

85. The project utilizes the experiences and practices of the UNDP/GEF and GIZ project on sustainable rangeland management for rural livelihood and environmental integrity including identification and selection of pilot sites, functional zoning of pastures, reconstruction of water points at distant pastures, and participatory approaches to herder engagement.

86. The project builds on the experiences and lessons from the World Bank/GEF project "Biodiversity Conservation in Western Tian-Shan" (completed), "Drylands Management Project" and "Forest Protection & Rehabilitation" (ongoing) vis-à-vis participatory land and rangelands management (e.g. herder agreements on restoration and development of degraded rangelands, community management of grazing pressure, and provision of water resources for associated rangelands). In particular, the project employs a number of generated positive results that demonstrated the environmental, social and economic viability of shifting from

the current unsustainable agricultural production of monocultures and livestock raising in dryland ecosystems to a well-balanced and beneficial agricultural system for rural communities.

87. The results and materials of the UNEP funded EcoNet project have already been used when looking at the existing gaps and under-represented ecosystems in the national PA system.

88. Kazakhstan together with the other Central Asian countries is part of the *Central Asian Countries Initiative for Land Management* (CACILM), a partnership dedicated to combating land degradation and improving rural livelihoods. While CACILM is focused primarily on desertification/ sustainable land management issues, its partners are also developing recommendations on sustainable use of resources and maintenance of the ecosystem integrity in dry-land ecosystems. Thus, conservation priorities in the Ile-Balkhash and Aral-Syrdarya regions have clearly been prioritized by CACILM partners. The proposed project will use the CACILM platform for dissemination of knowledge and replication outside the immediate project areas.

89. The Government of Kazakhstan with technical support from UNDP Kazakhstan has been successful in instituting a stakeholder decision-making platform focused on water management—a River Basin Council. The project will draw on lessons learnt to transfer such experiences and practices to PA management.

PROJECT RESULTS FRAMEWORK

Project Strategy	Objectively Verifiable Indicators	Baseline	Target	Sources of Verification	Assumptions
The long-term goal to which the project will contribute is the conservation of Kazakhstan's entire desert/semi-desert ecoregion to maintain the range of ecosystem services it provides					
Objective: To enhance the sustainability of protected areas in globally important desert and semi-desert ecosystems by expanding their geographic coverage, promoting a landscape approach, and supporting biodiversity-compatible livelihoods in and around PAs.	Coverage of underrepresented Southern desert in the PA System of Kazakhstan	1,591,800 ha (5.3% of ecological zone)	By 2015 coverage of Southern desert in PA system increases by 2,682,032 ha (8.9% of the ecological zone). This increase comes from the following: - Establishment of 1 new PA (Mangistau State Reserved Zone) covering 2,676,262 ha - Expansion of 1 existing PA (Barsakelmes State Nature Reserve) by 5,770 ha By 2020[33] coverage of Southern desert in PA system increases by approximately 970,000 ha (3.2% of the ecological zone). This increase comes from: - Expansion of 1 existing PA (Ustyurt State Nature Reserve) by approximately 220,000 ha - Establishment of a wildlife corridor between Barsakelmes and Ustyurt PAs of approximately 750,000 ha	GIS, Cadaster, Government resolutions	Government continues to place priority on conservation of the desert and semi-desert ecoregion and there is a departure from the historical perception of deserts as "wastelands" Future financial allocations under the Government's Natural Resource Program (Zhasyl Damu) continue to flow to the desert/ semi-desert ecoregion Influence of climate change will not undermine efforts to arrest biodiversity loss and land degradation in desert and semi-desert ecosystems There are no external catastrophic events – such as the transfer of livestock diseases to saiga – compromising the project's objective of achieving
	Coverage of underrepresented Mountain-valley subtype desert in the PA System of Kazakhstan	99,704 ha (3.3% of ecological zone)	By 2015 coverage of Mountain-valley subtype desert in PA system increases by 1,602,504 ha (53.4% of the ecological zone). This increase comes from the following: - Establishment of 1 new PA (Ile-Balkhash State Nature Reserve) covering 442,296 ha - Expansion of 1 existing PA (Altyn Yemel State National Nature Park) by 460,208 ha - Establishment of a wildlife corridor between Altyn Yemel and Ile-Balkhash PAs of 700,000 ha By 2020[34] coverage of Mountain-valley subtype desert in PA system increases by approximately 30,000 ha (1% of the ecological zone). This increase comes from the following: - Establishment of 1 new PA (Arganaty) covering approximately 30,000 ha	GIS, Cadaster, Government resolutions	
	Size of flagship species populations of desert & semi-desert ecosystems	Ile Balkhash Project Area:		Monitoring reports (census) of CFH,	
		Goitered gazelle: 1,800	1800≥		
		Koulan: 1,700	1700≥		

[33] Although the project is expected to end in 2018, target indicators for PAs and corridors to be established/ expanded under Zhasyl Damu 2015-2020 are set for 2020 as this is the official time frame for Zhasyl Damu. However, the project expects to achieve much of the ground work for establishment/ expansion of these PAs and corridors by 2018 through supporting the government in preparation of ENOs and TEOs for these areas along with necessary consultations. But it may not be until the end of 2020 that the government is able to formally gazette these areas. Target hectare estimates for 2020 remain estimates at this stage and will be confirmed during project implementation.

[34] Same as previous footnote

Project Strategy	Objectively Verifiable Indicators	Baseline	Target	Sources of Verification	Assumptions
	in target areas remains at the baseline level or increase	Argali: 205	205≥	Research institutes & relevant NGOs	stabilization or increasing populations of this globally threatened species
		Aral Syrdarya Project Area:			
		Goitered gazelle: 80	80≥		
		Koulan: 340	340≥		
		Pallas's sandgrouse: 407	407≥		
		Ustyurt Plateau:			
		Ustyurt argali: 1,020	1020≥		
		Goitered gazelle: 270	270≥		
		Houbara bustard: 60	60≥		
Outcome 1: PA system of Kazakhstan contains representative samples of desert and semi-desert ecosystems under various conservation regimes and is effective in protecting ecosystems and ecological processes	Enhanced management effectiveness of **existing PAs that are expanded** under the project (as measured by METT)	Altyn Yemel: 50 %	75%	METT Scorecard	Government maintains political and operational support to Zhasyl Damu (2010-15 & 2015-20) – key baseline element of the project Full support of local authorities and communities to establish new PAs (departure from conservative view of deserts as wastelands)
		Barsakelmes: 42 %	67%		
		Ustyurt: 43 %	68%		
	Enhanced management effectiveness of **new PAs that are established** under the project (as measured by METT)	Ile-Balkhash: 19%	44%	METT Scorecard	
		Mangistau: 7%	32%		
		Arganaty: 9%	34%		
Outcome 2: Landscape-level conservation planning and management are developed and implemented in target desert and semi-desert environments	Territorial development plans employing landscape management approach	0 ha	9 million ha	Records of Balkhash and Aralsk rayon akimats	Conservation and Agriculture sectors are able to work together on land use/ management approaches that do not harm biodiversity or lead to land degradation Land users will not abandon SLM activities as they perceive the medium to long term benefits of sustainable land use
	Number of hectares of restored wetlands & delta lakes	0 ha	2,202 ha	Akimat and CFH records	
	Number of hectares of riparian & saksaul forests under sustainable management	0 ha	18,048 ha	Akimat and CFH records	
	Quality and quantity of vegetation cover in rangelands in 3 rural districts	Hectares of land with significant signs of soil erosion caused by overgrazing in selected plots[35]	Reduction of the size of the area heavily affected by soil erosion by at least 15% in the Ile Balkhash area and 20% in the Aral Syrdarya target area	Reports of experts from monitoring plots	
	Presence of plant species	Hectares of distant rangelands	Unwanted plant species in at least 4 rangeland monitoring	Reports of	

[35] Baseline to be estimated at the beginning of the project once monitoring sites are identified and primary data are collected.

Project Strategy	Objectively Verifiable Indicators	Baseline	Target	Sources of Verification	Assumptions
	which negatively affect the function of distant rangelands	with significant signs of natural succession due to under grazing[36]	plots are less than 5% surface coverage	experts from monitoring plots	strategies
	Average income of families participating in the measures on pasture management	US$ 1,600	Increase by at least 20%	Field survey	
	Number of farmer associations that use the experiences of this project as a model	No projects which use participatory bottom-up approaches in the target areas	At least 15 farmer associations or rural consumer cooperatives in the Aral Syrdarya target area and 25 in the Ile Balkhash area use the experience of this project as a model.	Records of farmer associations/ RCCs	
Outcome 3: Community involvement in conservation and sustainable use of biodiversity in and around PAs is enhanced	Reduction in poaching and illegal logging at target PAs (annual) per unit of patrolling effort, compared with year of initial patrolling	Ile-Balkhash Target Area		Reports of PAs, CFH and akimats	Communities embrace the opportunity to collaborate on management of PAs through Public Committees Land users are open to PES schemes even though these are relatively new in the Kazakh context The micro credit line specifically for biodiversity-friendly and sustainable land management activities faces no start-up difficulties
		Illegal logging violations: 67 Poaching violations: 436 Total violations: 503	Reduction by 40%		
		Aral-Syrdarya Target Area			
		Illegal logging violations: 241 Poaching violations: 157 Total violations: 398	Reduction by 40%		
	Functioning stakeholder engagement mechanism for transparency in PA planning and management	No PA public committees for mobilizing stakeholders in and around PAs in the Ile-Balkhash and Aral-Syrdarya target areas	Two (2) operational PA public committees	Meeting minutes	
	Number of PES agreements under implementation in project area	0	2 by project end	Approved biodiversity supply agreements	
	Share of registered land users and low-income rural households benefiting from biodiversity microcredit line	0%	5%	FFSA reports	

[36] Same as previous footnote

TOTAL BUDGET AND WORKPLAN (UNDP ATLAS format)

Award ID:	**00073767**
Award Title:	**PIMS 4855 BD FSP: Kazakhstan Desert PAs**
Business Unit:	**KAZ10**
Project Title:	**Improving sustainability of the PA system in desert ecosystems through promotion of biodiversity-compatible livelihoods in and around PAs**
Atlas Project ID	**00086425**
PIMS number:	**4855**
Implementing Partner (Executing Agency)	**Government of Kazakhstan: Committee for Forestry & Hunting**

GEF Outcome/Atlas Activity	Responsible Party/ Implementing Agent	Fund ID	Donor Name	Atlas Budgetary Account Code	Atlas Budget Description/ Input	Amount (USD) Year 1 (2013)	Amount (USD) Year 2 (2014)	Amount (USD) Year 3 (2015)	Amount (USD) Year 4 (2016)	Amount (USD) Year 5 (2017)	Amount (USD) Year 6 (2018)	Total (USD)	Budget notes
OUTCOME 1: PA system of Kazakhstan contains representative samples of desert and semi-desert ecosystems under various management regimes and is effective in protecting ecosystems and ecological processes	FHC	62000	GEF	71200	International Consultants	9,000	38,500	6,300	0	0	0	**53,800**	1
				71300	Local Consultants	0	33,125	12,975	1,600	0	0	**47,700**	2
				71400	Contractual Services-Individ	10,935	36,451	36,451	36,451	36,451	25,516	**182,256**	3
				72100	Contractual Services - Companies	0	223,550	208,550	35,000	0	0	**467,100**	4
				71600	Travel	2,000	8,000	8,000	6,000	3,000	3,000	**30,000**	5
				72400	Communic&AudioVisual Equip	250	300	300	300	300	250	**1,700**	6
				74200	Audio Visual&Print Prod Costs	1,000	5,000	5,000	4,000	4,000	900	**19,900**	7
				74500	Miscelaneous Expenses	250	1,000	1,000	1,000	1,000	500	**4,750**	
				75700	Training, Workshops and Conf	2,300	15,500	10,500	10,500	9,494	500	**48,794**	8
					TOTAL Outcome 1	**25,735**	**361,426**	**289,076**	**94,851**	**54,245**	**30,666**	**856,000**	
OUTCOME 2: Landscape-level conservation planning & management is developed and implemented in desert & semi-desert environments	FHC	62000	GEF	71200	International Consultants	0	22,500	15,000	0	15,000	0	**52,500**	9
				71300	Local Consultants	0	11,200	16,200	0	16,000	0	**43,400**	10
				71400	Contractual Services - Individ	36,229	120,763	120,763	120,763	120,763	84,534	**603,816**	11
				71600	Travel	8,000	25,000	25,000	20,000	20,000	8,779	**106,779**	12
				72100	Contractual Services - Companies	0	50,000	0	0	0	0	**50,000**	13
				72400	Communic&AudioVisual Equip	250	500	500	500	500	300	**2,550**	14
				72600	Grants	0	954,500	268,020	0	0	0	**1,222,520**	15
				74200	Audio Visual&Print Prod Costs	1,000	15,000	25,000	25,000	20,000	5,000	**91,000**	16
				74500	Miscelaneous Expenses	640	3,000	3,000	3,000	3,000	3,000	**15,640**	
				75700	Training, Workshops and Conf	2,345	30,000	35,000	34,000	34,000	17,450	**152,795**	17
					TOTAL Outcome 2	**48,464**	**1,232,463**	**508,483**	**203,263**	**229,263**	**119,063**	**2,341,000**	
OUTCOME 3: Enhanced community involvement in conservation and sustainable use of biodiversity in and around PAs	FHC	62000	GEF	71300	Local Consultants	0	7,200	22,700	6,000	5,000	4,000	**44,900**	18
				71400	Contractual Services - Individ	16,113	53,709	53,709	53,709	53,709	37,596	**268,546**	19
				71600	Travel	2,000	5,000	6,000	6,000	4,000	2,500	**25,500**	20
				72400	Communic&AudioVisual Equip	250	500	500	500	500	300	**2,550**	21
				72600	Grants	0	500,000	0	0	0	0	**500,000**	22
				74200	Audio Visual&Print Prod Costs	500	7,000	7,000	6,000	6,000	2,000	**28,500**	23
				74500	Miscelaneous Expenses	500	1,500	1,500	1,500	1,500	500	**7,000**	
				75700	Training, Workshops and Conf	3,500	17,000	16,000	15,254	14,000	7,250	**73,004**	24
					TOTAL Outcome 3	**22,863**	**591,909**	**107,409**	**88,963**	**84,709**	**54,146**	**950,000**	
Project Management	FHC	62000	GEF	71400	Contractual Services-Individ	5,471	16,413	16,413	16,413	16,413	10,942	**82,065**	25
				72200	Equipment and Furniture	16,000	0	0	0	0	0	**16,000**	26
				72400	Communic&AudioVisual Equip	2,000	2,500	2,500	2,000	2,000	2,000	**13,000**	27
				74500	Miscelaneous Expenses	1,885	1,000	1,000	1,000	1,000	1,000	**6,885**	
				74599	UNDP Cost Recovery Chrgs-Bills	6,400	33,450	19,200	15,200	13,800	11,000	**99,050**	28
					TOTAL Project Management	**31,756**	**53,363**	**39,113**	**34,613**	**33,213**	**24,942**	**217,000**	
Grand Total		62000	GEF	71200	International Consultants	9,000	61,000	21,300	0	15,000	0	**106,300**	
				71300	Local Consultants	0	51,525	51,875	7,600	21,000	4,000	**136,000**	
				71400	Contractual Services - Individ (TA)	63,277	210,924	210,924	210,924	210,924	147,646	**1,054,618**	
				71400	Contractual Services - Individ (PM)	5,471	16,413	16,413	16,413	16,413	10,942	**82,065**	
				71600	Travel	12,000	38,000	39,000	32,000	27,000	14,279	**162,279**	
				72100	Contractual Services - Companies	0	273,550	208,550	35,000	0	0	**517,100**	
				72200	Equipment and Furniture	16,000	0	0	0	0	0	**16,000**	
				72400	Communic&AudioVisual Equip	2,750	3,800	3,800	3,300	3,300	2,850	**19,800**	
				72600	Grants	0	1,454,500	268,020	0	0	0	**1,722,520**	
				74200	Audio Visual&Print Prod Costs	2,500	27,000	37,000	35,000	30,000	7,900	**139,400**	
				74500	Miscelaneous Expenses	3,275	6,500	6,500	6,500	6,500	5,000	**34,275**	
				74599	UNDP Cost Recovery Chrgs-Bills	6,400	33,450	19,200	15,200	13,800	11,000	**99,050**	
				75700	Training, Workshops and Conf	8,145	62,500	61,500	59,754	57,494	25,200	**274,593**	
					PROJECT TOTAL	**128,818**	**2,239,162**	**944,082**	**421,691**	**401,431**	**228,818**	**4,364,000**	

Budget Notes:

1	Int'l expert to assist with IW & inception report (3 wks, 9k); Int'l wildlife corridor planning & mgnt expert (2 wks, 7k); Int'l landscape-level PA expansion & planning expert (4 wks, 14k); Int'l PA institutional effectiveness & capacity building expert (4 wks, 14k); Invited lectures (3) to deliver trainings under Output 1.7 (3wks, 6.3k)
2	Wildlife (green) corridor creation expert (13 wks, $9,750); PA design & creation expert (9 wks, 9k); PA management & effectiveness expert (26 wks in Yrs 2&3, 13k); Institutional effectiveness & capacity dev expert (13 wks in Yrs 2&3, $9,750); CC risks assessment expert (3 wks, 3k)
3	NPM (130 wks @ $774 per week); PA & Capacity Building Expert, Team Leader, Almaty-based Field Project Team (1/3 of the Expert's time, 83wks @ $557 per week); PR Specialist (1/3 of the PR specialist's time, 76 wks @ $459 per week)
4	4 ENOs--for a wildlife corridor & a new PA in IBA, expansion of the Ustyurt SNR, a wildlife corridor connecting Barsakelmes & Ustyurt SNR (10k each, 40k total); a subcontract for a participatory planning under Output 1.4 (awareness raising & knowledge creation among communities about PA's functions, role, significance & potential) - 20k; Enforcement & monitoring equipment/machinery for PAs based on the equipment needs assessment of targeted PAs ($327,100 divided equally between Yrs 2 & 3); Design of training & dev programs for PA staff under Output 1.7, 10 modules, includes meetings of experts to agree on draft and final versions of training modules (30k); Design of a graduate course on PA management under Output 1.8 including meetings of experts to agree on draft and final versions of the course (50k)
5	Travel costs of 5 int'l experts (see Note 1 above), project technical staff & and local experts (see Notes 2 & 3 above) plus DSA; travel costs of PA staff to a training institution in Russia to upgrade professional skills
6	Internet, land telephone, postage & pouch charges associated with implementation of Outcome 1
7	Translation of project reports & documents into 3 languages (Kazakh, Russian & English); translation & issue of publications (project inception report, PA mgnt planning, METT methodology & use, results of PA human resources & institutional effectiveness assessment, PA management plans, a report on CC risks to desert &semi-desert ecosystems & ecosystem-based adaptation), leaflets & brochures for school talks, seminars & workshops & other project outreach events to support implementation of Outcome 1)
8	Costs associated with (i) rental of conference rooms for a project inception workshop; a workshop on sharing experiences on wildlife corridor establishment; meetings of working groups at oblast & rayon levels as well as local stakeholder groups; a workshop on PA mgnt planning; experts' meetings on PA planning at rayon & oblast levels; a workhop on METT methodology and experts' meetings on METT use in target PAs; (ii) rental of workshop/seminar equipment (projector, flipchart boards, laptop, etc.); (iii) ticket costs of workshop/seminar/training participants plus DSA
9	Int'l expert on participatory land use planning (10 wks, $22,500), Int'l MTE expert (5 wks, 15k) and Int's FE expert (5 wks, 15k)
10	Contracts for: (i) legal expert to draft amendments to the PA law & other related bylaws, the Land law as well as internal & inter-agency instructions related to territorial landscape level planning, the Law on wildlife use, etc (total 8 wks divided btw Outcomes 2 & 3, 8k total); (ii) participatory land use planning to assist the int'l consultant on land use planning in implementation of Output 2.1 (30 wks in Yrs 2&3, 15k total); (iii) database & GIS for implementation of Outputs 2.1 & 2.4 (13 wks in Yrs 2&3), 13k total); (iv) development of a how-to-guide on territorial landscape-level planning in Yr 5 (4wks, 4k); (v) development of a how-to-guide on PAPC creation & operationalization in Yr 5 (4wks, 4k); (vi) MTE (5 wks, 5k); (vii) FE (6wks; 6k)
11	Contracts for (i) NPM (130 wks @ $774 per week); (ii) PA & Capacity Building Expert, Team Leader, Almaty-based Field Project Team (1/3 of the Expert's time, 83wks @ $557 per week); (iii) PR Specialist (1/3 of the PR specialist's time, 76 wks @ $459 per week); (iv) PA& Inter-sectoral cooperation expert, Team Leader, Aralsk-based field project team (250 wks @ $361 per week); (v) Territorial planning & inter-sectoral cooperation expert, Astana-based position (234 wks @ $557 per week); (vi) PA public committees, pilot & microcredit projects, Almaty-based position (208 weeks @ $459 per week); (vii) Community engagement & pilot project expert, Aralsk-based position (208 wks @ $300 per week); (viii) Procurement specialist, Almaty-based position (250 wks @ $316 per week); (ix) Field logistics coordinator/driver, Almaty-based position (230 weeks @ $197 per week)
12	Travel costs of 3 int'l experts (see Note 10 above), project technical staff & and local experts (see Notes 11 & 12 above) plus DSA; visits of journalists to demonstration sites
13	A subcontract under Output 2.1 on collection & processing of primary data for territorial landscape level planning (50k)
14	Internet, land telephone, postage & pouch charges associated with implementation of Outcome 2
15	Grants to local communities for demonstration of restoration & sustainable use in the wider productive landscape as described in Annex 6 (LD--819k; BD--403.5k)
16	Translation of project reports & documents into 3 languages (Kazakh, Russian & English); translation & issue of publications (how-to-guide on territorial landscape level planning & management, a report on lessons learned of demonstration projects); production of a documentary film on landscape level achievements and implementation of demonstration projects; leaflets & brochures for seminars & workshops & other project outreach events to support implementation of Outcome 2

17	Costs associated with (i) rental of conference rooms for meetings & workshops on territorial planning to communicate results to stakeholders in target areas; capacity building workshops in landscape planning & mgnt at rayon & oblast levels; seminars to share experiences on landscape-level planning; meetings/workshops to present results of demo projects; capacity building trainings for target groups on implementation of demo projects; meetings w/ stakeholders on wildlife corridor mgnt planning; public awareness events; (ii) rental of workshop/seminar equipment (projector, flipchart boards, laptop, etc.); (iii) ticket costs of workshop/seminar/training participants plus DSA
18	Contracts for: (i) legal expert to draft amendments to the PA law & other related bylaws, the Land law as well as internal & inter-agency instructions related to territorial landscape level planning, the Law on wildlife use, etc (total 8 wks devided btw Outcomes 2 & 3, 8k total); (ii) 6 trainers on PAPC creation & operationalization (2 wks, 12k); (iii) Natural resources management economics & PES (5wks, $6,250); (iv) Expert on results & lessons learned of PES in Kazakhstan (5wks, 5k); (v) 4 trainers on PES (2wks, 8k); (vi) Expert on results & lessons learned of BD microcredit program (4 wks, 4k)
19	Contracts for (i) PA & Capacity Building Expert, Team Leader, Almaty-based Field Project Team (1/3 of the Expert's time, 83wks @ $557 per week); (ii) PR Specialist (1/3 of the PR specialist's time, 76 wks @ $459 per week); (iii) PA public committees, pilot & microcredit projects, Almaty-based position (208 weeks @ $459 per week); (iv) Community engagement & pilot project expert, Aralsk-based position (208 wks @ $300 per week); (v) Administrative & Microcredit Financing Specialist, Aralsk-based position (250 wks @ $251 per week); (vi) Field logistics coordinator/driver, Aralsk-based position (230 wks @ $197 per week)
20	Travel costs of project technical staff & and local experts (see Notes 20 & 21 above) plus DSA associated with PAPC creation, PES and BD microcredit program implementation
21	Internet, land telephone, postage & pouch charges associated with implementation of Outcome 3
22	GEF's contribution to the BD microcredit line to be managed by FFSA as per co-financing letter and agreement, see Annex 7 for details (500k)
23	Translation of project reports & documents into 3 languages (Kazakh, Russian & English); translation & issue of publications (a how-to-guide on PAPC creation, a report on env & economic assessment of target ecosystems & identification of ecosystem services for PES, lessons learned of PES and PES application in Kazakhstan, final publication on BD microcredit program implementation)
24	Costs associated with (i) rental of conference rooms for meetings & workshops with PAPC potential stakeholders, initial & 2nd meetings of PAPCs, ad-hoc meetings of PAPC; trainings for target stakeholders on PAPC & public forums in general; PES consultation meetings; trainings on PES methodology; (ii) Costs associated with rental of workshop/seminar equipment (projector, flipchart boards, laptop, etc.); (iii) ticket costs of workshop/seminar/training participants plus DSA
25	Admin & Finance Specialist, full-time for 5 years based in Astana (260 weeks @ $316 per week)
26	Basic furniture needs of Astana-based Core Team & Field Offices in Almaty (IBA) and Aralsk (Ustyurt & AS areas)
27	Internet, land telephone, postage & pouch charges of the Core Project Team based in Astana & Field Offices in Aralsk and Almaty
28	This is the assessment of the recovery of charges for services provided by the UNDP country office to the national implementing partners for administrative, financial, HR, procurement and ICT services, related to implementation of this budget, as per the approved UNDP Universal Price List. UNDP cost recovery charges estimated as % of total annual budget given estimated annual costs. Specific per yer % are as follows: Yr 1 (2013, 4 mo) - 5%; Yr 2 (2014) - 1.5%; Yr 3 (2015) - 2%; Yr 4 (2016) - 3.5%; Yr 5 (2017) - 3.5%; Yr 6 (2018, 8 mo) - 5%. An annual percentage estimate represents an average percentage charged by UNDP to projects with corresponding actual annual spendings.

Summary of Funds: [37]

	Amount Year 1* (US$)	Amount Year 2 (US$)	Amount Year 3 (US$)	Amount Year 4 (US$)	Amount Year 5 (US$)	Amount Year 6** (US$)	Total (US$)
GEF	127,266	2,229,362	958,532	433,786	394,274	220,780	**4,364,000**
UNDP Country Office Astana	42,000	140,000	140,000	140,000	140,000	98,000	**700,000**
Forestry and Hunting Committee	600,000	2,000,000	2,000,000	2,000,000	2,000,000	1,400,000	**10,000,000**
Akimat of Aralsk Rayon of Kzylorda Oblast	77,810	259,365	259,365	259,365	259,365	181,557	**1,296,827**

[37] Summary table includes all financing of all kinds: GEF financing, cofinancing, cash, in-kind, etc.

Akimat of Balkhash Rayon of Almaty Oblast	79,988	266,625	266,625	266,625	266,625	186,639	**1,333,127**
International Fund for Saving the Aral Sea	11,131	37,104	37,104	37,104	37,104	25,973	**185,520**
Flora & Fauna International	40,800	136,000	136,000	136,000	136,000	95,200	**680,000**
ACBK	6,960	23,200	23,200	23,200	23,200	16,240	**116,000**
Public association "Taldykorgan Inter-district Society of Hunters and Fishermen"	9,672	32,240	32,240	32,240	32,240	22,568	**161,200**
CAREC	4,980	16,600	16,600	16,600	16,600	11,620	**83,000**
KAP-AC Gas Limited Partnership	77,200	257,333	257,333	257,333	257,333	180,135	**1,286,667**
Fund for Financial Support of Agriculture	90,000	300,000	300,000	300,000	300,000	210,000	**1,500,000**
Kazakh State University of Agriculture, Forest, Land & Water Resources Department	0	222,038	222,038	222,038	222,038	0	**888,152**
Kazakh State University of Agriculture, Water Resources, Land Reclamation & Irrigation Department	0	107,200	107,200	107,200	107,200	0	**428,800**
Almaty Kazakh Research Institute of Livestock Breeding & Fodder Production	19,200	64,000	64,000	64,000	64,000	44,800	**320,000**
Shymkent Kazakh Research Institute of Livestock Breeding & Fodder Production	12,000	40,000	40,000	40,000	40,000	28,000	**200,000**
Total Financing (GEF plus co-financing excluding PPG)	**1,199,006**	**6,131,068**	**4,860,238**	**4,335,492**	**4,295,981**	**2,721,509**	**23,543,293**

MANAGEMENT ARRANGEMENTS

90. **National Execution (NEX):** The project will be nationally executed (NEX)[38] by the Committee for Forestry and Hunting (CFH) that will act both as the Implementing Partner and the Beneficiary of the project. Implementation support will be provided by the UNDP Country Office (see Project Governance Arrangements below). In its capacity of Executing Entity the CFH will be responsible for overall project management. It will appoint a National Project Director--a high-level government official primarily responsible for overall implementation of the Project. This responsibility includes representing and supporting project objectives at high decision making levels within the Government of Kazakhstan. The National Project Director also takes the primary responsibility for representing the Project to co-financiers, as well as for ensuring that the required government support to reach the milestones of the Project is available. Besides, CFH will be responsible for the facilitation of all project activities such as international consultant missions, trainings for respective staff, ensuring appropriate access to project sites, relevant data, records, agencies and authorities. UNDP will provide support services including procurement and contracting, human resources management, and financial services in accordance with the relevant UNDP Rules and Procedures and Results-Based Management guidelines.

91. The project will be implemented in close coordination and collaboration with all relevant government institutions, local communities and NGOs, as well as with other related relevant projects in the region. The UNDP-CO will be an active partner in the project's implementation. It will support implementation by maintaining the project budget and project expenditures, contracting project personnel, experts and subcontractors, undertaking procurement, and providing other assistance upon request of the National Executing Agency. The UNDP-CO will also monitor the project's implementation and achievement of the project outcomes and outputs, and will ensure the proper use of UNDP/GEF funds. Financial transactions, reporting and auditing will be carried out in compliance with national regulations and established UNDP rules and procedures for national project execution.

92. In order to accord proper acknowledgement to GEF for providing funding, a GEF logo will appear on all relevant GEF project publications, including, among others, project hardware purchased with GEF funds. Any citation on publications regarding this project will also accord proper acknowledgment to GEF. The UNDP logo needs to be used alongside the GEF logo. More information is included in the part "Communication and visibility" below.

93. **Project governance** structure will be aligned with UNDP's new rules for Results Based Management and will be composed of: (i) Project Executive Group – Project Board; (ii) Project Management; (iii) Project Assurance; and (iv) Project Support. The governance structure is described below:

94. Project Executive Group: The Project Board will be the executive decision making body for the project, providing guidance based upon project progress assessments and related recommendations from the Project Manager. The PB will review and approve annual project reviews and workplans, technical documents, budgets and financial reports. The PB will provide general strategic and implementation guidance to the PM. It will meet annually, and make decisions by consensus. The specific rules and procedures of the PB will be decided upon at the project inception meeting. The Project Board is responsible for making management decisions for a project in particular when guidance is required by the Project Manager. The Project Board plays a critical role in project monitoring and evaluations by quality assuring these processes and products, and using evaluations for performance improvement, accountability and learning. It ensures that required resources are committed and arbitrates on any conflicts within the project or negotiates a solution to any problems with external bodies. In addition, it approves the appointment and responsibilities of the Project Manager and any delegation of its Project Assurance responsibilities. Based on the approved Annual Work Plan, the Project Board can also consider and approve the quarterly plans (if applicable) and also approve any essential deviations from the original plans. In order to ensure UNDP's ultimate accountability for the project results, Project Board decisions will be made in accordance to standards that shall ensure management for development results, best value money, fairness, integrity, transparency and effective international competition. In case consensus cannot be reached within the Board, the final

[38] In line with standing GEF and UNDP policies, the project will be nationally executed by the Government (referred to as 'national implementation' in UNDP terminology). The Government has key control functions related to all aspects of project leadership, management and implementation (e.g. provides the National Project Director, heads and manages the Steering Committee/Project Board, considers and approves key milestones within its jurisdiction – such as annual work plans, budgets, management responses to mid-term and final evaluations, participates in monitoring, etc., as further described in the Management Arrangements). At the same time, under the National Implementation Modality, UNDP can render direct project services on request of Governments. The Government of Kazakhstan has requested such services from UNDP since the national legislation does not allow for direct project execution of international technical assistance by Government entities.

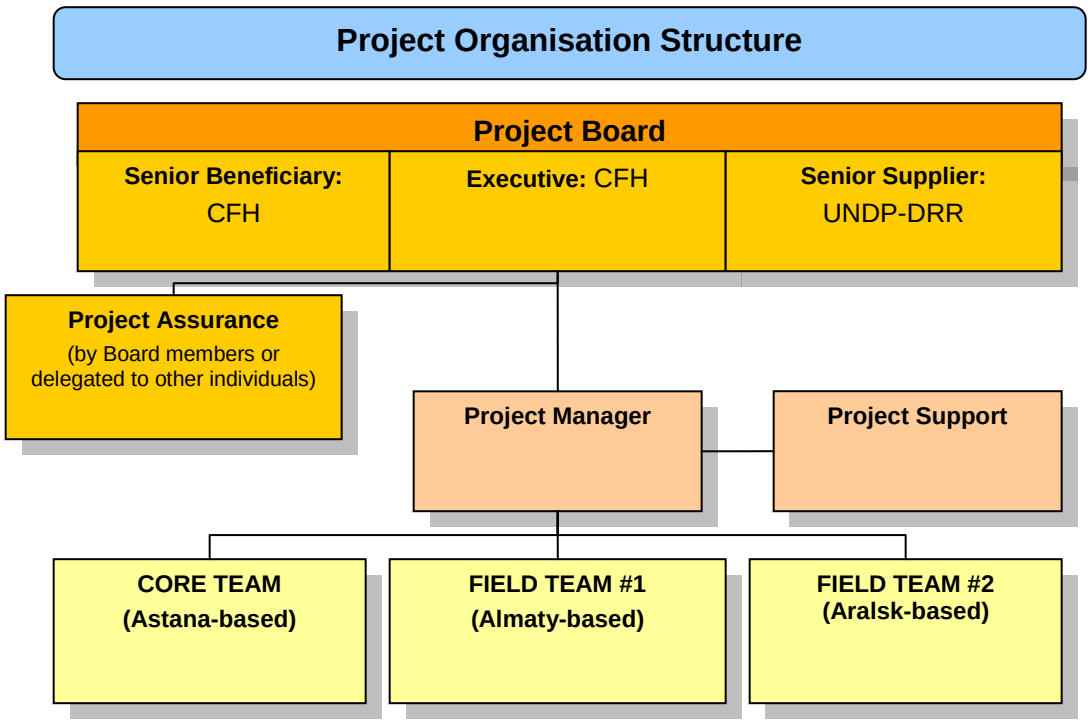
decision shall rest with the UNDP Project Manager. The success of the project implementation is dependent upon strong project guidance, coordination and advocacy from the Project Board. The PMU which will be responsible for arranging SC meetings, providing materials to members prior to the meeting, and delineating a clear set of meeting objectives and sub-objectives to be met.

Functions of the Project Board	Representation
Executive: individual representing the project ownership to chair the group.	CFH, Deputy Chairman will convene the Project Board's meetings.
Senior Supplier: individual or group representing the interests of the parties concerned, which provide funding for specific cost sharing projects and/or technical expertise to the project. The Senior Supplier's primary function within the Board is to provide guidance regarding the technical feasibility of the project.	UNDP DRR, or a designated UNDP Development Advisor
Senior Beneficiary: individual or group of individuals representing the interests of those who will ultimately benefit from the project. The Senior Beneficiary's primary function within the Board is to ensure the realization of project results from the perspective of project beneficiaries.	CFH
Project Assurance: supports the Project Board Executive by carrying out objective and independent project oversight and monitoring functions. The Project Manager and Project Assurance roles should never be held by the same individual for the same project.	UNDP Staff member

95. Project Management. The National Project Manager will be tasked with the day-to-day management of project activities, as well as with financial and administrative reporting. The Project Manager will be responsible for project implementation and will be guided by Annual Work Plans and follow the RBM standards. The Project Manager will prepare Annual Work plans in advance of each successive year and submit them to the Project Executive Group for approval. The National Project Manager will be supported by the Admin/Finance Assistant and two team leaders in the field offices in Almaty and Aralsk. *The National Project Manager* will have the authority to run the project on **a daily basis** on behalf of the Implementing Partner within the constraints laid down by the Group. PM's prime responsibility is to ensure that the project produces the planned outputs and achieves the planned indicators by undertaking necessary activities specified in the project document to the required standard of quality and within the specified constraints of time and cost. This will require linking the indicators to the work plan to ensure RBM.

96. Project Assurance. UNDP will designate a Development Advisor to provide independent project oversight and monitoring functions, to ensure that project activities are managed and milestones accomplished. The UNDP Development Advisor will be responsible for reviewing Risk, Issues and Lessons Learned logs, and ensuring compliance with the Monitoring and Communications Plan. The UNDP-GEF Regional Technical Advisor located in Bratislava will also play an important project assurance role by supporting the annual APR/PIR process.

97. Project Support. UNDP will provide financial and administrative support to the project including procurement, contracting, travel and payments.



MONITORING FRAMEWORK AND EVALUATION

The project will be monitored through the following M& E activities. The M& E budget is provided in the table below.

Project start:

98. A Project Inception Workshop will be held within the first 2 months of project start with those with assigned roles in the project organization structure, UNDP country office and where appropriate/feasible regional technical policy and programme advisors as well as other stakeholders. The Inception Workshop is crucial to building ownership for the project results and to plan the first year annual work plan.

99.
The Inception Workshop should address a number of key issues including:

(i) Assist all partners to fully understand and take ownership of the project. Detail the roles, support services and complementary responsibilities of UNDP CO and RCU staff vis à vis the project team. Discuss the roles, functions, and responsibilities within the project's decision-making structures, including reporting and communication lines, and conflict resolution mechanisms. The Terms of Reference for project staff will be discussed again as needed.

(ii) Based on the project results framework and the relevant GEF Tracking Tool if appropriate, finalize the first annual work plan. Review and agree on the indicators, targets and their means of verification, and recheck assumptions and risks.

(iii) Provide a detailed overview of reporting, monitoring and evaluation (M&E) requirements. The Monitoring and Evaluation work plan and budget should be agreed and scheduled.

(iv) Discuss financial reporting procedures and obligations, and arrangements for annual audit.

(v) Plan and schedule Project Board meetings. Roles and responsibilities of all project organisation structures should be clarified and meetings planned. The first Project Board meeting should be held within the first 12 months following the inception workshop.

An Inception Workshop report is a key reference document and must be prepared and shared with participants to formalize various agreements and plans decided during the meeting.

Quarterly:

(i) Progress made shall be monitored in the UNDP Enhanced Results Based Management Platform.

(ii) Based on the initial risk analysis submitted, the risk log shall be regularly updated in ATLAS. Risks become critical when the impact and probability are high. Note that for UNDP GEF projects, all financial risks associated with financial instruments such as revolving funds, microfinance schemes, or capitalization of ESCOs are automatically classified as critical on the basis of their innovative nature (high impact and uncertainty due to no previous experience justifies classification as critical).

(iii) Based on the information recorded in Atlas, a Project Progress Reports (PPR) can be generated in the Executive Snapshot.

(iv) Other ATLAS logs can be used to monitor issues, lessons learned etc... The use of these functions is a key indicator in the UNDP Executive Balanced Scorecard.

Annually:

(i) Annual Project Review/Project Implementation Reports (APR/PIR): This key report is prepared to monitor progress made since project start and in particular for the previous reporting period (30 June to 1 July). The APR/PIR combines both UNDP and GEF reporting requirements.

The APR/PIR includes, but is not limited to, reporting on the following:

- Progress made toward project objective and project outcomes - each with indicators, baseline data and end-of-project targets (cumulative)
- Project outputs delivered per project outcome (annual).
- Lesson learned/good practice.
- AWP and other expenditure reports
- Risk and adaptive management
- ATLAS QPR
- Portfolio level indicators (i.e. GEF focal area tracking tools) are used by most focal areas on an annual basis as well.

Periodic Monitoring through site visits:

UNDP CO and the UNDP RCU will conduct visits to project sites based on the agreed schedule in the project's Inception Report/Annual Work Plan to assess first hand project progress. Other members of the Project Board may also join these visits. A Field Visit Report/BTOR will be prepared by the CO and UNDP RCU and will be circulated no less than one month after the visit to the project team and Project Board members.

Mid-term of project cycle:

100. The project will undergo an independent Mid-Term Evaluation at the mid-point of project implementation. The Mid-Term Evaluation will determine progress being made toward the achievement of outcomes and will identify course correction if needed. It will focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learned about project design, implementation and management. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization, terms of reference and timing of the mid-term evaluation will be decided after consultation between the parties to the project document. The Terms of Reference for this Mid-term evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF. The management response and the evaluation will be uploaded to UNDP corporate systems, in particular the UNDP Evaluation Office Evaluation Resource Center (ERC).

101. The relevant GEF Focal Area Tracking Tools will also be completed during the mid-term evaluation cycle.

End of Project:

102. An independent Final Evaluation will take place three months prior to the final Project Board meeting and will be undertaken in accordance with UNDP and GEF guidance. The final evaluation will focus on the delivery of the project's results as initially planned (and as corrected after the mid-term evaluation, if any such correction took place). The final evaluation will look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental benefits/goals. The Terms of Reference for this evaluation will be prepared by the UNDP CO based on guidance from the Regional Coordinating Unit and UNDP-GEF.

103. The Terminal Evaluation should also provide recommendations for follow-up activities and requires a management response which should be uploaded to PIMS and to the UNDP Evaluation Office Evaluation Resource Center (ERC).

104. The relevant GEF Focal Area Tracking Tools will also be completed during the final evaluation.

105. During the last three months, the project team will prepare the Project Terminal Report. This comprehensive report will summarize the results achieved (objectives, outcomes, outputs), lessons learned, problems met and areas where results may not have been achieved. It will also lay out recommendations for any further steps that may need to be taken to ensure sustainability and replicability of the project's results.

Learning and knowledge sharing:

106. Results from the project will be disseminated within and beyond the project intervention zone through existing information sharing networks and forums.

107. 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, analyze, and share lessons learned that might be beneficial in the design and implementation of similar future projects.

108. Finally, there will be a two-way flow of information between this project and other projects of a similar focus.

Communications and visibility requirements:

109. Full compliance is required with UNDP's Branding Guidelines. These can be accessed at http://intra.undp.org/coa/branding.shtml, and specific guidelines on UNDP logo use can be accessed at: http://intra.undp.org/branding/useOfLogo.html. Amongst other things, these guidelines describe when and how the UNDP logo needs to be used, as well as how the logos of donors to UNDP projects needs to be used. For the avoidance of any doubt, when logo use is required, the UNDP logo needs to be used alongside the GEF logo. The GEF logo can be accessed at: http://www.thegef.org/gef/GEF_logo.The UNDP logo can be accessed at http://intra.undp.org/coa/branding.shtml.

110. Full compliance is also required with the GEF's Communication and Visibility Guidelines (the "GEF Guidelines"). The GEF Guidelines can be accessed at: http://www.thegef.org/gef/sites/thegef.org/files/documents/C.40.08_Branding_the_GEF%20final_0.pdf. Amongst other things, the GEF Guidelines describe when and how the GEF logo needs to be used in project publications, vehicles, supplies and other project equipment. The GEF Guidelines also describe other GEF promotional requirements regarding press releases, press conferences, press visits, visits by Government officials, productions and other promotional items.

111. Where other agencies and project partners have provided support through co-financing, their branding policies and requirements should be similarly applied.

Table 5. Project Monitoring and Evaluation Plan

Type of M&E activity	Responsible Parties	Budget (US$)	Time frame
Inception Workshop (IW)	Project Manager CFH UNDP CO UNDP GEF	8,000	Within first two months of project start up
Inception Report	Project Team UNDP CO	None	Immediately following IW
Measurement of Means of	Project Manager will oversee the hiring of	To be finalized during the	Start, mid and end of project

Type of M&E activity	Responsible Parties	Budget (US$)	Time frame
Verification for Project Purpose Indicators	specific studies and institutions, and delegate responsibilities to relevant team members	project's Inception Phase. Cost to be covered by targeted survey funds. Indicative cost: 15,000 (start, mid, end); total: 45,000	
Annual Measurement of Means of Verification for Project Progress and Performance	Oversight by Project GEF Technical Advisor and Project Manager Project team	To be determined as part of the Annual Work Plan's preparation. Cost to be covered by field survey budget. Indicative cost: 8,000 (annually); total: 40,000	Annually prior to APR/PIR and to the definition of annual work plans
Steering Committee meetings	Project Manager	10,000 (2,000 annually)	Following IW and annually thereafter.
APR and PIR	Project Team UNDP CO UNDP-GEF	None	Annually
Quarterly progress reports	Project team	None	Quarterly
CDRs	Project Manager	None	Quarterly
Issues Log	Project Manager UNDP CO Programme Staff	None	Quarterly
Risks Log	Project Manager UNDP CO Programme Staff	None	Quarterly
Lessons Learned Log	Project Manager UNDP CO Programme Staff	None	Quarterly
Technical and periodic status reports	Project team Hired consultants as needed	6,000	To be determined by Project team and UNDP-CO
Mid-term External Evaluation	Project team UNDP CO UNDP-GEF RCU External Consultants (evaluation team)	30,000	At the mid-point of project implementation.
Final External Evaluation	Project team, UNDP CO UNDP-GEF RCU External Consultants (evaluation team)	40,000	At the end of project implementation
Terminal Report/Publication	Project team UNDP CO External Consultant	15,000	At least one month before the end of the project
Audit	UNDP-CO Project team	8,000 annually	Yearly
Visits to field sites (UNDP staff travel costs to be charged to IA fees)	UNDP-CO, UNDP-GEF RCU Government representatives	None	Yearly average one visit per year
TOTAL (indicative) COST (Excluding project and UNDP staff time costs)		234,000	

LEGAL CONTEXT

This document together with the CPD signed by the Government and UNDP which is incorporated by reference constitute together a Project Document as referred to in the SBAA and all CPD provisions apply to this document.

Consistent with the Article III of the Standard Basic Assistance Agreement, the responsibility for the safety and security of the implementing partner and its personnel and property, and of UNDP's property in the implementing partner's custody, rests with the implementing partner. The implementing partner shall:

a) put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the project is being carried;
b) assume all risks and liabilities related to the implementing partner's security, and the full implementation of the security plan.

UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of this agreement.

The implementing partner agrees to undertake all reasonable efforts to ensure that none of the UNDP funds received pursuant to the Project Document are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via http://www.un.org/Docs/sc/committees/1267/1267ListEng.htm. This provision must be included in all sub-contracts or sub-agreements entered into under this Project Document.

AUDIT CLAUSE

The Audit will be conducted in accordance with UNDP Financial Regulations and Rules and applicable audit policies on UNDP projects.

ANNEXES

Annex 1: Risk Analysis

Risks	Impact & Probability	Mitigation
Government does not continue to place priority on conservation of the desert and semi-desert ecoregion and the historical perception of deserts as "wastelands" remains entrenched	Medium	The government has recognized that protected area establishment has been the slowest and most inadequate in desert ecosystems, as well as in the steppes, as reflected in the 4th National Report to the CBD. It has requested GEF assistance specifically to redress this situation. By demonstrating the feasibility of establishing a network of PAs and corridors in the desert ecozone while at the same time promoting sustainable use by local land users, the project will serve to reinforce the Government's decision in this regard. The project's efforts to build capacity of people from various sectors ranging from government to local communities will help build broad-based support for conservation and sustainable use of desert ecosystems.
Future financial allocations under the Government's Natural Resource Program (Zhasyl Damu) to the desert/ semi-desert ecoregion are reduced	Medium	The project is establishing a partnership with national stakeholders at a crucial juncture. It will not only work with the government in developing expenditure priorities under Zhasyl Damu 2010-15, but also for the next phase i.e., Zhasyl Damu 2015-20. The project will demonstrate cost-effective means for conservation of desert ecosystems that combine PAs, buffers, corridors and sustainable use in the landscape outside PAs that can then be integrated into future planning and resource allocation exercises to the benefit of desert ecosystems. Some of the project activities, such as the use of the METT as an uniform evaluative and resource allocation tool, will improve efficiency of government spending not only protection in the desert ecozone but other ecozones as well.
Influence of climate change will undermine efforts to arrest biodiversity loss and land degradation in desert and semi-desert ecosystems	Uncertain-Low	The risk of climate change is one of several reasons that the project has chosen to emphasize landscape-level actions together with protected area expansion. The project will enable the emergence of a supportive matrix of land uses, including the ecological corridors to connect protected areas. In addition to benefits for migratory species such as saiga, goitered gazelle, and koulan, this approach will limit climate change risk by providing pathways along macro-climatic and upland-lowland gradients to enable species movement in a context of potentially shifting ecological zones.
Local authorities and communities do not support the establishment of new PAs due to their conservative view of desert ecosystems as wastelands	Medium	The expansion and strengthening of the national protected areas system is consistent with the already approved Government Program. The Committee on Forestry and Hunting has already conducted a feasibility study for the establishment of a series of protected areas to conserve desert ecosystems. This work is a part of the Protected Area pillar of the Zhasyl Damu program. Under Outcome 1, the project will involve the local communities and authorities throughout the entire process of protected area establishment. Furthermore, raising the understanding of desert biodiversity values and incentivizing communities to preserve these values will be supported through the pilot PES agreements and the micro-credit biodiversity facility (Outputs 3.2 and 3.3). During discussions with stakeholders in the PPG phase some participants at the meetings in the pilot rural districts have expressed their concerns that PA expansion might limit their access to traditional places of fuel wood and woody forage. However, the project will ensure that such concerns are addressed with their participation in PA public committees.
Land users abandon SLM activities as they do not perceive the medium to long term benefits of sustainable land use strategies	Medium	Local land users are acutely aware of the impact that land degradation is having on their well-being. During meetings and interviews under the PPG phase, residents of several rural districts raised issues of lack of structures regulating the sustainable management of natural resources at the local level. They expressed their concerns about low productivity of grasslands, excessive felling of trees and bushes, and the desertification of land and increase of sand drifts around villages and in productive landscapes. Being aware of their vulnerability to land degradation, they want to find ways of reducing it and are willing to co-finance these activities by providing labor and other inputs. The project will continue to emphasize the importance of local engagement and initiative in the design of SLM activities. The success of pilot SLM activities will be closely monitored and adjusted to ensure that local benefits are realized. Awareness raising and dissemination of results will also be a priority of the project.
Communities are wary of the opportunity to collaborate on management of PAs through Public	Medium	Under Output 3.1, the project will develop the capacities of local communities and authorities to participate in protected area management. The project will incorporate lessons on community engagement learnt from the completed UNDP/GEF projects (on

Risks	Impact & Probability	Mitigation
Committees		conservation of agro-biodiversity, wetlands conservation) in Kazakhstan. The model of PA public committees will be adjusted to the local economic and social context in order not to disrupt the culture and livelihoods of local communities.
Land users are unwilling to consider PES schemes as these are relatively new in the Kazakh context	Medium	The project will build on the ground work done by CAREC on the opportunities for reward schemes in Kazakhstan. It will take a highly consultative approach, enlisting local NGOs, Council of Elders and other CBOs to ensure that information on the rewards schemes is widely disseminated. The project will take advantage of local events and forums to discuss the PES opportunities and discuss any concerns.
The micro credit line specifically for biodiversity-friendly and sustainable land management activities faces start-up difficulties	Medium	The novelty of the mechanism is well recognized. However, several factors in the current socio-economic and financial context of Kazakhstan indicate that such a facility is less risky than elsewhere in the region, and has high probability of success. The feasibility of the facility has been briefly discussed in Annex 7. Operational difficulties would not pose an impediment, since it is based on the existing institutional, financial and operational platform of FFSA, and is not being created from scratch. The capitalization issue is considered to be low-risk, since the fund is not a grant endowment trust fund (for which capitalization globally is most difficult to obtain), rather a credit revolving facility. FFSA has agreed to capitalize US$ 1 million provided GEF incrementally covers the support functions of the new product: marketing, outreach, compliance monitoring. GEF funds to cover this soft support and mediation between the financial facility and end-users (communities) will ensure absorptive capacity/ demand for the project. Based on UNDP research and experience of the wetlands conservation project of GEF, such demand does exist, and can be successfully tapped provided there is a strong UNDP-GEF-Government-FFSA partnership set up for it.

Annex 2: Terms of Reference

National Project Manager (NPM)

Background

The National Project Manager (NPM), will be a locally recruited national selected based on an open competitive process. He/She will be responsible for the overall management of the project, including the mobilization of all project inputs, supervision over project staff, consultants and sub-contractors. The NPM will be tasked with the day-to-day management of project activities, as well as with financial and administrative reporting. The NPM's prime responsibility is to ensure that the project produces the planned outputs and achieves the planned indicators and indicator targets by undertaking necessary activities specified in the project document to the required standard of quality and within the specified constraints of time and cost. This will require linking the indicators to the work plan to ensure Results-Based Management.

The NPM will report to the UNDP-Kazakhstan Environment Officer (or other duly designated UN officer) for all of the project's substantive and administrative issues. The NPM will report on a quarterly basis to the Project Executive Group (PEG). The NPM will be responsible for meeting government obligations under the project and will perform a liaison role with the Government, UNDP and other UN Agencies, NGOs and other project partners.

Duties and Responsibilities

- Supervise and coordinate the production of project outputs, as per the project document;
- Liaise with UNDP, CFH and other relevant government agencies, and all project partners, including donor organizations and NGOs for effective coordination of all project activities;
- Ensure the timely and effective implementation of all components of the project;
- Ensure a results-based approach to project management – this means the NPM *must* understand the project's results framework indicators and respective indicator targets and verify these at project inception together with UNDP and any additional expertise. These indicators must then be linked on a daily basis to the project's work, NOT simply reported on once a year for the PIR Process.
- Mobilize all project inputs in accordance with UNDP procedures for nationally executed projects;
- Coordinate the recruitment and selection of project personnel;
- Coordinate and supervise the work of all consultants and sub-contractors, ensuring the timely delivery of expected outputs, and effective synergy among the various sub-contracted activities;
- Prepare Annual Work plans in advance of each successive year and submit them to the Project Executive Group for approval.
- Prepare financial reports, as required by Project Director and UNDP;
- Work with UNDP to complete the annual project implementation review (PIR) reporting exercise.
- Facilitate administrative backstopping to subcontractors and training activities supported by the Project;
- Oversee and ensure timely submission of all project reports, including technical reports, quarterly financial reports, and other reports as may be required by UNDP, GEF, and other oversight agencies;
- Disseminate project reports and respond to queries from concerned stakeholders;
- Report progress of project to the steering committee, and ensure the fulfilment of steering committee directives.
- Carry out regular inspections of all project sites and activities.

Qualifications

- Proven management expertise – must be able to fluidly handle the political, technical, and people management challenges that will face the NPM on a daily basis. This is first and foremost the most important qualification.
- A university degree (MS or PhD) in Management or Environmental Sciences;
- At least 10 years of experience in natural resource management or project/programme management;

- At least 5 years of project/programme management experience;
- Working experience with ministries, national institutions, local government, research institutes in Kazakhstan;
- Ability to effectively coordinate a large, multi-stakeholder project;
- Ability to administer budgets, train and work effectively with counterpart staff at all levels and with all groups involved in the project;
- Strong drafting, presentation and reporting skills;
- Strong computer skills, in particular mastery of all applications of the MS Office package and internet search;
- Strong knowledge of PA management issues in Kazakhstan, including the political, institutional and socio-economic contexts;
- Working knowledge of English.

Administrative/Finance Assistant (AFA)

Background

The Administrative and Finance Assistant (AFA), will be a locally recruited national selected based on an open competitive process. He/She will report to National Project Manager (NPM) and assist the NPM in the coordination of the UNDP-GEF project. He/She will have two roles: as an Administrative Assistant and as an Accountant.

As an Administrative Administrator, he/she will:

- Provide assistance in the operational management of the project according to the project document and the NEX procedures.
- Undertake all preparation work for procurement of office equipment, stationeries and support facilities as required;
- Provide support in preparing project events, including workshops, meetings (monthly, quarterly and annual), study tours, trainings, etc., as required.
- Take care of project telephone, fax, and email system;
- Assist with preparation of TORs and contracts for consultants for project activities.

As a Project Accountant, he/she will:

- Prepare quarterly advance requests to get advance funds from UNDP in the format applicable.
- Assist the NPM and NPD in project budget monitoring and project budget revision.
- Set up accounting system, including reporting forms and filling system for the project, in accordance with the project document and the NEX procedures;
- Maintain petty cash transactions. This includes writing of receipts, preparation of payment request form, receipt and disbursement of cash and clearance of advances;
- Prepare cheques and withdraw money from the bank;
- Prepare project financial reports and submit to NPM and NPD for clearance and furnish to UNDP as required;
- Enter financial transactions into the computerised accounting system;
- Reconcile all balance sheet accounts and keep a file of all completed reconciliation;
- Check and ensure that all expenditures of projects are in accordance with NEX procedures. This includes ensuring receipts to be obtained for all payments;
- Check budget lines to ensure that all transactions are booked to the correct budget lines;
- Ensure documentation relating to payments are duly approved by the NPD;
- Bring any actual or potential problems to the attention of the NPD;
- Follow up bank transfers. This includes preparing the bank transfer requests, submitting them to the bank and keeping track of the transfers;
- Ensure Petty Cash to be reviewed and updated ensuring that there is up-to-date records;
- To continuously improve system & procedures to enhance internal controls to satisfy audit requirements.
- Ensure that bank statements be collected from the banks at the appropriate time;

- Ensure that bank accounts are reconciled and reported in a timely manner;
- Prepare monthly bank reconciliation statement, including computation of interests gained to be included into reports.
- Maintain the inventory file to support purchases of all equipment/assets.
- Undertake other relevant matters assigned by the NPM.

Qualifications and requirements

- University degree in accounting, finance or related fields;
- Solid experience of budgeting, planning and reporting on foreign funded projects; and experience with international auditing requirements.
- Good secretarial skills and good organizational capacity;
- Knowledge in administrative and accounting procedures of the Government and UNDP is an advantage
- Good computer skills in common word processing (MS Word), spreadsheet (MS Excel), and accounting software.
- Appropriate Kazakh, Russian and English language skills, both spoken and written.

Field Office Team Leader

The Field Office Team Leader (PA & Capacity Building Expert/Almaty-based Team Leader; PA & Intersectoral Cooperation Expert, Aralsk-based Team Leader) will be an experienced national expert recruited to provide overall technical backstopping to the Project. He/She will report to National Project Manager (NPM). The Team Leader will be the project manager's deputy in the field (in Aralsk and Almaty respectively) -- managing and coordinating the project's work in the pilot area. This position will have 250 person/week or 4.8 years in total.

Annex 3: Consultants to be hired using GEF resources

Position Titles	$/ person week	Estimated person weeks	Tasks to be performed
For Project Management (only local/no international consultants)			
Administrative & Finance Specialist	315.635	260	The Administrative & Finance Specialist will manage the day to day operations of the project, particularly with respect to finances, technical services, procurement and personnel matters, supervise the provision of supplies and services, be responsible for the maintenance of project equipment administer petty cash and manage project disbursements in the UNDP financial system.
		260	
Justification for GEF resources allocated to travel costs: The project is working in 3 target areas: Ile-Balkhash and Aral-Syrdarya basins, and Plateau Ustyurt, which will require travel within the country; travel to/from training sessions, collaboration with national & local-level government and institutions, co-funding partners, etc.			
Justification for office facilities, equipment, vehicles and communications for management: Basic furniture needs of Astana-based Core Team & Field Offices in Almaty (IBA) and Aralsk (Ustyurt & AS areas)			
For Technical Assistance			
National Consultants			
National Project Manager	774	260	In this project, NPM will not be hired to carry out pure management tasks. While still performing overall management, NPM will guide and contribute his/her technical knowledge to implementation of Outcomes 1 and 2 related to PA expansion and management, and landscape-level territorial planning in target areas. The NPM will report to the Head of the UNDP-Kazakhstan Energy & Environment Unit and/or the assigned Programme Officer in the Unit. The PM will report on a periodic basis to the Project Steering Committee (PSC). The PM will be responsible for meeting government obligations under the project, liaise with the Government, UNDP, NGOs and project partners, and maintain close collaboration with project stakeholders providing co-financing.
PA & Capacity Building Expert (Team Leader, Almaty-based Field Project Team)	557	250	The PA & Capacity Building Expert's time is allocated between Outcomes 1&2. S/he will lead implementation of Outcome 1 on PA expansion & management effectiveness, and will contribute to implementation of Outputs 2.1-2.4 of Outcome 2 related to landscape-level territorial planning, demonstration of sustainable resource use practices, operationalization of a wildlife corridor and ecological monitoring & decision support system.
PA & Intersectoral Cooperation Expert (Team Leader, Aralsk-based Field Project Team)	361	250	The PA & Intersectoral Cooperation Expert's time is allocated to technical assistance under Outcome 2. S/he will lead and coordinate implementation of Outcome 2 in Aral-Syrdarya and Ustyurt areas as well as the project's PA expansion & capacity building efforts associated with implementation of Outputs 1.1-1.6 in Aral-Syrdarya and Ustyurt areas.
PR Specialist (Astana-based position)	459	230	The PR Specialist's time is allocated between Outcomes 1, 2 & 3. S/he will lead the project's outreach activities highlighting project results & achievements under Outcomes 1-3.
Intersectoral cooperation & territorial planning expert (Astana-based position)	557	230	The Intersectoral cooperation & territorial planning expert will lead the project's technical assistance under Outcome 2 and will coordinate implementation of Outputs 2.1-2.4 in Arala-Syrdarya and Ile-Balkhash target areas.
PA Public Committee, Pilot & Microcredit Projects Expert (Almaty-based)	459	208	The PA Public Committee, Pilot & Microcredit Projects expert will assist with implementation of Output 2.2 under Outcome 2 and will lead implementation of Outputs 3.1 and 3.3 under Outcome 3.
Procurement Specialist (Almaty-based)	316	250	The Procurement Specialist will prepare in consultation with the project experts and approve the project's procurement plan annually and monitor its implementation on a quarterly basis in line with UNDP requirements. In particular, the project will lead procurement of goods and equipment for PAs under Outcome 1. He/she will manage the day to day operations of the Almaty-based field office, particularly with respect to finances, technical services, procurement and personnel matters, supervise the provision of supplies and services, be responsible for the maintenance of project equipment and manage project disbursements in the UNDP financial system.
Field Logistics Coordinator/Driver	197	230	Field Logistics Coordinator facilitates planning and scheduling of field visits

Position Titles	$/ person week	Estimated person weeks	Tasks to be performed
(Almaty-based)			to project sites in the Ile-Balkhash area; obtains necessary transportation permits or make necessary agreements with stakeholders in the field; maintains vehicle in a good shape and order for long-distance trips; drives the project staff and/or stakeholders to project sites; oversees logistics during a field visit, delivers official correspondence and provides other project support as requested by Almaty-based Team Leader.
Community engagement & pilot project expert (Aralsk-based)	300	208	The Community engagement & pilot project expert will coordinate implementation of Outcomes 2 & 3 in the Aral-Syrdarya and Ustyurt target areas related to mobilization of rural communities and businesses to implement demonstration projects, pilot PES schemes and to participate in PA management via PAPCs.
Administrative & Microcredit Financing Specialist (Aralsk-based)	251	250	The Administrative & Microcredit Financing Specialist will manage the day to day operations of the Aralsk-based field office, particularly with respect to finances, technical services, procurement and personnel matters, supervise the provision of supplies and services, be responsible for the maintenance of project equipment and manage project disbursements in the UNDP financial system. He/she will also assist the Community engagement & pilot project expert in administering the BD Microcredit Program in the Aral-Syrdarya and Ustyurt project areas.
Field Logistics Coordinator/Driver (Aralsk-based)	197	230	Field Logistics Coordinator facilitates planning and scheduling of field visits to project sites in the Aral-Syrdarya and Ustyurt areas; obtains necessary transportation permits or make necessary agreements with stakeholders in the field; maintains vehicle in a good shape and order for long-distance trips; drives the project staff and/or stakeholders to project sites; oversees logistics during a field visit, delivers official correspondence and provides other project support as requested by Aralsk-based Team Leader.
Wildlife (green) corridor creation expert	750	13	The Wildlife (green) corridor expert will lead the overall process for a wildlife corridor creation in the IB area. In particular, the expert will conduct an inception workshop to discuss the overall vision of stakeholders and develop a workplan for the corridor establishment; define the conservation objectives of the corridor; identifying criteria that the corridor must satisfy; assessing various options for linking priority areas for conservation with key landscape-scale ecological processes against these criteria; coordinate the preparation of ENO to be endorsed by CFH and akimat.
National consultant for mid-term evaluation	1,000	5	See description under International consultants, but with stronger focus on local issues including the preparation of the mission (arrangements of meetings, logistics, etc.).
National consultant for final evaluation	1,000	6	See description under International consultants, but with stronger focus on local issues including the preparation of the mission (arrangements of meetings, logistics, etc.).
PA design & creation expert	1,000	9	The PA design & creation expert will assist with implementation of Output 1.3. In particular, the expert will perform a comprehensive assessment of the existing PA establishment process and its implications for PA expansion within the desert and semi-desert region, providing a detailed gaps analysis that assesses ecological and representation gaps under the baseline PA system and identifies cost-effective opportunities for closing them. The expert will draft its proposal for PA expansion under the new phase of Zhasyl Damu (2015-2019), including locations, types and areas of new PAs, and submit it to CFH.
PA management & effectiveness expert	500	26	The PA management & effectiveness consultant will assist with implementation of Outputs 1.4 & 1.6 and Output 2.3. In particular, the consultant will assist target PAs and the to-be established wildlife corridor in the IB area with development of PA management plans that will include a description of the conservation objectives of the PA, zoning and management strategies for the different zones, and a business plan; collect the feedback of oblast and rayon administrations, CFH, land user groups (livestock breeders, hunters, fishermen, agriculturalists, women, etc.), NGOs and PA administrations on on draft PA management plans and integrate it in revised drafts; summarize all past experience in the country related to the use of METT; develop process and functions charts to allow CFH and PA administrations to map the sequence of activities and associated

Position Titles	$/ person week	Estimated person weeks	Tasks to be performed
			responsibilities in the process of METT completion; assess the monitoring and reporting needs of CFH and PAs administrations to comply with the METT; develop METT quality-check guidelines for PAs and CFH; draft a set of internal rules/ ordinances to institutionalize the METT process; revise the proposed process and rules, as needed, based on results of pilot applications.
Legal expert on PA planning & management	1,000	8	The Legal expert will assist with implementation of Outputs 1.2, 1.6, 2.1, 2.3, 3.2, 3.3. In particular, the expert will draft amendments to the PA Law and other related bylaws to formalize the process of the wildlife corridor creation and operation; amendments to the PA Law to mandate the use of METT across the national PA system; amendments to the Land Law as well as internal or inter-agency instructions related to territorial landscape level planning; amendments to the Law on Wildlife Use related to the functioning of hunting concessions in the wider productive landscapes and monitoring of their activities; an agreement with FFSA on continuation of this biodiversity microcredit program before project completion.
Institutional effectiveness & capacity development expert	750	13	The expert on institutional effectiveness & capacity development will assist with implementation of Output 1.7. In particular, the expert will assist the International consultant on institutional effectiveness in devising (a) catalog of skills and competencies required for management of different categories of desert and semi-desert PAs and (b) a set of occupational standards to help ensure that required skills are appropriately distributed among the profiles of staffing positions within the system; will assess and identify options for human resource development in the desert and semi-desert protected areas in order to address key gaps in competencies; will review human resource development and training in PA institutions in Kazakhstan and provide recommendations on the design and content of training and development programs for raising key competencies of current PA managers.
National consultant for assessment of CC risks to desert & semi-desert ecosystems & ecosystem-based adaptation	1,000	3	The consultant on CC risks to desert & semi-desert ecosystems will assist with implementation of Output 1.7. In particular, the consultant will assess the risk that climate change poses to desert and semi-desert environments and the opportunities presented by Ecosystem-based Adaptation. Findings and recommendations of the consultant will be included into training & development programs for PA managers.
Participatory land use planning expert	500	20	The participatory land use planning expert will work with the International consultant on participatory land use planning and will assist in implementation of Output 2.1. In particular, the consultant will perform the following activities: (i) participatory biophysical and socio-economic resource mapping to understand the potential of the various ecozones in the pilot area; (ii) spatial assignment of appropriate land use types considering the needs of stakeholders, local knowledge and development priorities of target rayons; (iii) identification of existing and potential conflicts among different land-users, and between land-users and ecosystems, and development of measures to mitigate or eliminate such potential or existing conflicts, with proposed measures being agreed with stakeholders; (iv) integration of gender aspects into territorial planning.
Database & GIS expert	1,000	10	The Database & GIS expert will assist with implementation of Outputs 2.1 and 2.4. In particular, the expert will perform the following tasks: (i) development of a GIS-based land use concept including GIS-based maps) for different types of land use given development priorities of rayons and ecosystems' potential; (ii) creation & operationalization of a biodiversity monitoring system in the Ile-Balkhash area that will contain GIS-based maps.
How-to-Guide expert on territorial landscape-level planning	1,000	5	The How-to-Guide Expert on territorial planning will assist with implementation of Output 2.1. In particular, the expert will summarize results of the pilot territorial planning exercise and will produce a "how-to" guide for replication purposes.
How-to-Guide expert on PAPC creation	1,000	5	The How-to-Guide Expert on PAPC creation will assist with implementation of Output 3.1 and will summarize results of pilot PAPCs and produce a "how-to" guide on PAPC creation and operationalization in Kazakhstan for replication purposes.

Position Titles	$/ person week	Estimated person weeks	Tasks to be performed
Trainers (6) on PAPC creation & operationalization	6,000	3	Trainers will assist with implementation of Output 3.1 and will deliver trainings related to PAPC creation and operation on the following topics: (i) the role of public in and participatory approaches to government management; (ii) a legal framework for public engagement; (iii) what is a Public Committee and how it can be created; (iv) strategic planning; (v) effective management of public meetings; how to make effective presentations; how to deliver talks at public meetings; (vi) financing of PAPCs (sources of financing and mechanisms for accessing it).
Natural Resources Management Economics & PES expert	1,250	6	The Natural Resources Management Economist will assist with implementation of Output 3.2. In particular, the expert will perform the following tasks: (i) environmental and economic assessment of target ecosystems and identification of ecosystem services suitable for reward schemes on biodiversity conservation in productive landscapes around target PAs; (ii) consultations and selection of partners ('buyers' & 'sellers') for a particular ecosystem service, and identification of the partners' realistic expectations from the proposed scheme; (iii) drafting an agreement (e.g. a grazing lease agreement) with shared responsibilities and accountability as well as a list of expected social and environmental benefits; (iv) preparation and implementation of the initial meeting of partners to negotiate the agreement.
Expert on results & lessons learned of PES in Kazakhstan	1,000	5	The Expert on results & lessons learned of PES will assist with implementation of Output 3.2. In particular, the Expert will perform the following tasks: preparation of (a) a summary and analysis of lessons learned (both positive and negative) in implementing pilot reward schemes, and assessment of economic, social and environmental values of proposed scheme, (b) recommendations on the application of PES/ reward schemes in the Kazakhstani social and economic context, (c) clear guidance on how to implement PES/reward schemes at the local level given the project experience.
Trainers (4) on PES	4,000	2	Trainers will assist with implementation of Output 3.2 and will deliver trainings on PES methodology, negotiation skills, threats & problem analysis, etc., aimed at developing the capacity of parties to concluded PES agreements as well as other stakeholders.
Expert on results & lessons learned of BD microcredit program	1,000	4	The Expert on results & lessons learned of BD microcredit program will assist with implementation of Output 3.3 and will summarize results and lessons learned (both positive & negative) in implementing the BD microcredit program, as well as assess economic, social and environmental values of the program.
		2,739	
International			
International technical consultant to assist with IW and inception report	3,000	3	The International Technical Consultant will participate in the Inception of the project and provide technical expertise for the project staff and other stakeholders on the project's goal, activities and implementation arrangements. This will include: (i) review of the final documentation on the project and related documents; (ii) presentation of the project to the newly hired project personnel at the internal session of the inception workshop; (iii) providing details on implementation of each project component; (iv) moderate discussion on changes in circumstances since project design; (v) presenting log-frame as a tool for implementation, reporting and monitoring; (vi) review of indicators; (vii) provide details on project monitoring and evaluation arrangements; (viii) presentation of the technical aspects of the project to the broader stakeholders at the external session; (ix) revision of the project log-frame and activities in the context of the changes within the project scope together with the project team; (x) integration of the changes into the project document and finalization of the revised part of the prodoc; (xi) preparation of the draft inception report; (xii) addressing comments to the report and revising it accordingly.
International consultant for mid-term evaluation	3,000	5	The main objective of the mid-term international evaluation team will be to determine progress being made towards the achievement of outcomes and will identify course correction to strengthen the chances for the delivery of the expected results. The team will test and confirm the key hypotheses

Position Titles	$/ person week	Estimated person weeks	Tasks to be performed
			underlying the project, reassess risks and assumptions, focus on the effectiveness, efficiency and timeliness of project implementation; will highlight issues requiring decisions and actions; and will present initial lessons learnt about project design, implementation and management. The mid-term evaluation will also examine to which degree cross-sectoral issues such as gender mainstreaming have been taken into account in project planning and implementation. Findings of this review will be incorporated as recommendations for enhanced implementation during the final half of the project's term. The organization, terms of reference and timing of the mid-term evaluation will be decided after consultation between the parties to the project document.
International consultant for final evaluation	3,000	5	The main task of the final evaluation team will be – in accordance with UNDP and GEF guidance – to focus on the delivery of the project's results as initially planned (and as corrected after the mid-term evaluation, if any such correction took place). The final evaluation will look at impact and sustainability of results, including the contribution to capacity development and the achievement of global environmental goals. The final evaluation should also provide recommendations for follow-up activities, and the report will feature management response to the issues raised.
Wildlife corridor planning & management expert	3,500	3	The Wildlife corridor planning & management consultant will assist with implementation of Output 1.2. In particular, the consultant will summarize international experiences on corridor creation & management in similar institutional & regulatory settings, and present key recommendations to national experts, CFH and PA staff on most common & internationally acceptable steps in corridor creation and approaches to corridor management.
Landscape-level PA expansion & planning expert	3,500	4	The Landscape-level PA expansion & planning consultant will assist with implementation of Outputs 1.3, 1.4 and 1.6. In particular, the consultant will contribute to the design of the PA expansion plan for 2015-2019 by bringing in best international practices; assist with development of PA management plans of target PAs; develop a METT template to be used by CFH and PA staff to track PA effectiveness; train CFH and PA staff on METT methodology.
PA institutional effectiveness & capacity building expert	3,500	4	The international PA institutional effectiveness & capacity building expert will assist with implementation of Output 1.7. In particular, the expert will develop (a) catalog of skills and competencies required for management of different categories of desert and semi-desert PAs and (b) a set of occupational standards to help ensure that required skills are appropriately distributed among the profiles of staffing positions within the system; will assess and identify options for human resource development in the desert and semi-desert protected areas in order to address key gaps in competencies; will review human resource development and training in PA institutions in Kazakhstan and provide recommendations on the design and content of training and development programs for raising key competencies of current PA managers.
Invited lecturers/practitioners to deliver talks on specific topics (3)	2,100	3	Output 1.7. Practitioners (3) from other countries with relevant experience will be invited to provide lectures on specific topics (e.g. community engagement & interactions, community-based tourism, PA management, etc.)
Participatory land use planning expert	2,250	10	The International Participatory Land Use Planning consultant will assist the project with implementation of Output 2.1. In particular, the consultant will perform the following activities: (i) participatory biophysical and socio-economic resource mapping to understand the potential of the various ecozones in the pilot area; (ii) spatial assignment of appropriate land use types considering the needs of stakeholders, local knowledge and development priorities of target rayons; (iii) identification of existing and potential conflicts among different land-users, and between land-users and ecosystems, and development of measures to mitigate or eliminate such potential or existing conflicts, with proposed measures being agreed with stakeholders; (iv) support to the project team to integrate gender aspects into territorial planning; (v) Training of project staff and local consultants of specialised participatory methods.

Position Titles	$/ person week	Estimated person weeks	Tasks to be performed
		37	

Annex 4: Tracking tool for Biodiversity (BD-1)

The METT has been completed for all target PAs of the project (see table below) and is submitted separately along with this document in the required excel format.

	METT scores (%)	
	Baseline	Target
Existing PAs that are to be expanded and where management is to be strengthened		
Altyn Yemel State National Nature Park	50	75
Barsakelmes State Nature Reserve	42	67
Ustyurt State Nature Reserve	43	68
New PAs to be established with effective management capacities		
Ile-Balkhash State Nature Rezervat	19	44%
Mangistau State Reserve Zone	7	32%
Arganaty State Reserve Zone	9	34%

Annex 5: Tracking tool for Land Degradation LD PMAT (LD-3)

The LD-PMAT has been completed for all target demonstration areas where SLM is to be piloted and also includes the demonstration sites in riparian forests as these areas are also expected to generate LD benefits (see tables below).

D.3.1. Zhanakurylyssk, Karaterensk, and Bogensk rural districts (Aral Syrdarya region)

Location (administrative district)	Aralsk rayon of the Kyzylorda oblast
Size (in hectares)	44,600 ha
Nearest existing or to-be-established desert/ semi-desert PA	Barsakelmes State Nature Reserve

D.3.2. Akdalinsk, Berekinsk and Akkulsk rural districts (Ile Balkhash region)

Location (administrative district)	Balkhash rayon of the Almaty oblast
Size (in hectares)	39,400 ha
Nearest existing or to-be-established desert/ semi-desert PA	Ile-Balkhash Reservat and the wildlife corridor connecting the Altyn Yemel State Nature Park and the Ile Balkhash Reservat

D.2.1 Bakanasky Forestry Entity and the Akdalinsky irrigation massif (Ile Balkhash region)

Location (administrative district)	Balkhash and Ile rayons of Almaty Oblast
Size (in hectares)	«Zheltorangy» section – 3 ha (poplar grove); «Karatorangy» section – 3 ha (poplar grove); «Akdalinsky irrigation massif» section – 1,720 ha (saksaul forests)
Nearest existing or to-be-established PA	Ile-Balkhash State Nature Sanctuary

D.2.2 Kop-Kuduk Hunting Area (Aral Syrdarya region)

Location (administrative district)	Zhalagash and Syr-Darya districts of Kzyl-Orda Oblast
Size (in hectares)	16,322 ha
Nearest existing or to-be-established desert/ semi-desert PA	Barsakelmes State Nature Reserve

The LD-PMAT is submitted separately along with this document in the required excel format.

Annex 6: Demonstration of Restoration and Sustainable Use in the Wider Landscape

The project has selected 3 types of landscapes outside protected areas where restoration and sustainable use will be demonstrated. Restoration and sustainable use in these demonstration sites is expected to enhance the effectiveness of desert and semi-desert PAs by maintaining ecological integrity and ecological processes in intervening landscape areas. The landscapes selected are as follows: (D1) Wetlands; (D2) Riparian and saksaul forests; and (D3) Rangelands. Within these categories, various criteria were used to identify pilot sites as described below:

- Opportunities for sustainable natural resources use, including land and biodiversity resources, in productive landscapes that are adjacent to target PAs to ensure the continuity of conservation and sustainable resource use efforts outside PA boundaries
- Significance in terms of critical habitat for globally important, rare and endangered species
- Compatibility of needs, skills and traditions of local communities with the proposed demonstration interventions
- Willingness of landowners and/or users to be partners and provide co-financing
- Alignment with relevant government strategies and programs to ensure complementary financing
- Alignment with relevant international environmental obligations of Kazakhstan
- Accessibility of pilot sites for hosting visits/ tours for exchange and dissemination of experience

The information on demonstration projects is presented in this annex in tabular format, and includes basic background information on the site (location, ownership, etc.), biodiversity and land degradation significance of the site, threats to the site, proposed demonstration activities, as well as socio-economic and gender aspects. Maps are also included.

D.1. Wetlands (2 sites totaling 2,202 ha)

Goal: Restoration of most important wetlands and improvement of the quality of habitat of globally important species.

Expected results:

a. Expansion of the territory of wetlands;
b. Improvement of habitat conditions;
c. Preservation of globally threatened, endangered and vulnerable IUCN red list species including white-headed duck *(Oxyura leucocephala),* dalmatian pelican *(Pelecanus crispus),* ferruginous duck *(Aythya nyroca),* pale-backed pigeon *(Columba eversmanni),* Pallas's fish-eagle *(Haliaeetus leucoryphus),* whooper swan *(Cygnus cygnus*), white-tailed eagle *(Haliaeetus albicilla),* Eurasian spoonbill *(Platalea leucorodia),* great white pelican *(Pelecanus onocrotalus),* Eurasian eagle-owl *(Bubo bubo),* ibisbill *(Ibidorhyncha struthersii),* little egret *(Egretta garzetta),* common crane *(Grus grus),* Pallas's gull *(Larus ichthyaetus),* black-bellied sandgrouse *(Pterocles orientalis)* and Pallas's sandgrouse *(Syrrhaptes paradoxus);*
d. Improvement of wetlands management outside protected areas.

D.1.1. Karatal Hunting Entity (Ile Balkhash region)

<table>
<tr><td>Location (administrative district)</td><td>Karatal District of Almaty Oblast</td></tr>
<tr><td>Size (in hectares)</td><td>The Karatal Hunting Area is spread over 41,101 hectares. Within this larger area, the project will focus on 1,400 ha of wetlands in need of restoration.</td></tr>
<tr><td>Land owner/land user</td><td>Taldykorgan Inter-district Society of Hunters and Fishermen (Public Association): The society was established in 1952. Its Chairman is Mr. V. E. Cheremnov. The number of workers is 13, and the number of society members is 1,900. The Society includes four other hunting entities.</td></tr>
<tr><td>Nearest existing or to-be-established desert/ semi-desert PA</td><td>Ile Balkhash Rezervat (southeast section). It is expected that the pilot site will become part of the protection (buffer) zone of the to-be-established Ile Balkhash Rezervat.</td></tr>
<tr><td>Description</td><td>The Karatal Hunting Entity is divided into four ranger sections including a resting area and a reproduction area. There are five hunters and two vehicles, Niva and UAZ 469. Regular works are carried out to fight poachers and conserve the wildlife.
The Karatal River delta and the Kelte lake system lie within the territory of the Karatal Hunting Entity. The lake system spans an area of over 1,300 ha and is located in lowlands between the dunes. The delta of the Karatal River is heavily silted due to low water levels and is covered by reed which inhibits water flow to the Kelte lake system compromising its sustainable functioning in the long run.</td></tr>
<tr><td>Biodiversity significance</td><td>Birds: Over 30 species of fowl nest in the lake system, including IUCN red list species such as Ferruginous Duck (Aythya nyroca), Dalmatian pelican (Pelecanus crispus), Sea eagle (Haliaeetus albicilla), Whooper Swan (Cygnus cygnus), Eurasian Spoonbill (Platalea leucorodia), Great White Pelican (Pelecanus onocrotalus) and Eurasian Eagle-owl (Bubo bubo).
According to latest census data, the following baseline and target quantitative indicators can be established for rare and endangered species in the project site:
<table>
<tr><td rowspan="2">Species</td><td colspan="2">Population numbers</td></tr>
<tr><td>Baseline (2012)</td><td>Project end (2017)</td></tr>
<tr><td>Cygnus cygnus</td><td>13</td><td>26</td></tr>
<tr><td>Haliaeetus albicilla</td><td>4</td><td>8</td></tr>
<tr><td>Platalea leucorodia</td><td>6</td><td>12</td></tr>
<tr><td>Pelecanus onocrotalus</td><td>6</td><td>12</td></tr>
<tr><td>Pelecanus crispus</td><td>20</td><td>40</td></tr>
<tr><td>Aythya nyroca</td><td>42</td><td>84</td></tr>
<tr><td>Bubo bubo</td><td>6</td><td>12</td></tr>
</table>
Fish: The delta is an important spawning ground of many commercially valuable but vulnerable species of fish, especially wild common carp (Cyprinus carpio)[39]. The hunting area obtained a permit in 2012 for fishing in the Kelte lake in the volume of 11.31 tons, including carp (Cyprinus carpio), bream (Abramis brama), asp (Aspius aspius), crucian carp (Carassius auratus gibelio), catfish (Silurus glanis) and carp (Stizostedion lucioperca).</td></tr>
<tr><td>Monitoring of biodiversity</td><td>The project will use annual field data to monitor progress and achievements of demonstration projects. Also, the project will produce a detailed threat analysis for each species to better estimate population trends and devise conservation measures accordingly. The project will contract leading national research institutes and specialized government agencies (Institute of Botany, Institute of Zoology, Balkhash-Alakol River Basin Organization of the Water Resources Committee,</td></tr>
</table>

[39] Registered as "vulnerable" in the IUCN Red List as of November 20, 2012

	Kazhydromet) to conduct field assessment and analysis of biodiversity and water resources, devise a management plan for each globally endangered or vulnerable species with quantitative indicators, description of population structure, and develop a water use plan for the area to ensure that sufficient amount of water flows into the lake system. The staff of the hunting entity as well as staff of the to-be-established Ile Balkhash Rezervat will be engaged in regular monitoring. For comprehensive monitoring in the productive landscapes, the project will try to engage the staff of adjacent hunting areas. The project will hold training sessions on effective biodiversity monitoring methods and approaches to ensure high quality and consistency of monitoring data available for analysis and reporting. In addition, the project will produce a guidebook for field monitoring to be distributed among participating staff and institutions.
Threats to the wetland	Reduced water levels due to demands for irrigation of upstream rice fields of the Karatal River (this is the northern point of rice cultivation in Kazakhstan). Fires and grazing lead to destruction of habitat. The local population burns reeds and riparian bushes and let cattle graze in this already vulnerable area.
Proposed demonstration activities	To address threats at the pilot site, the following demonstration activities are proposed: (1) Hydrological and hydrobiological assessments of the condition of the wetlands and adjoining ecosystems of the Ile-Balkhash target area. This assessment will extend beyond the 1,400 ha of Kelte lake system and include the river stream, the Karatal river delta and other small lakes in the area for better understanding of current conditions and threats to the whole ecosystem. (2) Assessment of water resource needs of the local population, recreational users (such as anglers and hunters), commercial fishing and hunting entities, agricultural users, etc. to determine the water volume and level essential for sustainability and viability of the wetland ecosystem. (3) Recommendations on methods for wetland restoration to ensure desired water volumes and levels. Based on assessment results in point (1) above, the project will devise the most suitable and feasible water use plan to be then negotiated and agreed on with decision-makers and water users. Also, during bird nesting and fish spawning times (Spring) the project will focus on working with upstream water users on efficient use of water resources to allow for a sufficient amount of water flow into the lake system. The latter would include a contract (potentially using a PES scheme) between upstream water users, the Karatal hunting entity and the new Ile-Balkhash Rezervat. Finally, the project will work with hunting areas on removing silt and cutting hard vegetation along channels. (4) Develop and implement plans for long term monitoring of (i) biodiversity impacts to be performed by the staff of the Karatal Hunting Entity and Ile Balkhash Nature Rezervat, and (ii) observance of water use limits to be implemented by the Balkhash-Alakol River Basin Organization of the Water Resources Committee jointly with relevant akimat departments and the Balkhash-Alakol River Basin Council[40] to ensure long-term sustainability of the demonstration activities. (5) Determine all parties in the middle and upper stream—apart from the already known stakeholders like the Karatal Hunting Society, local population, recreational users, RBC, Kazhydromet—interested in the wetlands restoration and get approval of the water volumes necessary for restoration of the lake system by users. Securing approvals may take some time given that decision-makers in the target area have no experience in such matters. In this regard, the project will arrange for information sessions, field visits and experience exchange tours for decision-makers in target areas. (6) Carry out technical works aimed at cleaning the riverbed and channels of garbage, silt, etc.
Costs	For implementation of the above activities, the GEF contribution will total US$ 107,000 and co-financing US$ 161,000. The costs will cover, among other things, the purchase of an excavator and tractor, field assessments, biotechnical and restoration works, awareness raising and information campaigns.
State any negative environmental or socio-economic effects, and ways to mitigate them in the project	Rehabilitation of the wetlands area in the Karatal River delta will lead to more favorable habitat conditions for endangered and vulnerable species. This, in turn, could lead to uncontrolled tourism and illegal hunting and fishing. To mitigate this potential threat, the project will assist the to-be-established Rezervat with surveillance equipment, train the staff of the Rezervat and Hunting entity in better prosecution, and work with tourism agencies to ensure sustainability (ref. Outputs 1.5 & 1.7). Also, farmers may face a short-term decrease in crop outputs as a result of switching to more efficient agricultural practices that generate benefits in the mid- to long-term. This potentially negative socio-economic effect can be mitigated through the work with upstream users on alternative land and water uses as part of point (3) above.
Economic benefits for local people	Rehabilitation of delta lakes and wetlands over an area of 1,400 ha will not only ameliorate habitat conditions for globally endangered and vulnerable species, resulting in increased population numbers, but it will also stabilize and potentially boost commercial fish stocks in the lakes,

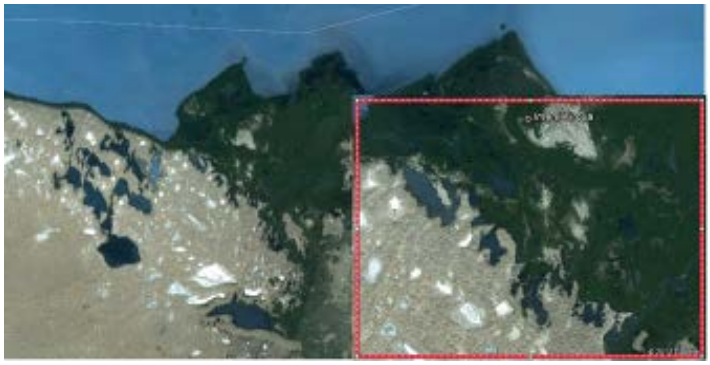
[40] This is a well-functioning non-government association that represents interests of water users and stakeholders in the Balkhash-Alakol basin. The Balkhash-Alakol RBC meets regularly, at least once a year, to discuss relevant issues for the basin.

	following the silt and hard vegetation removal activities. Also, the project is expected to improve aesthetic features and qualities of the landscape, making it more attractive for ecotourism development in the area. As part of Output 2.1 on landscape planning, the project will include recommendations on sustainable ecotourism to be part of the territorial planning for the area.
Involvement of women in the restoration project and/or benefits for women from restoration	The project will secure the participation of women at every implementation stage of this demonstration project. The project will monitor gender aspects at demonstration sites. The project expects to actively engage women from local communities in environmental awareness raising activities for various target groups. Also, when contracting specialized institutions for field studies and assessments, the project will encourage the inclusion of a higher percentage of women on the team.
Training in monitoring for land-users, communities, research institutions	The project will conduct training sessions and site visits using the results of field assessments and analysis. Leading thematic institutions such as Institutes of Zoology, Livestock Breeding, Ichthyology, Agriculture and Water Resources will be engaged to deliver trainings. Training activities will target decision-makers, water and land users, staff of hunting entities, PAs, members of NGOs and local communities.

FIGURE 1 KARATAL RIVER DELTA (GENERAL VIEW)

The map to the left shows the Karatal River (yellow line) flowing into Lake Balkhash (top of map)

FIGURE 2 MAP OF KARATAL DEMONSTRATION SITE (D.1.1)



The map to the left shows a closer view of the Karatal River Delta and the Kelte lake system. The red line marks the boundary of the pilot site. The blue water body at the top is Lake Balkhash.

FIGURE 3 CLOSE-UP VIEW OF THE KELTE LAKE SYSTEM

D.1.2. Aidarkul lake system and intervening meadows and haylands (Aral Syrdarya region)

<table>
<tr><td>Location (administrative district)</td><td>Aral and Kazalinsk rayons of Kzyl Orda Oblast</td></tr>
<tr><td>Size (in hectares)</td><td>Aidarkul lake system is 477 ha
Meadows and haylands total 325 ha
<table>
<tr><td>Lakes</td><td></td><td>477 ha</td></tr>
<tr><td>Aulietobe</td><td>50</td><td></td></tr>
<tr><td>Aidarkul</td><td>100</td><td></td></tr>
<tr><td>Akurme</td><td>90</td><td></td></tr>
<tr><td>Sorkol</td><td>12</td><td></td></tr>
<tr><td>Narolgen</td><td>25</td><td></td></tr>
<tr><td>Tobeken</td><td>150</td><td></td></tr>
<tr><td>Akshonghel</td><td>50</td><td></td></tr>
<tr><td>Meadows and haylands</td><td></td><td>325 ha</td></tr>
<tr><td>Balykkol</td><td>20</td><td></td></tr>
<tr><td>Aulietobe</td><td>45</td><td></td></tr>
<tr><td>Temirkol</td><td>20</td><td></td></tr>
<tr><td>Altyntapkan</td><td>10</td><td></td></tr>
<tr><td>Zhayindykol</td><td>200</td><td></td></tr>
<tr><td>Daulykol</td><td>30</td><td></td></tr>
<tr><td>Total</td><td></td><td>802 ha</td></tr>
</table></td></tr>
<tr><td>Land owner/land user</td><td>A group consisting of local community members is expected to implement this demonstration project. The project will assist community members in registering this group as a legal entity (NGO or public association) in the course of project implementation.</td></tr>
<tr><td>Nearest existing or to-be-established desert/ semi-desert PA</td><td>Barsakelmes State Nature Reserve is the nearest PA to the demonstration site: 34 km to the delta front of the Small Aral Sea and 26 km to the delta of the Syrdarya River from the demo site.</td></tr>
<tr><td>Description</td><td>The Aidarkul lake system is located to the south of Zhanakurylys village near the Aral Sea. The lake system directly depends on water volume in the Karaaryk channel which is filled by water from the Kishidarya river. This lake system has almost dried out. In the past, these lakes were famous for rich fish resources.</td></tr>
<tr><td>Biodiversity significance</td><td>Over 250 species of regionally and globally important birds use this lake system in the Aral Sea basin for nesting & foraging and as resting grounds. Some species are either globally vulnerable, near endangered or endangered, as registered in the IUCN Red List. These include the Dalmatian pelican (Pelecanus crispus), Great White Pelican (Pelecanus onocrotalus), Red-breasted Goose (Branta ruficollis), White-headed Duck (Oxyura leucocephala), Ferruginous Duck (Aythya nyroca), Pallid Harrier (Circus macrourus), Pallas's Fish-eagle (Haliaeetus leucoryphus), Cinereous Vulture (Aegypius monachus), Greater Spotted Eagle (Aquila clanga), Eastern Imperial Eagle (Aquila heliaca), Lesser Kestrel (Falco naumanni), Saker Falcon (Falco cherrug), Houbara Bustard (Chlamydotis undulata), Black-winged Pratincole (Glareola nordmanni).
This lake system, including freshwater tributaries/ channels, provides habitat for IUCN vulnerable fish species such as ship sturgeon (Aral Sea population) (Acipenser nudiventris), Syrdarya shovelnose sturgeon (Pseudoscaphirhynchus fedtschenkoi) and pike asp (Aspiolucius esocinus).
Also, the following Kazakhstan Red Book species grow in the area: Kazakhstani bulrush (Scirpus kasachstanicus), gress (Nymphoides peltatum) and saltbush (Atriplex pratovii).
According to latest census data, the following baseline and target quantitative indicators can be established for rare and endangered species in the project site:
<table>
<tr><td rowspan="2">Species</td><td colspan="2">Population numbers</td></tr>
<tr><td>Baseline (2012)</td><td>Project end (2017)</td></tr>
<tr><td>Pelecanus onocrotalus</td><td>8</td><td>16</td></tr>
<tr><td>Pelecanus crispus</td><td>12</td><td>24</td></tr>
<tr><td>Aythya nyroca</td><td>30</td><td>60</td></tr>
<tr><td>Branta ruficollis</td><td>6</td><td>12</td></tr>
<tr><td>Falco naumanni</td><td>10</td><td>20</td></tr>
<tr><td>Haliaeetus leucoryphus</td><td>14</td><td>28</td></tr>
</table></td></tr>
<tr><td>Monitoring of biodiversity</td><td>The project will use annual field data to monitor progress and achievements of demonstration projects. Also, the project will produce a detailed threat analysis for each species to better estimate population trends and devise conservation measures accordingly. The project will contract leading national research institutes and specialized government agencies (Institute of Botany, Institute of Zoology, Aral-Syrdarya River Basin Organization of Water Resources Committee, Kazhydromet, etc.) to conduct field assessment and analysis of biodiversity and water resources, to devise a management plan for each globally endangered or vulnerable species with quantitative indicators and population structure, and to develop a water use plan for the area to ensure the sufficient amount of water flowing into the lake system. The staff of the Barsakelmes Reserve and research institutes will participate in regular annual monitoring. For a more comprehensive monitoring in the productive landscapes, the project will hold trainings on effective biodiversity monitoring</td></tr>
</table>

	methods and approaches to ensure high quality and consistency of monitoring data available for analysis and reporting. In addition, the project will produce a guidebook for field monitoring to be distributed among participating staff and institutions.
Threats to the wetland	Inefficient use of water resources: In general, the Aral Syrdarya area has lost many lake and river systems due to the changing water level in the Syr Darya river, causing riverbeds and channels that deliver water to the systems to dry out. Similarly, the survival of the Aidarkul lake system depends on the amount of water flowing into the system from the Karaaryk canal. With a significant drop of water level in the Karaaryk canal due to inefficient use of water resources, the system no longer receives sufficient amount of water resulting in shallowness of larger lakes and desiccation of small lakes. Excessive warming of shallow lake waters during the Summer causes algal blooms, which leads to massive fish die-offs. Also, low water levels during the Spring leave bare large areas of former spawning grounds and areas where young fish feed, thus negatively impacting the whole food chain of this lake system. Finally, the area of nesting grounds of globally and regionally important bird species is gradually shrinking stemming from inefficient use of water resources upstream. Unsustainable fishing: A few settlements (such as Bogen, Konebogen, Zhanakurylys, Akshatau, Kyzylzhar and Amanotkel) are located relatively close to the Aral Sea and the delta of the Syr Darya river, including the Aidarkul lake system. Only 49% of the 2,570 community members residing in three districts in the delta of the Syr Darya River have a permanent source of income. Such dire employment statistics makes other members resort to self-employment alternatives that are often ecologically harmful and unsustainable. For example, in the Karateren district alone a total of 250 tons of fish were caught and processed in 2011. To put this figure in perspective, the official catch limit was set to 301 tons of fish for the Kamystybass lake system, which includes the Aidarkul lake system; the limit for the entire Kzyl Orda oblast was set to 946.25 tons in 2011.
Proposed demonstration activities	(1) Hydrological and hydrobiological assessments of the condition of the wetlands and adjoining ecosystems of the Aral Syrdarya target area. The assessment will cover the nearest delta lakes outside the Aidarkul lake system to have a clear understanding and detailed analysis of threats and the state of biodiversity in the whole wetland ecosystem. (2) Assessment of water resource needs of the local population and other user groups (such as water users, agriculturists, commercial fisheries, etc.) to determine the water volume and level required for long-term sustainability of the wetland ecosystem. (3) Recommendations on methods for wetland restoration to ensure desired water volumes and levels. The key would be to restore and maintain an optimal water level in the lake system. Constructing a regulating sluice on the Karaaryk canal will complete this task. Other expected activities will include de-silting of the canal and removal of reeds along it to improve water flow. The project will devise the most suitable and feasible water use plan to be then negotiated and agreed on with decision-makers and water users. Also, during bird nesting and fish spawning times (Spring) the project will focus on working with upstream water users on efficient use of water resources to allow for a sufficient amount of water flow into the lakes and wetland system. The latter would include a contract (potentially using a PES scheme) between water users. These proposed activities can be modified following the hydrological, hydrobiological, and water need assessments. (4) Develop and implement a plan for long term monitoring of biodiversity and habitat impacts. It is expected that the group of local community members that will take the lead at this demonstration site (and that will be established as a legal entity during the project) will monitor water levels. The staff of the Barsakelmes Reserve and research institutes will perform annual monitoring of the biodiversity state, including monitoring of threats, qualitative and quantitative indicators of biodiversity and habitats. (5) Determine all parties interested in the wetlands restoration including upstream water users of the Karaaryk canal and Syr Darya River. (6) Carry out technical works on cleaning the riverbed and channels of garbage, silt, etc. (7) Carry out a search for partners to improve the species composition and increase the fish capacity of the lake system and the number of fingerlings (possibly financed via the micro crediting program under Output 3.3).
Costs	The GEF is expected to contribute US$ 107,000 for implementation of the above demonstration activities. The costs will cover, among other things, the purchase of an excavator and tractor, hydrological field studies & assessments, biotechnical and restoration works, awareness raising and information campaigns. An initiative group from the target area will largely contribute with labor and equipment. The contribution will be confirmed at the stage of implementation once the initiative group will be registered as a legal entity. The Akimat of Aral rayon will partially co-finance the cleaning & repair of the Karaaryk canal, development of a water use plan for the canal by contributing a total of US$ 50,000.
State any negative environmental or socio-economic effects, and ways to mitigate them in the project	Rehabilitation of wetlands in the Syr Darya River delta will create more favorable habitat conditions for endangered and vulnerable species. This could potentially give a rise to uncontrolled tourism and illegal hunting and fishing. To mitigate this potential threat, the project will assist the Barsakelmes Reserve with surveillance equipment; engage local initiative groups in patrolling;

	train the staff of Rezervat and of the initiative groups in better prosecution; conduct awareness raising activities for target user groups. Also, farmers may face a short-term decrease in crop output as a result of switching to more efficient methods of water resource use that generate benefits in the mid- to long-term. This potentially negative socio-economic effect can be mitigated through the work with upstream users on alternative land and water uses as part of point (3) above.
Economic benefits for local people	Rehabilitation of delta lakes and wetlands over the area of 802 ha will not only ameliorate habitat conditions for globally endangered and vulnerable species, resulting in increased population numbers, but it will also stabilize and potentially boost commercial fish stocks in lakes, following the silt and hard vegetation removal activities. Also, the project is expected to improve aesthetic features and qualities of the landscape, making it more attractive for ecotourism development in the area. As part of Output 2.1 on landscape planning, the project will include recommendations on sustainable ecotourism to be part of the territorial planning for the area. This will mitigate anthropogenic pressures on the ecosystems of the Barksakelmes Reserve and the delta front of the Small Aral Sea in particular.
Involvement of women in the restoration project and/or benefits for women from restoration	The project will secure the inclusion of women at every implementation stage of this demonstration project. Within the overall framework of gender monitoring, the project will perform monitoring of gender aspects in demonstration projects. The project expects to actively engage women from local communities in environmental awareness raising activities for various target groups. Also, when contracting specialized institutions for field studies and assessments, the project will encourage the inclusion of a higher percentage of women on the team.
Training in monitoring for land-users, communities, research institutions	The project will conduct training sessions and site visits using the results of field assessments and analysis. Leading thematic institutions such as Institutes of Zoology, Livestock Breeding, Ichthyology, Agriculture and Water Resources will be engaged in the delivery of training. Training activities will target decision-makers, water and land users, staff of hunting entities, fisheries, PAs, members of NGOs and local communities.

FIGURE 4 MAP OF THE AIDARKUL DEMONSTRATION SITE (D.1.2)

In the map on the left, the red line marks the boundary of the Aidarkul lake system, the grey line represents the Syr Darya River flowing into the Small Aral Sea (top left of map), the red text marks the delta of the Syr Darya.

FIGURE 5 CLOSE-UP VIEW OF THE AIDARKUL LAKE SYSTEM INCLUDING DESICCATED SMALL LAKES AND WETLANDS

D.2. Riparian and saksaul forests (2 sites totaling 18,048 ha)

Rare and vulnerable species such as black saksaul (Haloxylon aphyllum), white saksaul (Haloxylon persicum), bloomy poplar or shrenk (Populus pruinosa) and Populus diversifolia play important soil and sand retention functions and act as biological filters in riparian ecosystems. These species serve as habitats and nesting grounds for globally and regionally important species and endemic species. These forests also perform an aesthetic role in desert and semi-ecosystems. These 2 demonstration projects will, therefore, aim to restore ecological functions of saksaul and riparian forests through provision of adequate protection and management of target areas. Finally, the project will pilot community engagement and negotiation mechanisms on sustainable resources use that can be replicated in other parts of the country.

Goal: Restoration and sustainable management of riparian and saksaul forests in desert and semi-desert ecosystems.
Expected results:

a. Expansion of forest coverage in desert and semi-desert ecosystems
b. Creation of conditions for natural reforestation
c. Conservation of globally threatened and endangered species
d. Sustainable and efficient forest management outside protected areas

D.2.1 Bakanasky Forestry Entity and the Akdalinsky irrigation massif (Ile Balkhash region)

<table>
<tr><td>Location (administrative district)</td><td>Balkhash and Ile rayons of Almaty Oblast</td></tr>
<tr><td>Size (in hectares)</td><td>«Zheltorangy» section – 3 ha (poplar grove); «Karatorangy» section – 3 ha (poplar grove); «Akdalinsky irrigation massif» section – 1,720 ha (saksaul forests)</td></tr>
<tr><td>Land owner/land user</td><td>Bakanasky State Administration of Forestry or Bakanasky Forestry</td></tr>
<tr><td>Nearest existing or to-be-established PA</td><td>Ile-Balkhash State Nature Sanctuary</td></tr>
<tr><td>Description</td><td>The Bakanasky State Forestry was created in 1956 with an office in the Bakanas village of the Balkhash rayon. The forestry occupies a total area of 1,558,997 ha consisting of 4 sections. The Bakanasky forestry performs the following key functions: protection of state forest within its boundaries from fires and illicit cutting. The forestry employs 79 staff, owns some machinery and operates 5 cordons. The forestry established a nursery of 5 ha for restoration activities.
The Akdalinsky irrigation massif adjoining the Bakanasky State Forestry was created as a rice irrigation system (area of 31,700 ha) with water use of up to 1.3 km3. It covers the Saryesik Atyrau desert in the ancient delta of the Ile river. High rates of natural propagation of saksaul and other forests after 40-50 years have been noted in areas of the irrigation massif where irrigation water is being discharged. The area of the irrigation massif is also a natural habitat of bloomy poplar groves.</td></tr>
<tr><td>Biodiversity significance</td><td>Bloomy poplar (Populus pruinosa Schrenk), like all Asiatic poplars, is a relict. Only two groves of this species were found in the project territory. The first is near Zhelturangy village, about one km eastward from the road going to the new bridge. This massif of poplar is small, about 2-3 ha, about 100-150 trees. The second grove is located in the Ile river delta (left bank) between Akzhar and Bakanas in the Karatorangy tract. The area is also very small, not more than 2-3 ha. As stated in the IUCN assessment, this species has a very narrow ecological range, restricted to river banks in arid areas, which makes it particularly vulnerable to any kind of disturbances. The species is threatened by changes in water regime (irrigation and hydroelectric power stations), cutting and agricultural conversion. Both groves need a fence, forest inventory, better monitoring and surveillance, complete prohibition of grazing, protection from fires, and preparation of background information for justifying their inclusion into the list of natural landmarks.
As noted above, the Akdalinsky irrigation massif contains dense areas of saksaul forests. Baseline and target quantitative indicators for the project site are as follows:
<table>
<tr><td>Forestry Section</td><td colspan="2">Forest area under sustainable management</td></tr>
<tr><td></td><td>Baseline, 2012</td><td>Target, 2017-18</td></tr>
<tr><td>Zheltorangy</td><td>0 ha under sustainable management</td><td>3 ha under sustainable management including an agreement between akimat and the Bakanasky forestry on protection and sustainable management of this section; justification completed for inclusion of the area into the list of nature landmarks.</td></tr>
<tr><td>Karatorangy</td><td>0 ha under sustainable management</td><td>3 ha of the poplar grove under sustainable management confirmed by an agreement between akimat and the Bakanasky forestry on protection and sustainable management of this section; justification completed for inclusion the area into</td></tr>
</table></td></tr>
</table>

	<table><tr><td></td><td></td><td>the list of nature landmarks.</td></tr><tr><td>Akdalinsky irrigation massif</td><td>0 ha under sustainable management</td><td>1,720 ha of saksaul forests under sustainable management of the Bakanasky forestry.</td></tr></table>
Monitoring of biodiversity	The Bakanasky State Forestry, Almaty Oblast Territorial Inspection of CFH, and research institutes will perform annual monitoring of habitat state and quantitative indicators for saksaul forests and poplar groves after initial assessment and inventory of poplar trees.
Threats to riparian and saksaul forest	Changes in the water regime of the Ile River and unsustainable felling of trees (poplar and saksaul) by local communities have led to a reduction of area covered by these species. Water regime changes: The Ile River is a trans boundary river originating in China. Despite the high-water years of 2010-2011, the volume of water reaching Kazakhstan is gradually decreasing. Further, inefficient irrigation and pollution of Ile waters in the Ile-Balkhash area reduces the availability and quality of water resources for ecosystems. Overgrazing: Poplar groves located close to rural settlements suffer from overgrazing. Local communities use these groves as pastures for domestic livestock all year round. Unsustainable felling: Large-scale felling of saksaul forests was rampant in the 1990s and was driven by demand of cafes and restaurants in Almaty for meat cooking as well as fuel needs of local communities. After a ban on saksaul cutting, illicit large-scale felling has reduced. Though local communities still sell saksaul to cafes in Almaty to generate additional income. Marginalized groups of local communities engage in illegal cutting of saksaul mainly for heating despite the ban still being in force. Fires: Anthropogenic and natural fires partially account for the damage caused to both ecosystems
Proposed demonstration activities	(1) Assessment of the condition of Asiatic poplar population in two target forestry sections. (2) Carrying out inventory of poplar trees and preparing recommendations for most suitable protection type and management of natural habitat of Asiatic poplar[41]. This step will provide the background justification for implementing point (4) below on obtaining a higher protection status for both forestry sections. (3) Fencing the two forestry sections (3 ha each) and prohibition of grazing inside the poplar groves. The Bakanasky forestry will perform these activities. (4) Prepare justification and initiate inclusion of Zhelturanga and Karaturangy into the list of the natural landmarks for effective conservation. Also, the project will coordinate this activity with the akimat and Bakanasky forestry to ensure financing is secured for regular protection and conservation measures. (5) Perform studies and assessment of the state and propagation rate of saksaul forest resources in the area of 1,720 ha in the Akdalinsky irrigation massif. (6) Develop recommendations for conservation and sustainable use of forest resources, indicating the volume needed for natural reproduction of saksaul forests. Based on results of the assessment under point (5) above, the project will devise an optimal water use regime in the Akdalinsky irrigation massif to maintain natural reproduction of saksaul forests in the target area. This will include negotiations with major water and agricultural users in the area using the Balkhash-Alakol River Basin Council as a stakeholder engagement mechanism. It is expected that the Bakanasky forestry entity will assume overall responsibility for sustainable management of saksaul forests in the area of 1,720 ha.
Costs	For implementation of the above activities, GEF is expected to contribute US$ 29,000 with co-financing of US$ 55,000. The costs among other things will cover initial field studies & assessments, restoration works, monitoring, awareness raising and information campaigns, and preparation of justifications for two sites of poplar groves.
State any negative environmental or socio-economic effects, and ways to mitigate	This demonstration project is expected to produce no negative environmental or socio-economic effects.
Economic benefits for local people	Restoration and conservation of saksaul forests and poplar groves will ameliorate environmental conditions in the area by (i) mitigating land degradation impacts such as soil salinization and erosion, and moving sands; and (ii) improving water regulation and protection from flooding. For local communities, this will mean reduced costs from cleaning fields from sands and protection from flooding. Upon completion of this demonstration project, 6 ha of poplar groves will be effectively protected and 1,720 ha of saksaul forests will be under sustainable management.
Involvement of women in the restoration project and/or benefits for women from restoration	The project will secure the inclusion of women at every implementation stage of this demonstration project. Within the overall framework of gender monitoring, the project will perform monitoring of gender aspects in demonstration projects. The project expects to actively engage women from local communities in environmental awareness raising activities for various target groups. Also, when contracting specialized institutions for field studies and assessments, the project will encourage the inclusion of a higher percentage of women on the team.

[41] The inventory will include general characteristics of an individual tree (age, state, growth rate, etc.) and its habitat. The results of this inventory will be used for building a case for landmark nominations as well as for species management plans (Outputs 1.4 and 2.3).

Training in monitoring for land-users, communities, research institutions	The project will conduct training and site visits using the results of field assessments and studies. Leading thematic institutions such as Forestry Institute, Kazlesproekt[42], Agriculture University, etc. will be engaged for the delivery of training. Training activities will target decision-makers, forestries, PAs, members of NGOs and local communities.

FIGURE 6. MAP OF ZHELTORANGY DEMONSTRATION SITE D.2.1 (RED LINE MARKS SITE BOUNDARY)

FIGURE 7. TOPOGRAPHIC MAP OF ZHELTORANGY PILOT SITE (RED LINE REPRESENTS SITE BOUNDARY; ILE RIVER AT TOP)

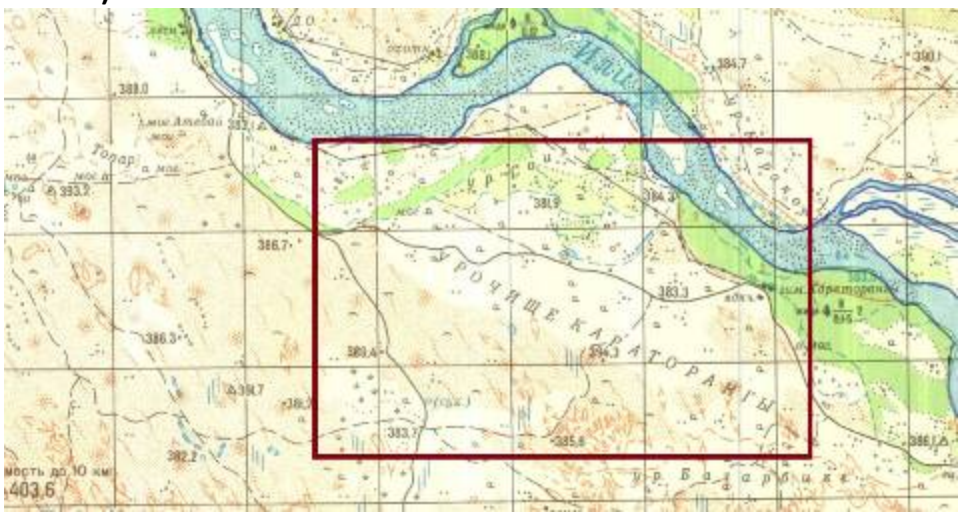


FIGURE 8. AKDALINSKY IRRIGATION MASSIF (RED LINE MARKS BOUNDARY; GREEN LINE REPRESENTS ILE RIVER)

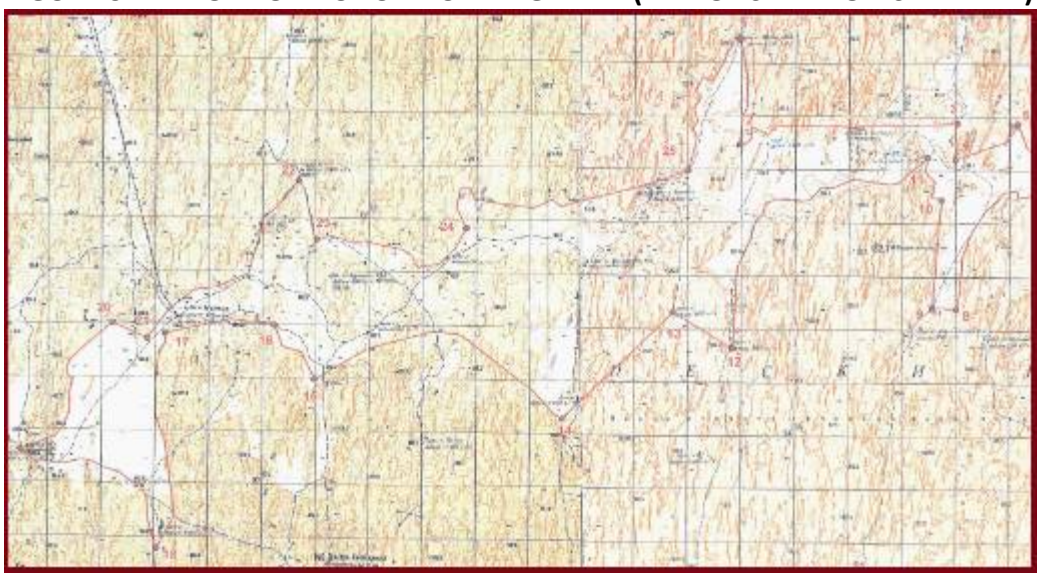
[42] This is the State project design institute under the CFH of MoA.

D.2.2 Kop-Kuduk Hunting Area (Aral Syrdarya region)

Location (administrative district)	Zhalagash and Syr-Darya districts of Kzyl-Orda Oblast
Size (in hectares)	16,322 ha
Land owner/land user	KAR-AS-GAZ-Kurylys LLP supplies gas to houses and prepares project estimates. Recently, it has assumed responsibility over a hunting entity.
Nearest existing or to-be-established desert/ semi-desert PA	Barsakelmes State Nature Reserve
Description	The project site is to the south of the modern valley of the Syr Darya River and represents the northern boundary of the vast Kyzyl Kum (or Qyzylqum) desert. The hunting area "Kop-Kuduk" owns over 15 artesian wells, which were closed in the past. Available water sources can be used for restoration of biodiversity, creation of a forest nursery and sustainable management of forest resources.
Biodiversity significance	The target area provides habitat for IUCN Red List species such as white saksaul (Haloxylon persicum) and Salsola arbuscula; jungle cat (Felis chaus) and the manul (Felis manul). This particular area is home to the endemic short-tailed bandicoot rat (Nesokia indica), golden jackal (Canis aureus), and bokhara horseshoe bat (Rhinolophus bocharicus). Several Kazakhstani Red Book species can also be found in this pilot area of saksaul forests: marbled polecat (Vormela peregusna), sand cat (Felis margarita), five-toed pygmy jerboa (Cardiocranius paradoxus), piebald shrew (Diplomesodon pulchellum), goitered gazelle (Gazella subgutturosa), eastern imperial eagle (Aquila heliaca), golden eagle (Aquila chrysaetos), stone curlew (Burhinus oedicnemus), black-bellied sandgrouse (Pterocles orientalis), pin-tailed sandgrouse (Pterocles alchata), Turkestan ground-jay (Podoces panderi), and houbara bustard (Chlamydotis undulata).
Monitoring of biodiversity	The hunting area "Kop-Kuduk", the Territorial Inspection of CFH and research institutes will perform annual monitoring of habitat state and quantitative indicators for saksaul forests after initial baseline assessments.
Threats to saksaul forest	First, local communities residing near the target area are particularly poor and use saksaul trees for heating and cooking. Despite the existing ban and the associated fuel compensation measures, illicit cutting by community members remains a threat to saksaul forests. Second, declining water levels in the Syr Darya river and, as a result, in canals that deliver water to target areas contribute to the degradation of saksaul forests. Finally, anthropogenic and natural fires partially account for the damage caused to this forest ecosystem.
Proposed demonstration activities	(1) Carry out studies of the condition of artesian wells (2) Prepare estimates for restoration of wells (3) Carry out technical works for cleaning/ restoration of wells (4) Carry out studies of saksaul forest condition in the territory of the hunting entity (5) Develop recommendations for preservation and sustainable use of forest resources and establishment of forest nursery (6) Run information campaigns and educate locals on the process of obtaining fuel compensation that accompanies the government ban on cutting of saksaul (7) Develop recommendations for long term monitoring of biodiversity and forest resources condition.
Costs	Estimated costs of GEF for this pilot project will total US$ 92,000 with complementary financing of US$ 1,286,667 from KAR-AS-GAZ-Kurylys LLP (of which the Kop-Kuduk Hunting area is a part) and will include the purchase of a tractor, drilling, biotechnical, cleaning and restoration works, assessment studies, monitoring, and awareness raising activities.
State any negative environmental or socio-economic effects, and ways to mitigate them in the project	This demonstration project is expected to produce no negative environmental or socio-economic effects.
Economic benefits for local people	The restored area of saksaul forests could potentially attract wildlife tourists and thus promote eco-tourism development in the region, benefiting local communities. Restoration and sustainable management of 16,322 ha of saksaul forests will also contribute to enhancement of soil properties and mitigation of land degradation effects such as soil erosion and salinization with potentially positive effects for livestock and agricultural yields. Also, reconstruction of wells will improve the access to water resources in the region translating in a potentially higher productivity of crops. Finally, the restored and sustainably managed stock of saksaul is expected to generate benefits for local communities in the long-run as the government abolishes the ban allowing the access to these resources but in a sustainable manner.
Involvement of women in the restoration project and/or benefits for women from restoration	The project will secure the inclusion of women at every implementation stage of this demonstration project. Within the overall framework of gender monitoring, the project will perform monitoring of gender aspects in demonstration projects. The project expects to actively engage women from local communities in environmental awareness raising activities for various target groups. Also, when contracting specialized institutions for field studies and assessments, the project will encourage the inclusion of a higher percentage of women on the team by giving extra points to the bidder.

Training in monitoring for land-users, communities, research institutions	The project will conduct training and site visits using the results of field assessments and studies. Leading thematic institutions such as Forestry Institute, Kazlesproekt[43], Agriculture University, etc. will be engaged for the delivery of training. Training activities will target decision-makers, forestry, PAs, members of NGOs and local communities.

FIGURE 9 MAP OF KOP-KUDUK HUNTING AREA (DEMONSTRATION SITE D.2.2)



Scale 1:100,000; Area 16,322 ha. The red line indicates the boundary of the hunting area.

D.3. Rangelands (2 sites totaling 84,000 ha)

1. *Goal*: To reduce land degradation trends and threats to the biodiversity of protected areas in the Aral Syrdarya and Ile Balkhash target areas.

2. *Expected results*: Improvements in conditions of soil and vegetation over an area of 84,000 ha.

D.3.1. Zhanakurylyssk, Karaterensk, and Bogensk rural districts (Aral Syrdarya region)

Location (administrative district)	Aralsk rayon of the Kyzylorda oblast
Size (in hectares)	44,600 ha
Land owner/land user	Rural Consumer Cooperatives “Zhanakurylyss”, “Karateren” and “Bogen”
Nearest existing or to-be-established desert/ semi-desert PA	Barsakelmes State Nature Reserve
Description	The Aralsk rayon originally was a livestock breeding region. Meat and dairy cattle breeding, sheep, horse and camel breeding are quite developed in the project area. These activities are one of the main income sources for local communities. At present, the livestock is kept in private household plots and farms. Private households and farms do not use distant pastures as the rangeland infrastructure has deteriorated (roads, wells, boreholes, water facilities) and basic housing and living conditions for livestock herders are not available (housing, electricity, communication, etc.).
SLM significance	By moving the livestock to distant pastures, the project will allow for (i) the revival of pastures around villages--thus stopping the sand drifts and land degradation; and (ii) reduced presence of plant species that negatively affect the functioning of distant pastures. The latter will indirectly benefit wildlife ungulates that graze in the area. SLM demonstration activities will improve soil carbon sequestration by adding biomass to the soil, causing minimal soil disturbance, conserving soil and water, improving soil structure, and enhancing soil fauna activity. Local communities will receive additional income resulting from increased productivity of grasslands per ha and increased mass of cattle and sheep per one head. The project will establish a demonstration field that will be used to educate and train farmers and other land user, local authorities in the use of new methods of cultivating highly productive grasslands.

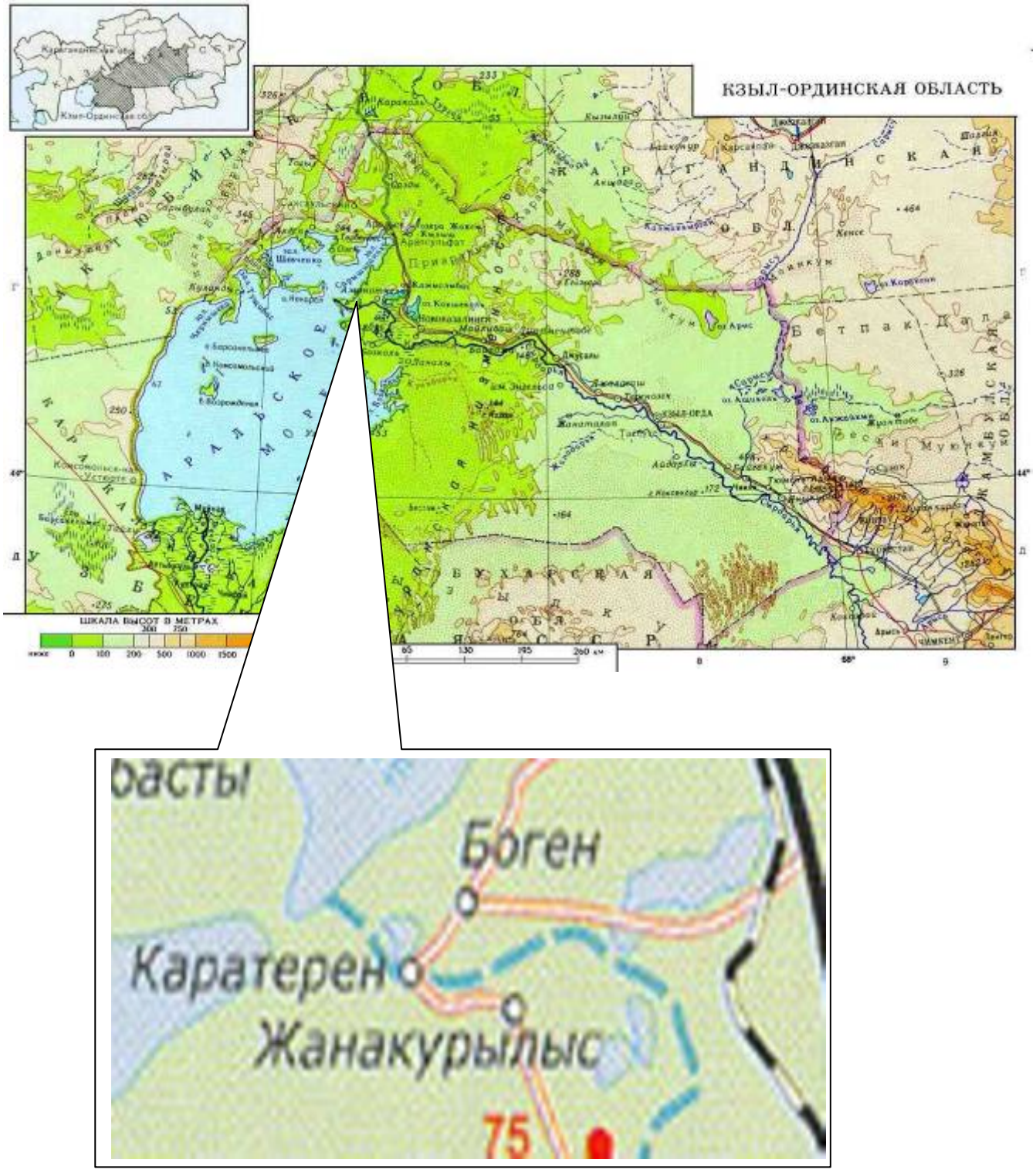
[43] This is the State project design institute under the CFH.

	<table><tr><th>Indicator</th><th>Baseline</th><th>End-of-Project Target</th></tr><tr><td>Quality and quantity of vegetation cover in rangelands in 3 rural districts</td><td>Number of hectares of land with significant signs of soil erosion caused by overgrazing in selected plots (baseline to be estimated at the beginning of the project once monitoring sites are identified and primary data are collected)</td><td>Reduction of the size of the area heavily affected by soil erosion by at least 20% in 3 rural districts</td></tr><tr><td>Presence of plant species which negatively affect the function of distant pastures</td><td>Number of hectares of distant pastures with significant signs of natural succession due to under grazing (baseline to be estimated at the beginning of the project once monitoring sites are identified and primary data are collected)</td><td>Unwanted plant species in at least 4 pasture plots are less than 5% surface coverage</td></tr><tr><td>Income of families (communities) participating in the measures on pasture management</td><td>Average family income (amount to be identified once the families/ communities to be identified)</td><td>Increase of income of rural community members by at least 20 %</td></tr><tr><td>Number of projects which use the experiences of this project as model</td><td>No projects which use participatory bottom-up approaches in the Aral-Syrdarya area</td><td>At least 15 famer associations or rural consumer cooperatives use the experience of this project as model</td></tr></table>
Monitoring of land degradation	For monitoring purposes, the project will contract the staff of the State enterprise “Science & Production Center on Land Resources Management” and its regional offices in Kzyl Orda, and professors and students of the Kzyl Orda State University. The contracted experts will identify and assess areas with severe signs of degradation and areas at distant pastures with significant signs of natural succession due to undergrazing. The project and contracted experts will perform regular monitoring (at the beginning, mid and end of project) of pasture conditions using monitoring sites established in each rural district at the beginning of project implementation. Primary, mid-term and end-of-project data will then be analyzed and compared to estimate the project progress in terms of mitigating land degradation and improving pastures and forage lands in 3 target rural districts. Finally, the project will conduct socio-economic surveys of target groups at the beginning, mid and end of project to register families benefiting from project activities and increase in income of families.
Threats to land resources	It is estimated that about 70% of land in target areas is degraded; lands along rivers are severely degraded and suffer from high soil erosion rates. The main causes are the excessive felling of trees and bushes (like saksaul) and over grazing. Excessive felling of saksaul: This was rampant in the 1990s, driven by the market demand for it as a special fuel for meat cooking. After a ban on saksaul cutting, illicit large-scale felling has reduced. Though local communities still sell saksaul to generate additional income. Overgrazing: The number of livestock is increasing steadily, and with uncontrolled grazing in flood plains and around settlements, the pressure on these ecosystems is escalating. The effects of degradation processes include low productivity of grasslands, desertification of land, increased occurrence of wind storms, increased sand drifts around villages and in productive landscapes due to the loss of vegetative cover that served as natural barriers (sand drifts fully cover and degrade ephemeral plants making them unavailable for livestock grazing), abundance of non-edible or unwanted plant species for livestock.
Proposed demonstration activities	1. Ameliorate meadows in the floodplain of the Syrdarya through restoration of dams and locks in the Zhanakurylyssk rural district (meadow area of 2,000 ha), the Karaterensk rural district (meadow area of 20,000 ha), and in the Bogensk rural district (meadow area of 5,000 ha). The pilot project will improve irrigation of 27,000 hectares of forage lands total. In order to carry out these activities the project will assist in creation of an extension service for the restoration and maintenance of flooded grasslands and pastures. For this purpose, the Project will purchase an excavator with a scoop (1), a bulldozer crawler (1), a dump tracker, a welding set (1), metal products and diesel fuel in accordance with the scope of work to restore the locks and dams.

	Estimated total costs will amount to US$ 170,000. The Rural Consumer Cooperative (RCC) will arrange all other works related to rehabilitation of dams and locks and will complement the pilot project budget with funds from community members. Total project costs are US$ 285,000. The GEF grant will cover US$ 85,000, with the rest to be covered by MoA and local communities. Upon completion of pilot project activities, the extension service will become self-financed and provide maintenance & restoration works in flood forage lands in all three rural districts covered by the project. 2. Improve productivity on 15,000 ha of ameliorated meadows through seeding of highly productive forage cultures and the use of organic fertilizer. For this purpose, the Project will provide the RCC with seeds of perennial grasses, diesel fuel, and organic fertilizers. RCC will conduct other works related to the preparation of the soil, crop planting and application of fertilizers through attracting funds from local people as a contribution to the pilot project. GEF is expected to contribute US$ 280,000 while contributions from community members will amount to US$ 428,000. 3. Introduction of fenced rotational grazing on improved forage lands of 15,000 ha by dividing the area into plots of 500 hectares each with fences composed of vegetation (in-between rows of tamarisk and saksaul of 450 ha). The project will provide planting materials of tamarisk, saksaul and diesel fuel for soil preparation and planting in the area of 450 hectares. The RCC will perform all other works related to transportation, storage, planting and cultivation by using co-financing of land users to the project. The estimated costs for the area of 15,000 ha will total US$ 264,000, of which the GEF grant will cover US$ 80,000 with MoA and local communities co-financing remaining costs. Complementary funding for the pilot activities can be accessed through the government program “Development of Distant Pasture Livestock Breeding for 2013-2016” of the Ministry of Agriculture of RK. Once the plots are arranged, the project experts will consult the target community on how rotational grazing works and what rules need to be agreed on among community members. 4. Introduction of mobile livestock management in distant desert pastures in the Nausha Bulak site of the Zhanakurylyssk rural district covering an area of 5,000 hectares, the Karateren and Tobe Kudyk distant pastures of 6,000 hectares each in the Bogensk rural district. The total area proposed for distant grazing comprises 17,000 hectares. These pastures will be used mainly in early spring when the floodplain meadows are under water. The project will provide assistance to the Kozhakul Ata farm to rehabilitate a well-spring and livestock watering points as well as install a solar generator in the herder’s house. The farm owner will bear costs associated with major repairs of the herder’s house located at the distant pasture site. Upon project completion, the Kozhakul Ata farm will reorganize into the RCC. The project will also assist with the purchase of solar generators, trailers and drilling of wells with arrangement of water points for distant livestock management by the Karateren and the Bogensk RCCs. Moving livestock grazing to distant desert pastures will help to mitigate severe degradation signs around settlements as well as benefit distant pastures that are suffering from under-grazing. The estimated total costs will be US$ 75,000 of which US$ 13,000 is to be covered by the GEF grant and the rest by MoA and local communities. The government funding within the MoA RK program “Development of distant pasture livestock breeding for 2013-2016” will be used to complement financing of this pilot project. 5. Adaptation to increased aridity in demonstration fields of perennial grasses and shrubs covering an area of 100 hectares (alfalfa - 85 ha, sainfoin (esparsette) - 5 ha, wheatgrass-5 ha, prostrate summer cypress (Kochia prostrata)- 1ha, teresken – 1 ha, alhagi - 1 ha, saksaul -1ha, tamarisk-1 ha and others) in the Tastak site of the Zhanakurylysk rural district. The project funds will cover the purchase of the following machinery and equipment for the established extension service of RCCs (point 1 above): a wheeled tractor - 1, a disk plough harrow - 1 and a grass seeder - 1, a fertilizer spreader - 1. In addition, the project will provide seeds of perennial grasses and cover costs of diesel fuel. Works related to the purchase and installation of the pumping station, soil preparation, planting and cultivation of crops will be conducted by the RCC using contributions of community members. The total cost of the demonstration project is US$ 92,000 of which US$ 59,500 is to be covered by the GEF grant and the rest by local communities. In addition to the activities on establishment of demonstration fields of perennial grasses and shrubs, the equipment purchased by the project will be used to implement pilot activities to restore the productivity of abandoned and degraded meadows of 15,000 ha by seeding forage crops and applying organic fertilizers (ref. point 2 above). 6. Restoration of degraded pastures around 5 settlements of 100 hectares each with prostrate summer cypress, teresken and Haloxylon and other shrubs. The project will provide seeds and diesel fuel and material for fencing. The RCC jointly with the established extension service will prepare the soil, plant and arrange fencing. The total cost of the pilot project is US$ 75,000 of which US$ 33,500 is to be covered by the GEF grant and the rest by MOA and local communities. It is expected that the MoA program on development of pasture & livestock breeding for 2013-2016 will partially co-finance implementation of this pilot project.
State any negative environmental or socio-	These demonstration projects are expected to produce no negative environmental or socio-economic

economic effects, and ways to mitigate them in the project	effects.
Economic benefits for local people	The costs of restoration and introduction of sustainable pasture and land management are one-time and insignificant but generate long-lasting economic effects by providing a sustainable source of income for local communities. With an average yield increase of dry forage of 5 hwt/ha, forage harvest is expected to increase to 2 hwt/ha. It is expected that the pilot activities in the area of 44,510 ha will result in the production of 8,920 tons of fodder or 890 tons of livestock weight gain. This will generate over 3 million US$ of additional income for local communities. The project will engage local communities (e.g. man/hrs, equipment & machinery, knowledge) in all rehabilitation activities. By end of project, communities and rural cooperative members are expected to gain knowledge and skills related to sustainable land and pasture management.
Involvement of women in the restoration project and/or benefits for women from restoration	The project will implement the following activities to ensure sufficient engagement of women in demonstration projects and generation of benefits: • Encourage and support participation of women in rehabilitation activities by selecting them as implementers of pilot projects. • Initiate creation of councils on joint management of natural resources in each rural district. The council is represented by a specialist of rural akimat, experts in agriculture, active farmers, veterans, business oriented and active women (at least one) and respected people of the village. They will take decisions on rules and processes related to land and water resources use, pasture rotation and seasonal grazing, and provide control over performance. • Assist in improving cooperation of women in rural districts with non-governmental women organizations in the region and the oblast and carrying out joint "round tables" and seminars on additional fund raising for development of small business among women of villages. • Organize training courses for women on production of goods of folk craft (carpets, clothes, embroidery, etc.) and food products (horse milk, camel milk, cheese, etc.) and assist in the participation of women in project areas in rayon and oblast • Engage women from women's organizations in monitoring and evaluation of pilot projects, and also in dissemination of good practices in neighboring rural districts. • Include activities on improving monitoring and evaluation of gender aspects in the project's annual work plans.
Training in monitoring for land-users, communities, research institutions	The project will conduct monitoring of achieved outcomes of pilot projects at least once a year engaging representatives of akimats, land users, NGOs and research institutes. The project will organize short-term training sessions for these target groups on how to track progress of pilot project indicators. Also, the project will employ a method of field visits for practical demonstration of achieved results and progress. The project will also engage thematic research institutes for capacity building of local authorities, land users and NGOs in land degradation monitoring. In particular, the project will recruit the staff of the South-East Livestock Research Institute (Shymkent city), Kzyl Orda Agricultural Research Institute, and the Kzyl Orda knowledge dissemination center of JSC "Kazagroinnovation".

FIGURE 10 MAP OF DEMONSTRATION SITE D.3.1 (KZYL-ORDA OBLAST WITH A CLOSER VIEW OF ZHANAKURYLYSSK, KARATERENSK, AND BOGENSK RURAL DISTRICTS)



D.3.2. Akdalinsk, Berekinsk and Akkulsk rural districts (Ile Balkhash region)

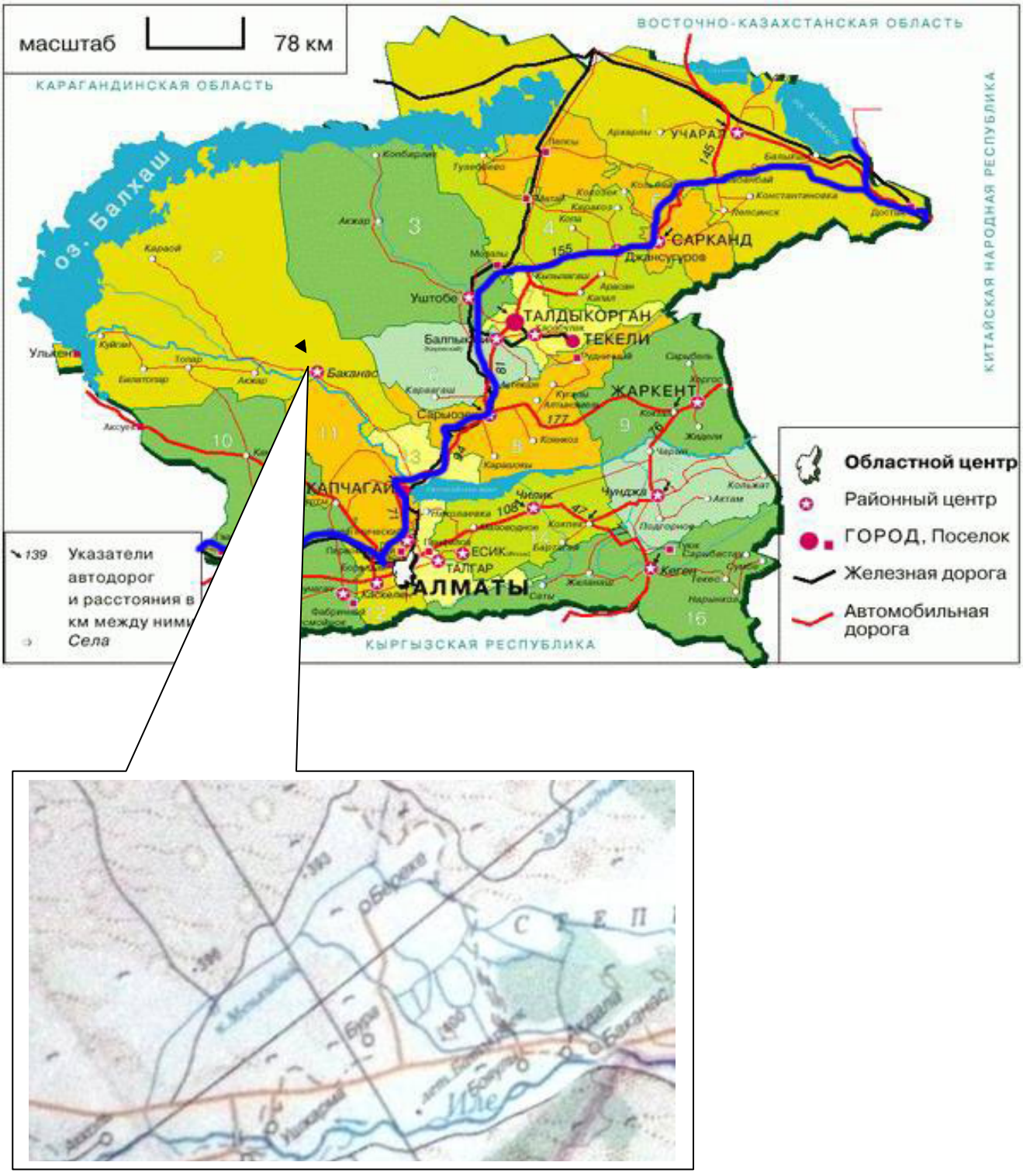
<table>
<tr><td>Location (administrative district)</td><td>Balkhash rayon of the Almaty oblast</td></tr>
<tr><td>Size (in hectares)</td><td>39,400 ha</td></tr>
<tr><td>Land owner/land user</td><td>Farmer associations of Akdalinsk, Berekinsk and Akkulsk rural districts. The project will initiate the creation of rural consumer cooperatives in each rural district.</td></tr>
<tr><td>Nearest existing or to-be-established desert/ semi-desert PA</td><td>Ile-Balkhash Rezervat and the wildlife corridor connecting the Altyn Yemel State Nature Park and the Ile Balkhash Rezervat</td></tr>
<tr><td>Description</td><td>Livestock breeding is the leading branch of agriculture. Dairy (Alatau and black-and-white breeds) and meat livestock breeding (Auliekolsakaya, etc.), sheep (Kazakh fine-wool, Kazakh meat wool breed), horse breeding (Kazakh type Jabe and hybrids) are widely developed in the region. Due to a poor and unstable forage supply, and outbred animals (especially sheep and poultry), animal productivity is quite low with sharp fluctuations.
Natural grasslands in the floodplain of the Ile River and field forage production in irrigated lands are the source of forage for farms in the region. Pasture forage is about 61.3% of the annual diet of cattle on average in the described area. In addition, large areas of pastures are used for hay each year regardless of a very low yield. The territory has a great potential for grazing. However, all water infrastructures were built before 1991 and no maintenance has been done since then. In addition, as a result of significant reduction over the years of the number of cattle, many water points were not used and were destroyed. To improve grazing conditions at distant pastures, rehabilitation and construction of new watering facilities are required. In 2010, a modern feedlot with a developed infrastructure for feeding 5,000 heads of cattle and 20,000 heads of sheep was built but it also needs to be significantly improved in terms of forage resources supply.
It should also be noted that in spite of the enormous potential for crop and livestock development in the area, a system of agriculturalist support services (or extension services) is non-existent. A former agro service structure was dismantled but nothing replaced it. Training for farmers is conducted irregularly and, in general, is limited to carrying out certain types of works, and often are conducted in the form of meetings. The system of information and legal services for farmers is not sufficiently developed. Farmers, managers and specialists of agricultural units receive these services from random sources including international assistance.
Recreational activities in the delta of the Ile River are organized quite well, but they are conducted sporadically. The lack of regulation of recreational pressure in the floodplain of the Ile River has resulted in an increase in the number of tourists with motor vehicles that cause disturbance to wildlife, mechanical destruction of vegetation, and damage to soil cover. Cases of illegal hunting of animals and birds are becoming more frequent. At the meeting in the Almaty territorial inspection of forestry and hunting and in the Akdalinsk rural district of the Balkhash rayon, examples of many conflict situations between nature users and environmental services were given. There are as yet no consolidated actions on developing an ecological culture aimed at the rational use, reproduction and conservation of this area with particularly rich flora and fauna.</td></tr>
<tr><td>SLM significance</td><td>The area harbors saksaul that are relatively ancient plants making saksaul and rare Asiatic poplar forests particularly valuable for protection and inclusion in the Red Book of Kazakhstan.
Sustainable use of distant pastures and pastures around settlements will ameliorate the overall environmental conditions for saksaul and Asiatic poplar forests in target areas. Indirectly, the proposed sustainable land management activities will improve habitat conditions for wildlife in target rural districts. SLM demonstration activities will improve soil carbon sequestration by adding biomass to the soil, causing minimal soil disturbance, conserving soil and water, improving soil structure, and enhancing soil fauna activity.
Local communities will receive additional income resulting from increased productivity of grasslands per ha and increased mass of cattle and sheep per one head.
The project will establish a demonstration field that will be used to educate and train farmers and other land user, local authorities in the use of new methods of cultivating highly productive grasslands.
<table>
<tr><td>Indicator</td><td>Baseline</td><td>End-of-Project Target</td></tr>
<tr><td>Quality and quantity of vegetation cover in rangelands in 3 rural districts</td><td>Number of hectares of land with significant signs of soil erosion caused by overgrazing in selected plots (baseline to be estimated at the beginning of the project once monitoring sites are identified and primary data are collected)</td><td>Reduction of the size of the area heavily affected by soil erosion by at least 15% in 3 rural districts</td></tr>
<tr><td>Presence of plant species which</td><td>Number of hectares of distant pastures with significant</td><td>Unwanted plant species in at least</td></tr>
</table>
</td></tr>
</table>

	negatively affect the function of distant pastures	signs of natural succession due to under grazing (baseline to be estimated at the beginning of the project once monitoring sites are identified and primary data are collected)	4 pasture plots are less than 5% surface coverage	
	Income of families (communities) participating in the measures on pasture management	Average family income (amount to be identified once the families/ communities to be identified)	Increase of income of rural community members by at least 20 %	
	Number of projects which use the experiences of this project as model	No projects which use participatory bottom-up approaches in the Ile Balkhash area	At least 25 famer associations or rural consumer cooperatives use the experience of this project as model.	
Monitoring of land degradation	For monitoring purposes, the project will contract the staff of the State enterprise "Science & production center on land resources management" and its regional offices in Almaty. Professors and students of the National Agriculture State University can also be contracted, if needed. The contracted experts will identify and assess areas with severe signs of degradation and areas at distant pastures with significant signs of natural succession due to under grazing. The project and contracted experts will perform regular monitoring (at the beginning, mid and end of project) of pasture conditions using monitoring sites established in each rural district at the beginning of project implementation. Primary, mid-term and end-of-project data will then be analyzed and compared to estimate the project progress in terms of mitigating land degradation and improving pastures and forage lands in 3 target rural districts. Finally, the project will conduct socio-economic surveys of target groups at the beginning, mid and end of project to register families benefiting from project activities and increase in income of families.			
Threats to land resources	The delta of the Ile River is experiencing increased economic activities (grazing, hay, crop production mainly rice, firewood collection, fishing, hunting, etc.). Natural resources are intensely used without taking into consideration whether they can be renewed or not. Such intense human pressure can lead to irreversible processes of degradation of natural ecosystems. There are no bodies that regulate land use at the local level. The main threats include excessive felling of saksaul that are relatively ancient plants making saksaul and rare Asiatic poplar forests particularly valuable for protection, salinization of irrigated agricultural lands due to unsustainable use, and unsustainable grazing (degradation of pastures around settlements, unsystematic use of floodplain areas for grazing, low productivity of grasslands).			
Proposed demonstration activities	1. Organization of a system of distant livestock management in desert and semi-desert pastures of Akdalinsk (12,000 ha), Berekinsk (12,000 ha) and Akkulsk rural districts (12,000 ha) by rehabilitating wells and watering points at distant pastures. The project will provide expert and consultative support in creation of an RCC in three target rural districts as a mechanism to engage community members in implementation of demonstration projects. The project will assist the newly created RCC in rehabilitating three open wells and watering points by installing wind-driven water lifts and back-up water-lifting pumps, and will provide three trailers equipped with solar generators for herders at distant pastures. The rehabilitated infrastructure will be used for livestock that graze at distant pastures and the wildlife (koulans or Asiatic wild horses, goitered gazelle, saiga, etc.) that migrate along the wildlife corridor. Moving the domestic livestock to distant desert and semi-desert pastures will reduce the pressure on pasturelands around settlements. The GEF grant will cover US$ 25,000 out of a total cost of US$ 112,000, with the rest being financed by MOA and local communities. 2. Setting up cultivated pastures with vegetation fencing (1,000 ha in each rural district) by sowing locally adapted perennial grasses and shrubs (wheatgrass, sainfoin, Isen, teresken, etc.) using environmentally safe technologies. The project will provide seeds, diesel fuel and material for fencing. The RCC will arrange works on soil preparation, planting and fencing. In the future, these works will be fulfilled at the expense of the state program of MoA RK "Development of pasture livestock breeding in the Republic of Kazakhstan for 2013-2016". Forage lands will be used for livestock and wildlife (koulan, goitered gazelle, etc.) grazing in the green corridor. The GEF grant will cover US$ 154,320 out of a total cost of US$ 502,520, with the rest being financed by MOA and local communities.			

	3. Adaptation to increased aridity in the demonstration field of 100 ha of perennial grasses and shrubs (alfalfa, sainfoin (esparsette), clover, ryegrass, timothy, cocksfoot, sweet clover, cereals and leguminous grass mixtures of annual and perennial crops) in the Akdalinsk rural district. The project will provide the RCC with seeds of perennial grasses, a water pump, pipes and diesel fuel. Costs associated with the preparation of soil, planting and cultivation will be covered by the RCC. The produce (hay, etc.) will be used to meet the needs of members of the RCC and particularly marginalized groups of the community (WWII veterans, single parent and large families, disabled, etc.) subject to the decision of the RCC Board. The GEF grant will cover US$ 9,500 out of a total cost of US$ 19,000, with the rest being financed by local communities. 4. Crop rotation in rice production areas to mitigate land degradation and salinization by planting alfalfa on 200 hectares in Berekinsk rural district. The project will provide the RCC with seeds of perennial grasses and diesel fuel while the RCC will perform the works related to the preparation of the soil, crop sowing and cultivation. The produce (hay, etc.)—subject to the decision of the RCC Board—will be used to meet the forage needs of the RCC members and vulnerable & poor groups of the community (WWII veterans, single parent and large families, disabled, etc.) during the winter period. The GEF grant will cover US$ 2,800 out of a total cost of US$ 16,700, with the rest being financed by MOA and local communities. 5. Creation of 100 hectares of highly productive grasslands in degraded irrigated lands of the Akkulsk rural district by planting alfalfa and other forage crops. The project will provide the RCC with a pump to supply water for irrigation, seeds of perennial grasses and diesel fuel. The RCC will cover the costs and perform works associated with the installation of a water pump, soil preparation, crop planting and cultivation. The GEF grant will cover US$ 6,400 out of a total cost of US$ 14,850, with the rest being financed by MOA and local communities. 6. Creation of an extension service for sowing fodder crops and operation of irrigation systems. The project will purchase an excavator (1), bulldozer (1), wheeled tractor (1), disc stubble plough (1), drill for sowing forage (1) and a fertilizer spreader (1), welder (1) and materials for repair of hydraulic facilities. The machinery and instruments will be used for implementation of pilot projects on sowing fodder crops and operation of irrigation systems in all three rural districts. Operations of the extension service will be supervised by a senior akimat official. The GEF grant will cover US$ 70,000 out of a total cost of US$ 335,000, with the rest being financed by MOA and local communities.
State any negative environmental or socio-economic effects, and ways to mitigate them in the project	These demonstration projects are expected to produce no negative environmental or socio-economic effects.
Economic benefits for local people	The costs of restoration and introduction of sustainable pasture and land management are one-time and insignificant but generate long-lasting economic effects by providing a sustainable source income for local communities. With an average yield increase of dry forage of 0.4 hwt/ha, forage harvest is expected to increase to 1.6 hwt/ha. It is expected that the pilot activities in the area of 42,400 ha will result in the production of 6,780 tons of fodder or 670 tons of livestock weight gain. This will generate over 2 million US$ of additional income for local communities. The project will engage local communities (e.g. man/hrs, equipment & machinery, knowledge) in all rehabilitation activities. By end of project, communities and rural cooperative members are expected to gain knowledge and skills related to sustainable land and pasture management.
Involvement of women in the restoration project and/or benefits for women from restoration	The project will implement the following activities to ensure sufficient engagement of women in demonstration projects and generation of benefits: • encourage and support participation of women in rehabilitation activities by selecting them as implementers of pilot projects; • initiate creation of councils on joint management of natural resources in each rural district. The council is represented by a specialist of rural akimat, experts in agriculture, active farmers, veterans, business oriented and active women (at least one) and respected people of the village. They will take decisions on rules and processes related to land and water resources use, pasture rotation and seasonal grazing, and provide control over performance. • assist in improving cooperation of women in rural districts with non-governmental women organizations in the region and the oblast and carrying out joint "round tables" and seminars on additional fund raising for development of small business among women of villages; • organize training courses for women on production of goods of folk craft (carpets, clothes, embroidery, etc.) and food products (horse milk, camel milk, cheese, etc.) and assist in the participation of women in project areas in rayon and oblast; • engage women and women's organizations in monitoring and evaluation of pilot projects, and also in dissemination of good practices in neighboring rural districts. • include activities on improving monitoring and evaluation of gender aspects in the project's annual work plans.
Training in monitoring for land-users,	The project will conduct monitoring of achieved outcomes of pilot projects at least once a year

communities, research institutions	engaging representatives of akimats, land users, NGOs and research institutes. The project will organize short-term trainings for these target groups on how to track progress of pilot project indicators. Also, the project will employ a method of field visits for practical demonstration of achieved results and progress. The project will also engage thematic research institutes for capacity building of local authorities, land users and NGOs in land degradation monitoring. In particular, the project will recruit the staff of the Kazakh Livestock & Forage Production Research Institute (Almaty city) and the Almaty-based knowledge dissemination center of JSC “Kazagroinnovation”.

FIGURE 11 MAP OF DEMONSTRATION SITE D.3.2 (ALMATY OBLAST WITH A CLOSER VIEW OF AKDALINSK, BEREKINSK AND AKKULSK RURAL DISTRICTS)



Annex 7: Feasibility of establishing a biodiversity microcredit revolving facility under Output 3.3

This annex describes the following:

- Microcredit market, its structure, consumers and key players;
- Partnership with FFSA, SGP and CAREC, and respective institutional roles and responsibilities;
- Micro-crediting conditions to be used (interest rate, duration, administration, etc.);
- A menu of on-the-ground activities that will be allowed for support and eligibility requirements for prospective borrowers;
- Funding sources for Output 3.3: funding from FFSA, funding from GEF and for which incrementally valuable activities;
- Action plan for the advertisement and support of the facility at the FSP implementation stage

H.1. Kazakhstan's microcredit market structure & major trends

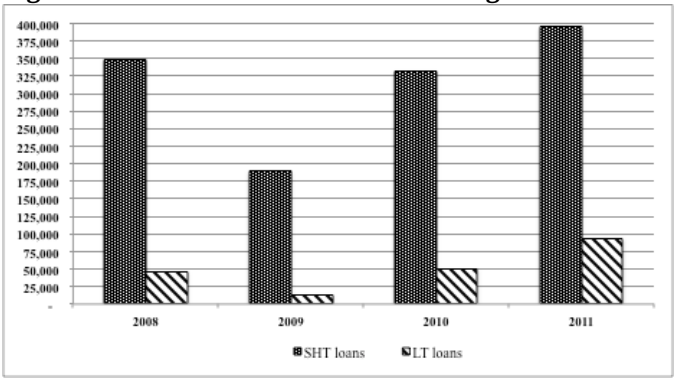
The Kazakhstani microcredit market emerged in the mid-1990ies through international assistance projects that set up and later transformed non-profit organizations into public funds as the first microcredit institutions. The primary goal of microcredit was to support entrepreneurship and alleviate poverty in urban and rural communities by extending microcredits to target groups. This sector has matured over time and now plays a critical role in uplifting communities' welfare.

According to the Agency of Statistics of Kazakhstan, there are 1,756 microcredit organizations (MCOs) registered in Kazakhstan, of which 1,093 or 62% are non-operational.[44] Among functioning MCOs, 130 MCOs or 20% operate in rural areas. The majority of MCOs work in Almaty city (20%), in South-Kazakhstan oblast (15%), and Almaty oblast (9%). In 2004, MCOs in Kazakhstan established a professional public association called Association of Microfinance Organizations of Kazakhstan (AMFOK).

The existing regulatory framework for MCO operations in Kazakhstan is relatively good but requires some amendments to enhance competitiveness of the microcredit market and protection of consumer interests. At present, MCOs are registered only with the authorities of statistics and justice without any oversight from a central regulator. Another problem lies in low capitalization of most of the existing microfinance institutions: the less money an organization has, the higher the percentage by which an organization is ready to borrow money. A new law is being developed that will (i) make the Central Bank of Kazakhstan the regulator of the entire microfinance system, (ii) include a concept of standards on mandatory participation of MCOs in the credit bureau system, (iii) expand the list of eligible transactions for MCOs, and (iv) increase the charter capital for MCOs.[45] The law's entry into effect will expand public access to microcredit tools, significantly expand the rights of borrowers, fictitious organizations will leave the market, and will allow for reducing the number of small microfinance institutions through increasing the lower limit of authorized share capital.[46]

The following microcredit market trends can be observed by reviewing MCO operations in Kazakhstan. Public-funded microfinance institutions with a cost of capital at close to zero percent win over the market, while private organizations obtain capital at 8% and higher. The market registered the growing consumers' preference for short-term credits in terms of total number, while long-term credits continue to exceed in terms of total amount borrowed. The number of short-term loans increased by 23% and long-term loans by 88% in 2011 compared to 2010 (Figure 1.1).

Figure 1.1. Number of short-term vs. long-term loans

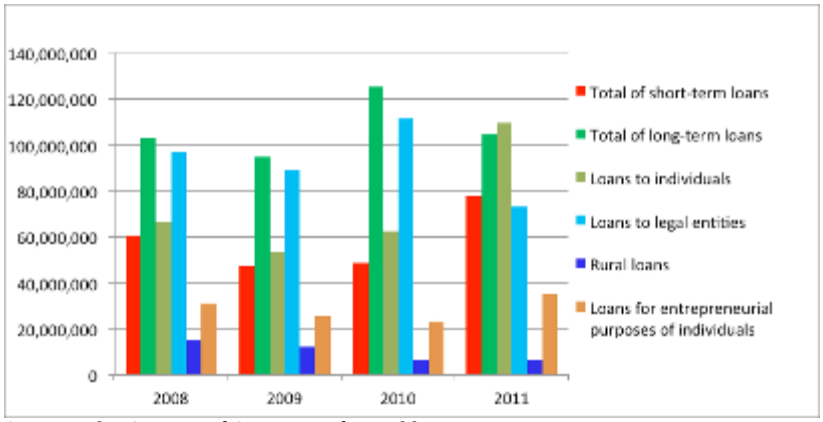


Source: The Agency of Statistics of Kazakhstan, 2012

Microcredits extended for entrepreneurial purposes increased by 10% in 2011 compared to the year 2010, and individual borrowings increased by 38%. Total borrowings by legal entities declined by 34.5% in 2011, but individuals became more active and borrowed 50.6% more in 2011. A demand curve for credits in rural areas showed a decreasing tendency in 2009-2010 and went slightly up only in 2011 (Figure 1.2.).[47]

Figure 1.2. Trends in microcredits across various categories of borrowers, 2008-2011

[44] The main reasons for non-operation of many microcredit organizations are either financial losses or one-off character or microcrediting for a closed circle of affiliated borrowers.
[45] Annual Report 2011 of KazMicroFinance
[46] http://caspionet.kz/eng/business/Rules_change_in_Kazakhstans_microfinance_market_1343362029.html
[47] Annual Report of 2011 of KazMicroFinance



Source: The Agency of Statistics of Kazakhstan, 2012

The average interest rate for short-term credits in urban areas increased from 26.4% in 2010 up to 29.6% in 2011, while in rural areas it decreased to 9.9% in 2011 compared to 11.9% in 2010.[48]

An important point to note is that MCOs increased the share of non-collateral lending from 36% to up to 62% in the total number of microcredits (Table 1.1 below). The growth in the share of unsecured loans and the use of guarantees and securities indicates some positive developments in the microcredit market.

Table 1.1. Share of different types of guarantees, 2010-2011

Type of collateral	2010	2011
- collateral property	47%	20%
- guarantee or security	17%	18%
- non-collateral	36%	62%

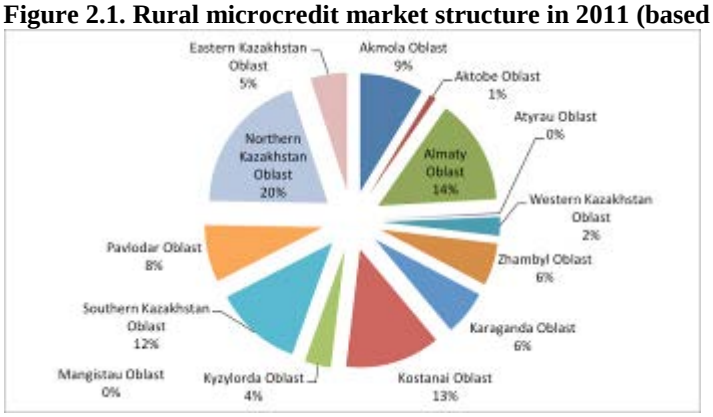
Source: Annual Report of 2011 of KazMicroFinance

H.2. Major microcredit market consumers

Small businesses and individual farmers constitute a major group of microcredit consumers in rural areas. The demand largely depends on the level of income and unemployment rates across the regions of Kazakhstan. High credit costs, unsustainable income, and the lack of collateral remain the key challenges for market development in rural areas.

Agriculture employs about 30% of the country's population. Microcredit for rural consumers proliferates in northern areas where most grain businesses are located (20% of total rural microcredit market), followed by Almaty (14%), Kostanai (13%) and Southern Kazakhstan (12%) oblasts.

Figure 2.1. Rural microcredit market structure in 2011 (based on total credit amounts)



Source: Agency of Statistics of Kazakhstan, 2012

[48] Annual Report of 2011 of KazMicroFinance.

Table 2.1 below highlights a decreasing tendency in the number of credits issued in rural areas since 2008, despite decreasing interest rates for rural borrowers. Some positive change has been observed in the number of credits issued to legal entities though.

Table 2.1. Rural microcredit trends, 2008-2011

	2008	2009	% change in 2009	2010	% change in 2010	2011	% change in 2011
No of rural loans to individuals	11,230	8,719	-22.4%	7,437	-14.7%	6,075	-18.3%
No of rural loans to legal entities	802	631	-21.3%	282	-55.3%	300	6.4%
Rural average weighted interest rate for SHT loans to individuals	18	17	-9.3%	12	-29.5%	10	-14.5%
Rural average weighted interest rate for LT loans to individuals	14	15	4.9%	12	-18.8%	12.8	5.8%
Rural average weighted interest rate for SHT loans to legal entities	11	10	-9.9%	10	3.0%	9.5	-7.8%
Rural average weighted interest rate for LT loans to legal entities	14	23	69.1%	10	-58.7%	8.3	-12.6%

Source: The Agency of Statistics of Kazakhstan, 2012

H.2.1. Profile of microcredit consumers in target areas of the project

The project's biodiversity microcredit program will target low-income rural households, individual entrepreneurs, farm holders[49] that reside/operate in target rural regions of Almaty, Mangistau and Kyzylorda oblasts. The FFSA microcredit market research (2011) estimates that low-income households in the target oblasts will most likely account for about 20% of the total rural microcredit demand in the country (Table 2.2 below).

Table 2.2. Prospective demand for microcredits among low-income rural households by *Oblasts*, 2011

Oblast	Rural population, beginning of 2011	No of rural households with low income	No of potential borrowers*	Average credit amount**, in US$	Expected demand, in million US$	% of total demand
Akmola Oblast	390,791	4,620	462	2,725	1.26	3.9
Aktobe Oblast	299,306	5,314	531	2,725	1.44	4.5
Almaty Oblast	1,435,968	14,417	1,442	2,725	3.93	12.3
Atyrau Oblast	278,274	3,461	346	2,725	0.94	2.9
W. Kazakhstan Oblast	318,318	4,712	471	2,725	1.28	4,0
Zhambyl Oblast	635,187	6,431	643	2,725	1.75	5.5
Karaganda Oblast	296,400	4,371	437	2,725	1.91	3.7
Kostanai Oblast	438,361	9,244	924	2,725	2.52	7.9
Kyzylorda Oblast	405,158	4,482	448	2,725	1.22	3.8
Mangistau Oblast	248,333	4,422	442	2,725	1.21	3.8
S. Kazakhstan Oblast	1,559,901	28,267	2,827	2,725	7.70	24.1
Pavlodar Oblast	234,346	5,143	514	2,725	1.40	4.4
N. Kazakhstan Oblast	350,527	6,722	672	2,725	1.83	5.7
E. Kazakhstan Oblast	589,753	15,775	1,578	2,725	4.30	13.4

*The analysis assumes that 10% of the total number of low-income rural households can be potentially interested in borrowing money.
**Average credit amount=Total amount of rural credits divided by total number of potential borrowers.
Source: Analysis of Microcredit Services in Rural Areas by Regions, Research of FFSA, 2011.

[49] 'Low-income rural households' refers to a category of the rural population that relies on personal subsidiary plots and cattle as the main source of income; 'individual entrepreneurs' is a subset of the category of small businesses with simplified registration requirements and tax obligations; 'farm holders or farms' is a separate subset in the category of small businesses in the agricultural sector.

As for individual entrepreneurs and farm holders, the two groups of potential borrowers in the three target oblasts are expected to account for about 30% of total market demand (Table 2.3 below). In total, the three groups of potential borrowers can account for about 50% of the total microcredit demand in rural areas.

Table 2.3. Prospective demand for microcredits among individual entrepreneurs and farms by *Oblasts*, 2011

Oblast	No of farms & indv. entrepreneurs	No of potential borrowers	Expected demand, in million US$	% of total demand
Akmola Oblast	4, 601	460	7.36	2.4
Aktobe Oblast	4 580	458	7.33	2.4
Almaty Oblast	52 058	5206	83.30	27.1
Atyrau Oblast	1 631	163	2.61	0.8
Western Kazakhstan Oblast	4 404	440	7.04	2.3
Zhambyl Oblast	16 286	1629	26.06	8.5
Karaganda Oblast	6 805	681	10.89	3.5
Kostanai Oblast	6 052	605	9.68	3.1
Kyzylorda Oblast	2 726	273	4.37	1.4
Mangistau Oblast	1 255	126	2.02	0.7
Southern Kazakhstan Oblast	68 634	6863	109.81	35.7
Pavlodar Oblast	3 627	363	5.81	1.9
Northern Kazakhstan Oblast	3 527	353	5.65	1.8
Eastern Kazakhstan Oblast	15 990	1599	25.58	8.3

*The analysis assumes that 10% of the total number of farms & individual entrepreneurs can be potentially interested in borrowing.
Source: Analysis of Microcredit Services in Rural Areas by Regions, Research of FFSA, 2011.

With regard to interest rates, minor drops in the average weighted interest rates for short-term loans were observed in all three oblasts starting 2010 (see Table 2.4). And this trend continued in 2011. Among the target regions, Mangistau oblast leads in the lowest average weighted interest rate offered to potential borrowers.

Table 2.4. Average weighted interest rates across target Oblasts, 2009-2011

Target Regions	2009		2010		2011	
	Average weighted interest rate, %		Average weighted interest rate, %		Average weighted interest rate, %	
	SHT loans	LT loans	SHT loans	LT loans	SHT loans	LT loans
Almaty Oblast	33.9	14.6	26.6	13.1	25.7	12.0
Kyzylorda Oblast	23.9	13.7	28.3	21.3	28.5	21.0
Mangistau Oblast	10.8	10.8	9.7	11.4	7.8	13.9

Source: The Agency of Statistics of Kazakhstan, 2012.

H.3. Major microcredit market players

Financial institutions, second-tier banks, organizations that provide individual types of banking services, microcredit organizations and credit partnerships are all possible players in the microcredit market. Yet, high administration costs and risks associated with microcredits make most players drop this type of activity from a menu of available services. Also, most players prefer to operate in urban areas where the demand is higher given higher income levels and risks are lower than in rural areas.

To extend financial services to rural regions, the government created regional MCOs within the State Support Program. These were financed through public-funded development institutions: JSC "Fund for Financial Support of Agriculture" and JSC "Entrepreneurship Development Fund "Damu". In 2011, public investments into the microcredit sector totaled over US$ 9 million. These MCOs have regional presence to disburse loans to farmers engaged in crop production and cattle-breeding.

These MCOs can disburse larger amounts for longer periods if compared to average amounts and maturity terms of conventional MCOs.[50]

[50] Annual Report of 2011 of KazMicroFinance

The major microcredit market players — the Damu fund, the Fund for Financial Support of Agriculture and KazMicroFinance — are presented below, highlighting strengths and weaknesses of each institution.

H.3.1. Damu Fund

The Damu Fund is considered to be one of the major players in the microcredit market. It was created in March 1997 to encourage the emergence and growth of small-size businesses and improve effectiveness of the government's support to this sector. Since the end of 2007, the Fund's mandate has been expanded to include support to medium-size businesses. Today, the Damu Fund is a national development institute of the Samruk-Kazyna National Welfare Fund, and its key objective is to facilitate development of SMEs and microfinance institutions by providing financial and consulting services.[51] The Fund has regional offices in all administrative regions of Kazakhstan as well as in the cities of Almaty and Astana.
The Fund has been implementing a number of microcredit financing programs. The most recent program on microcredit development in Kazakhstan for 2008-2012 aims at providing financial and non-financial support to MCOs to facilitate the growth and qualitative development of the microfinance sector. The Program's partners include UNDP in Kazakhstan, Consultative Group to Assist the Poor (CGAP, USA), Microfinance Centre (MFC, Warsaw), Central Asian Microfinance Alliance (CAMFA, Uzbekistan), Russian Microfinance Centre (RMC, Russia), Kazakhstan Credit Fund (KCF, Kazakhstan), Asian Credit Fund (ACF, Kazakhstan), and Association of Microfinance Organizations of Kazakhstan (AMFOK).[52] Within the Microcredit Development Program, the Damu Fund has financed 199 MCOs for a total amount of 6,051.83 billion KZT or US$ 40.34 billion, thus covering 40% of all active MCOs in Kazakhstan and providing a significant contribution to financial support to MCOs.

H.3.2. Fund for Financial Support of Agriculture (FFSA)

FFSA has been operational in Kazakhstan since 1994 and is one of a few organizations that render microcredit services to residents of rural areas. FFSA focuses on providing and expanding the access of rural businesses and individuals to financial services of the microcredit market. The Fund carries out its activities through its widespread network of representative offices in 14 administrative regions of Kazakhstan, thus covering about 100% of rural territories of the country.

The highlights of FFSA key accomplishments include the State Rural Areas Development Program for 2004-2010 and the Agricultural Sector Development Program: Establishment of Rural Microcredit Market in 2005. FFSA assisted in the establishment of 51 microcredit organizations in rural regions of the country. In 2007, FFSA became a subsidiary of JSC KazAgro National Managing Holding Company. The latter focuses on advancing development of the agricultural sector and increasing its competitiveness in the domestic and external markets. Cooperation with the Microfinance Centre (MFC, Warsaw) was set up to conduct training for the Fund's employees on microcredit issues and to render technical support to microcredit organizations in Kazakhstan.

In 2008, FFSA was awarded the «β +» credit rating by the international rating company M-CRIL, India. Also, FFSA was issued a certificate Microfinance Information eXchange, Inc. (MIX Market) awarding it "5 Diamonds" out of a possible five. The certificate confirms that the Fund's operation is transparent, marked by good quality, and all relevant information provided is trustworthy. In 2010, the Fund was awarded the "BB+" international rating that confirms the Fund's ability to effectively achieve its mission's objectives and deliver social values.

FFSA has signed and successfully implements the micro-credit program for support of rural communities called *Tabigi Orta,* 2010-2015, initiated under the UNDP/GEF project on wetlands conservation. This program assists rural communities in accessing microcredits. The overall budget of the program is over US$ 100 million. The program provides loans between US$ 30,000 and 200,000 to rural populations at effective annual interest rates in the range of 6.26 to 11 percent, primarily for mainstream agriculture (arable farming, grazing), payable in 3 years in 3 equal installments. During 2009-2010, some 10,000 rural villagers drew on the funds from FFSA. The program has extensive experience in working with communities in and around almost 25 protected areas all over the country.

Since 2005, FFSA has been supporting rural households by extending credits in the amount of over US$ 95 million for livestock development and crop production. This support has resulted in additional employment for about 64,000 people, the

[51] History and Key Milestones, website of the Damu Fund, http://www.damu.kz/239.
[52] Action Programme of Small Entrepreneurship Development Fund JSC to Develop Microcredit Organizations in the Republic of Kazakhstan for 2008 – 2012, website of the Damu Fund, http://www.damu.kz/266.

purchase of 355,000 heads of cattle and agricultural production on 45,000 hectares of land. Please see information on FFSA's key microcredit products in Table 3.2.1 below.

In addition to rural households, FFSA has been active in lending to small businesses in rural areas. Over the period 2009-2010, FFSA had entered into loan agreements with local authorities of 12 regions (with the exception of Akmola and South Kazakhstan regions). Within this program, FFSA raised an additional US$ 12.3 million from local authorities and financed 806 business projects for a total amount of US$ 13.5 million. In addition to other economic and social values, realized business projects created an additional 2,000 jobs in different regions.

Also to be noted, FFSA delivers training to rural residents throughout Kazakhstan on the fundamentals of microcredit and business, business planning, etc. During the period 2005-2009, the FFSA training program reached over 100,000 people residing in rural areas.

Table 3.2.1. Key microcredit products of FFSA

«Rural microloan» Loan conditions: *Loan amount*: from 200,000 to 1 000,000 KZT *Maturity term*: up to 3 years *Interest rate*: 9.5 % per year *Effective interest rate*: up to 10.2% per year *Commission*: 0% *Loan purpose*: animal husbandry, crop production, and other businesses in rural areas *Target audience*: individuals and legal entities residing and operating in rural areas. *Collateral*: liquid movable, immovable property	Key requirements for prospective borrowers: - absence of overdue indebtedness of taxes and other mandatory payments to the budget; - absence of overdue indebtedness to Second Level Banks and other financial institutions for the last reporting date (month of application); - absence of negative credit history; - existence of account in tenge in second level banks to control the movement of credit funds; - the use of the microcredit for animal husbandry, crop, and other business types; - reporting on expenditures to FFSA
"MCO" Loan conditions: *Maturity term*: up to 6 years *Interest rate*: up to 7,5% p/a *Effective interest rate*: up to 7,9% p/a *Purpose of loan*: animal husbandary, crop and business types in rural areas *Target audience*: Micro-credit organizations operating in rural areas *Collateral*: liquid movable, immovable property.	Key requirements for prospective borrowers: - solvency and financial stability; - absence of overdue indebtedness of taxes and other mandatory payments to the budget; - absence of overdue indebtedness to Second Level Banks and other financial institutions for the last reporting date (month of application); - absence of negative credit history; - experience of micro lending in rural areas for at least 1 year; - existence of automated system accounting a loan portfolio; - providing the necessary documents for the monitoring of the MCO's final borrowers, with documents that proof the acceptance of final borrowers to provide information to the Fund.

"Sybaga" Loan conditions: *Loan amount*: from 1 to 18 million KZT *Maturity term*: - up to 84 months for the purchase of breeding stock and breeding bulls of cattle; - up to 24 months for working capital; - up to 84 months for the purchase and repair of fixed assets *Interest rate*: 6% *Effective interest rate*: up to 6.25% per year *Commission*: 0% *Target audience*: entities, farms, individual entrepreneurs *Collateral*: liquid movable, immovable property *Early repayment*: no penalties	Key requirements for prospective borrowers: - solvency and financial stability; - absence of overdue indebtedness of taxes and other mandatory payments to the budget; - absence of overdue indebtedness to Second Level Banks and other financial institutions for the last reporting date (month of application); - absence of negative credit history; - existence of necessary infrastructure for cattle; - Ensuring food supply; - availability of grazing areas, including contracts on joint activities - availability of veterinary welfare at the farm (in the presence of cattle).
"Eginzhai" Loan conditions: *Loan amount*: from 200,000 tenge to 3 million tenge *Maturity term*: up to 2 years *Interest rate*: 12% per annum *Effective interest rate*: up to 12.86% per year *Commission*: 0% *Purpose of loan*: spring field work *Target audience*: individuals and legal entities *Collateral*: liquid assets and real property *Early repayment*: no penalties	Key requirements for prospective borrowers: - absence of overdue indebtedness of taxes and other mandatory payments to the budget; - absence of overdue indebtedness to Second Level Banks and other financial institutions for the last reporting date (month of application); - existence of enforcement of obligations (the second level of the bank guarantee, a guarantee of JSC "KazAgroGarant" pledge of grain crop production and receipt of other types of liquid security provided by the legislation of the Republic of Kazakhstan); - confirmation of information about actual planted areas and yields for the actual implementation of activities, but not more than three (3) years in the context of cultures; - providing the documents confirming the presence of cultivated areas, including contracts on joint activities.

H.3.3. KazMicroFinance

Microcredit organization "KazMicroFinance" LLC is one of the largest MCOs in Kazakhstan with a large regional network represented not only in large cities but also in rural areas. It was started as the Kazakhstan Loan Fund in 1996 by ACDI/VOCA, an American non-government organization, as part of a USAID-funded project on microcredit development in Kazakhstan. In 2006, the Kazakhstan Loan Fund changed its status to a for-profit organization "MCO "KazMicroFinance" LLC (KMF). Being a legal successor of the Kazakhstan Loan Fund, KMF keeps a position of a leader in microfinance market in the Central Asian region, accumulating KLF achievements.

In 2010, the company was awarded two international awards: MFC & Smart Campaign Award for Excellence in Client Protection and the Best Microcredit Organization for continuous efforts in avoiding customer over-indebtedness.
MCO "KMF" has a regional presence through 14 branches in main towns of Kazakhstan, including the cities of Almaty and Astana, and 41 branches in rural areas, delivering financial services in more than 1,300 remote villages. Loans offered by the company became more accessible to ordinary people, through a personal approach to each individual client, and flexibility in the client's solvency assessment.

In 2011, 80,626 loans were disbursed, which is 49% more than the previous year (54,207). Loan portfolio size increased by 45% and exceeded pre-crisis loan portfolio level by 22%, the number of active clients increased by 52%, loan portfolio risk decreased and its quality improved. Table 3.3.1 below presents main KMF loan products and conditions.

Table 3.3.1. Conditions of KMF loan products

Types	Product	Maturity term, months	Amount, KZT	Types of collateral	Intended use
Group non-collateral lending	Dostar	Up to 12	Up to 1 000 000	Group solidary responsibility	Replenishment of the working and basic capital, consumer goals, purchase of livestock, seeds for crops and purchase of agricultural equipment.
Individual collateral lending	Business, Standard	Up to 60	Up to 10 000 000	Collateralized	Replenishment of the working and basic capital, consumer goals
	Farmer	Up to 36	Up to 10 000 000	Collateralized	Replenishment of the working and basic capital, purchase of livestock, seeds for crops and purchase of agricultural equipment.

Source: Annual Report 2011 of KazMicroFinance

H.4. Biodiversity microcredit program

The feasibility of the biodiversity microcredit program proposed under Output 3.3 of the present project document has been generally confirmed. The key conditions that have been satisfied include:

- There are an adequate amount of prospective clients residing in rural areas that can potentially borrow from MCOs to implement biodiversity friendly activities, as confirmed by recent market research. The existence of the client base for microcredit in rural communities has also been proven by the success of the FFSA mainstream credit history, as well as by international projects such as the UNDP-GEF Wetlands project.
- A menu of biodiversity friendly but profitable economic activities have been identified that can be implemented by local communities in desert and semi-desert regions. These include but are not limited to sustainable grazing and agricultural production, wool-making, wildlife management, collection of medicinal plants, apiculture, eco-tourism, etc.
- There exists a well-functioning microcredit market in the country that has microcredit institutions with a proven track record of success and regularly replenished own capital including: (i) experience in funding biodiversity conservation activities; (ii) experience in working with partners such as UNDP; (iii) interest in creation and promotion of a new biodiversity product; and (iv) willingness to co-finance the GEF project.

H.4.1. Institutional roles & responsibilities

Among the key players in the microcredit market in Kazakhstan, FFSA stands out particularly given its previous experience in implementing a similar program (Tabigi Orta) for the UNDP/GEF project on wetlands conservation. Under this program, FFSA has gained extensive experience in working with communities in and around almost 25 protected areas all over the country. The mid-term evaluation of the Tabigi Orta program indicated that some micro-credit projects have already generated positive benefits for PAs (e.g. via sustainable grazing, honey-making, replacement of wood fuel use by solar collectors, etc.).

As such, jointly with the FFSA, the project will launch a biodiversity micro-credit line. This will expand the FFSA's existing portfolio of microcredit products to include support for sustainable livelihoods of rural communities in and around PAs, with a particular focus on desert and semi-desert ecosystems. The project will thus be able to avoid additional costs associated with designing the operational delivery mechanism. It will simply tap into the existing institutional, financial and operational platform of FFSA, and not have to create this from scratch.

UNDP and CFH will oversee implementation of this program to ensure that the intended financial support reaches targeted communities. FFSA will use its existing disbursement and collection system as well as institutional arrangements to implement this new micro-credit program. The UNDP/GEF project staff will only exercise control over the scope of activities to be performed by the borrower. FFSA regular reporting on program progress and results of UNDP's M&E activities will be reviewed by the project's Steering Committee members at least once a year.

UNDP will partner with the GEF Small Grants Program (GEF/SGP) and CAREC to effectively manage inputs of various partners (international, private and government) that work with rural communities in target regions thus maximizing potential effects of the program. This cooperation will also result in better coordination, sustainability of small-scale projects and overall cost-effectiveness. In addition, the project will tap into the existing community mobilization system employed by GEF/SGP to increase the pool of potential borrowers for the microcredit program.

H.4.2. Micro-crediting conditions

The budget for the biodiversity microcredit line will total US$ 1.5 million with GEF contributing US$ 0.5 million and FFSA contributing US$ 1 million in cash[53]. The incremental GEF resources will provide: (i) assistance in marketing of the scheme to local communities and businesses, (ii) assistance to villagers in feasibility assessment and application process, (iii) guidance on implementation of specific activities, and (iv) monitoring of contractual arrangements and evaluation of on-the-ground activities.

The program will use an annual interest rate of 4%[54] to issue loans to rural community members and small businesses, payable by the end of the project. Additional terms and conditions will be specified for each credit subject to the approval of a business proposal. FFSA will allocate an additional US$ 0.5 million to cover operational costs of the microcredit program. The disbursement and collection system that already exists at FFSA will be used for this new micro-credit program.

H.4.3. Eligible on-the-ground activities

Various criteria were used to identify eligible on-the-ground activities as well as borrowers in target desert and semi-desert areas as described below:

- Proposed activity should be taking place in productive landscapes near target PAs;
- The proposer of the activity should be a rural resident near the target PAs of the project;
- The proposer of the activity should submit a list of mandatory documents (e.g. a business plan, bank account, absence of negative credit history, etc.) as required by FFSA to be eligible for a microcredit;
- Proposed activity should do no harm to target biodiversity;
- Proposed activity should be sustainable in ecological, financial and social terms;
- Proposed activity should be compatible with needs, skills and traditions of the local community

The PPG phase confirmed a menu of activities suitable for implementation in target desert communities through micro credits.[55] This includes: (i) indigenous sheep breeding and wool-making, (ii) sustainable fisheries (relevant for Ile Balkhash and Aral-Syrdarya communities), (iii) ecotourism/agro-tourism in and around protected areas, (iv) production of fodder in unused and degraded lands through adoption of minimum and no-tillage technologies, seed procurement, forage production, etc.; (v) rehabilitation of pasture infrastructure (e.g. reconstruction of herders' facilities, wells) for the use of remote pastures; (vi) development of renewable sources of energy in remote pastures (e.g. the purchase of solar panels); (vii) efficient irrigation (e.g. drip irrigation, land leveling equipment for efficient rice irrigation), (viii) support to milk and other livestock products processing; (ix) sustainable hunting practices around target PAs through wildlife-friendly management.[56]

H.4.4. Beneficiaries of the Microcredit Program

As stated in Section H 2.1, the project's biodiversity microcredit program will target low-income rural households, individual entrepreneurs, farm holders that reside/operate in target rural regions of Almaty, Mangistau and Kyzylorda oblasts. About 400 recipients[57] or 5% of total number of potential borrowers among low-income rural households, individual entrepreneurs and farm holders are expected to benefit from this facility.[58] This figure represents a conservative estimate deriving from the FFSA's past experience (including financial risks) and prospective demand of potential borrowers in target regions, potential ecological viability of the credited activities, experience of similar GEF projects in Kazakhstan, and elsewhere, including the GEF Small Grants Programme. In the target regions, a rural household usually consists of 4-6 people, a small rural business

[53] As confirmed by the FFSA co-financing letter dated 16 October 2012.
[54] This is the lowest possible interest rate available on the microcredit market in Kazakhstan. For example, FFSA currently issues loans with effective annual rates in the range of 6.26 to 11 percent.
[55] This stems from the past experience of the UNDP/GEF project and FFSA when implementing the Tabigi Orta program as well as the FFSA's current understanding of the prospective customer's profile in rural areas.
[56] This list of eligible activities is not comprehensive and may be revised subject to approval of the Project Steering Committee.
[57] This figure may include recurring borrowers.
[58] According to the profile of microcredit consumers in the project's target areas (Section H 2.1), FFSA estimates that about 2,332 rural households and 5,605 individual entrepreneurs & farm holders can be potentially interested in its microcredit products. For the purpose of this project, the analysis assumes that about 5% of the total number of the FFSA's prospective clients in three target regions can be potentially interested in the project's biodiversity microcredit program.

entity includes 5-8 people, and a farm can be formed of 5-6 households or about 20-36 people. Therefore, it is highly probable that the proposed scheme will directly benefit over 6,000 of rural residents living in and around protected areas in the foothill and Southern Kazakh desert and semi-desert areas.

H.4.5. Action Plan

A detailed action plan for implementation of the biodiversity microcredit program is presented below.

Type of Activity	Output	Timeframe	Responsible parties
Conclusion of an agreement between the Fund for Financial Support of Agriculture (FFSA) and the Committee for Forestry and Hunting (CFH)	A legal and institutional framework created for biodiversity friendly micro-crediting	At the start of the project. Endorsed by SC	FFSA and FHC
Endorsement of a list of eligible alternative and sustainable livelihood activities for target areas	Thematically eligible activities in target areas clearly defined and endorsed by SC members, and attached as an annex to the agreement between CFH and FFSA	At the start of the project. Endorsed by SC and updated bi-annually	UNDP and CFH
MoU between UNDP, CAREC and GEF SGP	A strategic framework defined for better coordination, cost-effectiveness and sustainability of the new microcredit product	At the start of the project	UNDP, CAREC, GEF SGP
Transfer of Tranche 1 (50% of total GEF contribution) with FFSA contributing 50% of total committed financing	Start-up of Program Phase I	After conclusion of the agreement	UNDP and CFH
Production and dissemination of an information package on the biodiversity microcredit program and its terms to potential borrowers via meetings, information leaflets, posters, billboards, radio and local TV ads, workshops & seminars	Information and consultation on the new microcredit product and its terms are readily available to and easily accessible by potential borrowers	During 3 months after the project start-up and throughout program duration	FFSA, UNDP
Dissemination of information and consult on complementary grant funding (international & government) available for target areas	Information and consult on complimentary funding are readily available to and easily accessible by communities in target areas	During 3 months after the project start-up and throughout program duration	UNDP, GEF/SGP, CAREC
Screening for and approval of submitted business proposals	Thematically relevant and financially valid business proposals approved and microcredits released	Program phase I	FFSA, UNDP
FFSA reporting[59]	Efficiency and effectiveness of the Program Phase I reviewed, emerging issues addressed routinely	Every quarter	FFSA
M&E of Program Phase I via site visits and FFSA reporting	80% of Program Phase I distributed and successfully utilized by borrowers in target communities. Lessons learned reviewed to feed in the next program cycle.	End of Program Phase I	UNDP and CFH
Transfer of Tranche 2 (remaining 50% of total GEF contribution) with FFSA contributing remaining 50%	Start-up of Program Phase II	Upon submission and approval of M&E report	UNDP and CFH

[59] Reporting should include: (i) a list of rural communities that received microcredits; (ii) number of individuals and businesses that received initial and secondary microcredits; (iii) total number and amount of issued microcredits; (iv) types of most frequently credited alternative & sustainable livelihood activities; (v) number and types of unsuccessful business projects; (vi) causes of failures; (vii) number of misused microcredits; (viii) prevention/mitigation strategies to address potential and emerging issues; (ix) estimated impact of implemented projects on biodiversity of desert and semi-desert ecosystems

Screening for and approval of submitted business proposals	Thematically relevant and financially valid business proposals approved and microcredits released	Program phase II	FFSA, UNDP
FFSA reporting	Program Phase II's on track, emerging issues addressed routinely	Every quarter	FFSA
M&E of Program Phase II via site visits and FFSA reporting	Progress and achievements of the biodiversity microcredit program evaluated and lessons learned recorded	Upon completion of Program phase II	UNDP
Summarize and disseminate results and lessons learned of the microcredit program	Information on achievements and lessons learned of the program is available for national & local government, businesses, public associations, international organizations, etc.	Upon completion of the microcredit program	UNDP, CFH and FFSA
Conclusion of an agreement with FFSA on continuation of this biodiversity microcredit program	Sustainability and continuation of the microcredit program ensured	Before project completion	UNDP, CFH and FFSA

Annex 8: Threats analysis

Biological Impact	Root Causes	Normative state	Barriers to achieving the normative state	Solutions: Interventions for project
1. Unsustainable use of water resources & inefficient farming practices (threat level: High)				
Degradation & alteration of original river ecosystems; desiccation of small wetlands. Loss of many lake and river systems in the Aral Syrdarya area due to changing water level in the Syr Darya river. Excessive warming of shallow lake waters during the Summer causes algal blooms, which leads to massive fish die-offs. Low water levels during the Spring leave bare large areas of former spawning grounds and areas where young fish feed, thus negatively impacting the whole food chain of this lake system. Nesting grounds of globally and regionally important bird species is gradually shrinking stemming from inefficient use of water resources upstream.	In Southern deserts, particularly in the Aral-Syrdarya area, farmers tend to modify natural river beds by "straightening" them in order to increase the water flow to rice paddies that are widespread along the Syrdarya River and its tributaries. Inefficient and unsophisticated farming methods and the use of chemical fertilizers	Local level authorities & stakeholders implement territorial landscape level planning and management to maintain ecosystem services in productive landscapes. Economic & regulatory incentives for farming practices (e.g. rotation of crops, zero tillage, efficient irrigation) that consider the needs of the delta, floodplain and wetland ecosystems downstream	Territorial land use plans are incomplete and fail to consider benefits from maintaining ecosystem services in the long-run. Capacity of local authorites & stakeholders is weak for comprehensive landscape level planning and management No incentives in place for maintaining ecosystem services.	Under Outcome 2, the project will: Work with the oblast and rayon level offices of CFH, Land Management Agency, MEP, as well as with local authorities of Aralsk rayon in the Aral-Syrdarya area to devise planning frameworks that focus on the economic potentials (rather than the constraints) of safeguarding and maintaining ecosystem services; Develop an ecological monitoring and decision support system to inform land use planning and biodiversity conservation in wider productive landscapes; Demonstrate sustainable and replicable resource use practices (wetlands restoration) to reduce threats to biodiversity and preserve ecological functions of productive landscapes around target PAs; Assist in drafting amendments to the Land Law as well as internal or inter-agency instructions related to territorial landscape level planning Build capacities of local government institutions and authorities, NGOs, PA staff, and other landscape actors in landscape planning and management Under Outcome 3, the project will: Create incentives for sustainable resource use around target PAs by engaging non-PA actors in a voluntary agreement on rewards for ecosystem services; Launch a biodiversity microcredit line to support biodiversity-friendly activities & practices of rural communities in and around PAs, with a particular focus on desert and semi-desert ecosystems.
2. Unsustainable harvest of saksaul forests (threat level: Medium)				
Excessive cutting of saksaul forests in the region of extremely poor forest and vegetation cover alters ecosystem composition and functions, causing desertification, and reduced biodiversity. Cutting of saksaul forest near rural settlements causes sand drifts, soil erosion, and increased occurrence of	This was rampant in the 1990s, driven by the market demand for it as a special fuel for meat cooking. A ban on saksaul cutting has reduced illicit large-scale felling. Local communities still sell saksaul to generate additional income as well as for domestic heating & cooking.	Ban against illicit cutting of saksaul is strictly enforced. Saksaul forests are under sustainable management.	Lack of institutional arrangements and mechanisms for sustainable management of saksaul forests.	Under Outcome 2, the project will: Demostrate the use of sustainable approaches to saksaul forest management in the Southern desert; Develop recommendations for conservation and sustainable use of forest resources, indicating the volume needed for natural reproduction of saksaul forests. Under Outcome 3, the project will: Create incentives for sustainable resource use around target PAs by engaging non-PA actors in a voluntary agreement on rewards for ecosystem services

Biological Impact	Root Causes	Normative state	Barriers to achieving the normative state	Solutions: Interventions for project
windstorms in productive landscapes.	Declining water levels in the Syr Darya river contribute to the degradation of saksaul forests.			
3. Overgrazing & land degradation (threat level: High)				
It is estimated that about 70% of land in target areas is degraded; lands along rivers are severely degraded and suffer from high soil erosion rates. The effects of degradation processes include low productivity of grasslands, desertification of land, increased occurrence of wind storms, increased sand drifts around villages and in productive landscapes due to the loss of vegetative cover that served as natural barriers (sand drifts fully cover and degrade ephemeral plants making them unavailable for livestock grazing), abundance of non-edible or unwanted plant species for livestock.	The number of livestock is increasing steadily, and with uncontrolled grazing in flood plains and around settlements, the pressure on these ecosystems is escalating.	Local authorities effectively regulate the use of available pasture resources in target rural districts. Rangeland infrastructure is well maintained to maximize the use of distant pastures. Communities and rural cooperative members have knowledge and skills related to sustainable land and pasture management. Herders have access to high-quality consultations related to livestock breeding.	A system of agriculturalist support services (or extension services) is non-existent. A former agro service structure was dismantled but nothing replaced it. Training for farmers is conducted irregularly and, in general, is limited to carrying out certain types of works, and often are conducted in the form of meetings. The system of information and legal services for farmers is not sufficiently developed. Farmers, managers and specialists of agricultural units receive these services from random sources including international assistance.	Under Outcome 2, the project will: Demonstrate sustainable and replicable rangeland management practices, including (i) fenced rotational grazing; (ii) introduction of mobile livestock management in distant desert pastures; (iii) restoration of degraded pastures around settlements; Engage thematic research institutes for capacity building of local authorities, land users and NGOs in land degradation monitoring. Organize training workshops for the target audience (e.g. farmers/ herders, Rural Consumer Cooperatives (RCCs), etc.) to build their capacity and skills for implementation of sustainable land management projects; Present results and lessons learned of demonstration projects at rayon, oblast, republic levels and international conferences, as well as in printing materials for wider outreach & information sharing.
4. Unsustainable use of wildlife and biodiversity resources (threat level: Medium)				
Unsustainable hunting and fishing destabilize population size, cause disturbance for birds during nesting times, and jeopardize conservation efforts within PAs.	Change in the quality of people's life since the collapse of the Soviet Union have been dramatic and characterised by high levels of unemployment and a loss of social support systems, thus forcing an increasingly unsustainable reliance on natural resources.	Protection is extended to areas with high biodiversity value in Syrdarya delta and adjacent territories PA staff are efficient in prosecuting poaching and unsustainable fishing Mobile groups perform effective patrolling of vast areas Local community members have access to alternative and biodiversity friendly livelihood practices	Important delta ecosystems are underrepresented in the national PAS While for mainstream agriculture (arable farming, rotational grazing) more credit is available, alternatives that would at the same time be biodiversity friendly lack credit availability.	Under Outcome 1, the project will: Expand the Barsakelmes Nature Reserve to include vulnerable delta ecosystems of the Southern desert; Purchase equipment to enhance biodiversity research and monitoring capacities of the expanded and new PAs. Provide training and equip rangers and patrolling groups with means for surveillance, interception, & prosecution to ensure enforcement in target PAs. Under Outcome 2, the project will: Rehabilitate wetlands in the Syr Darya River delta; Under Outcome 3, the project will: Create incentives for sustainable resource use around target PAs by engaging non-PA actors in a voluntary agreement on rewards for ecosystem services; Provide microcredit for biodiversity-friendly activities & practices of rural communities in and around PAs, with a focus on desert and semi-desert ecosystems.
5. Habitat fragmentation (threat level: Medium)				

Biological Impact	Root Causes	Normative state	Barriers to achieving the normative state	Solutions: Interventions for project
Development of road and rail networks, gas pipelines and associated infrastructure occurs without consideration for environmental impacts, leading to damage and fragmentation of habitat in some of the most sensitive areas of the Ustyurt plateau, and forcing change of ancient migration routes and breeding grounds of migrating species.	Unsustainable development of extractive industries.	GoK asseses existing and future development priorities of extractive industries in the region and match it with conservation priorities in the Ustyurt plateau.	PA system does not include important, vulnerable areas of Souther desert ecoregion. Effective consultation mechanism for negotiating with local stakeholders (including extractive industries) on biodiversity friendly practices does not exist.	Under Outcome 1, the project will: Design of the PA expansion plan for 2015-2020 in Southern deserts is informed by landscape-level information and includes vulnerable areas; Creation of a wildlife corridor within the Southern desert region between Barsakelmes and Ustyurt State Nature Reserves for protection of saiga calving areas and migration routes in the Ustyurt Plateau along the border with Uzbekistan. Under Outcome 3, the project will: Institutionalize public PA committees acting as stakeholder engagement mechanisms for PA planning and management.

Annex 9: Action plan for incorporation of gender aspects in the project, with quantifiable baseline and target indicators, as per GEF and UNDP guidance

UNDP/GEF's review of in-situ conservation projects (e.g. for conservation of agro-biodiversity or wetland ecosystems) has revealed that women have become a key partner in rural communities, as they are more receptive to new concepts and more willing to shift to biodiversity-friendly practices, provided that they generate enough income for a household. This project will therefore place particular emphasis on ensuring that women are well represented in project implementation and that the impact of project activities on women will be considered.

Representation of women in institutions

Currently, the six rural districts in the target Aral-Syrdarya and Ile Balkhash project areas have no legally registered NGO. All settlements have councils of elders, which include 5-7 respected male residents. This old tradition comes from the times when Kazakhs were nomads but has found its way in the new social structure. The council of elders is a well-respected institution especially in rural settings. Although they are advisory and consultative units under rural local administrations, they are very influential and play a key role in resolving rural issues.

Even though women do not play a role in the Council of Elders, in all villages of the project area women are visible members of society comprising 95% of the staff in state authorities and institutions (schools, medical institutions, akimats), as well as in the sphere of trade and fish processing (Aral) and rice production (Bakanas). As a rule, directors of schools, heads of kindergartens and rural outpatient clinics are women. While none of the rural districts has female akims, administrative and support staff of akimats mainly consists of women.

Public women's councils operate in villages. As a public body, they are not active enough. Their activities are mainly limited to working together with the akimat on arranging events for the International Women's Day, International Children's Day, and others. Women's councils of rural districts do not properly communicate with women's organizations of the district in arranging workshops, and training courses on women's entrepreneurship.

Participation of women in decisions related to natural resource management

In rural areas, many women are engaged in housekeeping. Many of them have special secondary and higher education, but due to circumstances (lack of jobs) they are engaged in housework, livestock maintenance, backyard gardening, harvesting food for winter (butter, jam, Kurt, etc.), and bringing up children. Heads of peasant households in all rural districts, with few exceptions, are men. Women are rarely involved in discussion and resolution of issues on sustainable use of land and water resources. Women do not have sufficient information about decisions related to natural resources management made at the district, regional and national levels. They do not have opportunities for active participation and influence in decision-making for sustainable management of land, pasture and water resources. Local units that should coordinate or regulate the use of natural resources are not available.

To better understand the problems of land degradation and its environmental and socio-economic consequences that seriously affect the welfare of local people as well for capacity building of women in resolving issues related to sustainable land and water resources management and biodiversity conservation, the Project will take the following measures:

- Encourage and support participation of women in demonstration activities by selecting them as implementers of pilot projects.
- Initiate creation of councils on joint management of natural resources in each rural district. The council will be represented by a specialist of rural akimat, experts in agriculture, active farmers, veterans, business oriented and active women (at least one) and respected elder residents of the village. They will take decisions on rules and processes related to land and water resources use, pasture rotation and seasonal grazing, and provide control over performance.

- Assist in improving cooperation of women in rural districts with non-governmental women organizations in the region and the oblast and carrying out joint "round tables" and seminars on additional fund raising for development of small business among women of villages.
- Organize training courses for women on production of goods of folk craft (carpets, clothes, embroidery, etc.) and food products (horse milk, camel milk, cheese, etc.) and assist in the participation of women from project areas in rayon and oblast level discussions.
- Outcome 3 of the project envisages a micro-credit facility to support sustainable rural livelihoods. The project team estimates that about 400 recipients[60] can benefit from obtaining micro-credit and at least 55% of the beneficiaries are expected to be women. For example, one of the high potential activities to be supported by the fund is wool making based on sheep of native breeds: this activity has traditionally been “in the hands of women”. Therefore by giving it a boost in the target region, the micro-credit program will address women’s poverty in the first place. Women will receive guidance for this and other relevant activities eligible under Outcome 3.
- Women will also be encouraged to participate in the PA public committees (Output 3.1).
- Engage women from women's organizations in monitoring and evaluation of pilot projects, and also in dissemination of good practices in neighbouring rural districts. In particular, the project will actively engage women from local communities in environmental awareness raising activities for various target groups. Also, when contracting specialized institutions for field studies and assessments, the project will encourage the inclusion of a higher percentage of women on the team.
- Include activities on improving monitoring and evaluation of gender aspects in the project’s annual work plans.

[60] Rural low-income households, individual entrepreneurs and farm holders

Annex 10: PA Equipment Needs Assessment

Item	Altyn Yemel SNNP	Barsakelmes SNR	Ustyurt SNR	Ile-Balkhash SNR	Total quantity	Cost per Unit, US$	Total costs, US$	GEF	Co-financing
Computer, scanner & printer	1	1	2	10	14	2,000	28,000	0	28,000
Binocular	10	10	10	10	40	200	8,000	4,000	4,000
Portable fire-extinguisher	10	10	10	10	40	150	6,000	0	6,000
Projector	1	1	1	1	4	400	1,600	800	800
Interactive whiteboard	1	1	1	1	4	2,000	8,000	0	8,000
Night vision device (NVD)	2	3	2	3	10	800	8,000	8,000	0
Video camera	1	1	1	1	4	1,200	4,800	0	4,800
Digital camera	1	1	1	2	5	500	2,500	2,000	500
GPS	10	10	10	10	40	500	20,000	4,000	16,000
Tents (for 2 & 4 ppl)	5	5	5	5	20	400	8,000	4,000	4,000
Sleeping bags	20	15	15	30	80	100	8,000	2,000	6,000
Patrolling vehicle, УАЗ-31512	1	1	1	2	5	10,000	50,000	10,000	40,000
Patrolling vehicle, ВАЗ-21213	1	1	1	2	5	10,000	50,000	10,000	40,000
Vehicle УАЗ- 31519	1	1	1	2	5	12,000	60,000	24,000	36,000
Vehicle УАЗ 3962	1	1	1	2	5	7,000	35,000	14,000	21,000
Vehicle УАЗ 3303	1	1	1	2	5	6,500	32,500	13,000	19,500
Motocycle, ИЖ-Planeta	10	5	5	10	30	3,500	105,000	14,000	91,000
Motor boat	1	2	0	1	4	13,000	52,000	13,000	39,000
Gasoline power-generating installation	1	2	2	2	7	7,000	49,000	14,000	35,000
Radio sets	30	20	20	30	100	300	30,000	6,000	24,000
Staff uniform (summer, winter)	40	20	20	40	120	500	60,000	0	60,000
Snowmobile	2	2	2	2	8	14,000	112,000	0	112,000
Electric heater	3	3	3	3	12	100	1,200	400	800
Power-generating station, Honda	1	1	1	1	4	2,500	10,000	5,000	5,000
Solar battery 100 W 2A	3	2	2	3	10	6,000	60,000	12,000	48,000

Automated weather station	2	2	2	3	9	15,000	135,000	30,000	105,000
Trailer for rangers	2	2	2	2	8	15,000	120,000	30,000	90,000
Tractor	1	1	1	1	4	25,000	100,000	0	100,000
Telescope	1	1	1	1	4	4,500	18,000	9,000	9,000
Microscope	1	1	1	1	4	2,000	8,000	4,000	4,000
Truck trailer	0	1	0	0	1	2,500	2,500	0	2,500
Fuel tanker ГАЗ-53	1	1	1	1	4	15,000	60,000	30,000	30,000
Pre-fabricated panel construction (for cordon)	2	3	3	5	13	40,000	520,000	0	520,000
Camera gun	2	2	2	2	8	1,200	9,600	2,400	7,200
Fuel tanker, ЕВ-2000	2	2	2	2	8	5,500	44,000	0	44,000
Water tanker, ЕГМ-4000	3	3	3	3	12	5,500	66,000	16,500	49,500
Floor standing AC	1	1	1	1	4	800	3,200	0	3,200
Cooler bag	10	10	10	10	40	150	6,000	3,000	3,000
Traditional nomad house (Urt)	1	1	1	1	4	10,000	40,000	0	40,000
Laptop	2	2	2	2	8	700	5,600	2,800	2,800
Construction of viewing platforms	1	2	1	2	6	10,000	60,000	20,000	40,000
Life vest	0	15	0	0	15	50	750	0	750
Information board	20	20	20	20	80	100	8,000	0	8,000
Horse	10	10	10	10	40	2,000	80,000	0	80,000
Set of scientific equipment (test-tubes, bulbs, etc.)	5	5	5	5	20	1,200	24,000	19,200	4,800
Fire track	1	1	1	1	4	35,000	140,000	0	140,000
						Total	**2,260,250**	**327,100**	**1,933,150**

Note: In the Total Budget & Workplan, the $327,100 for PA enforcement & monitoring equipment to be financed by GEF is evenly divided between Years 2 and 3 under Contractual Services-Companies, BL 72100. The project is expected to cover the purchase of 8 patrolling vehicles for the total amount of US$ 71,000 or 20% of the GEF contribution (to complement the government's funding) serving various needs of rangers of the to-be-established wildlife corridor (about 700,000 ha) and the Ile-Balkhash Reservat (over 400,000 ha) in the Ile-Balkhash area.

Annex 11: UNDP Environmental and Social Screening Checklist

Please see a separate PDF file

Annex 12: Other information

The Letters of Co-financing are attached as separate files.

Note: *For all co-financing expressed in Tenge or KZT (national currency of Kazakhstan), the following exchange rate was used: 1US$ = 150 KZT

Annex 13: Letter of Agreement for direct costs

The letter is attached as a separate file

SIGNATURE PAGE

Country: Kazakhstan

UNDAF Outcome (s)/Indicator (s): UNDAF Outcome 2: By 2015 communities, national and local authorities use more effective mechanisms and partnerships that promote environmental sustainability and enable them to prepare, respond and recover from natural and man made disasters.

CPAP Outcome (s)/Indicator (s): Government, communities and civil society practice an integrated approach to natural resources management in national and regional perspectives

CPAP Output (s)/Indicator (s): Government, educators, communities, civil society and academic community practice national and local authorities use more effective mechanisms and partnerships that promote environmental sustainability and enable them to prepare, respond and recover from natural and man made disasters.

Executing Entity/Implementing Partner: Committee for Forestry and Hunting

Implementing entity/Responsible Partner: Committee for Forestry and Hunting

Programme Period:	2013-2018
Atlas Award ID:	00073767
Project ID:	00086425
PIMS #	4855
Start date:	September 2013
End Date	August 2018
Management Arrangements	NEX
PAC Meeting Date	TBD

Total allocated resources:	$23,543,293
• Regular	
o UNDP (grant)	$600,000
• Other:	
o GEF	$4,364,000
o Government	$9,379,147
o IFAS	$45,520
o NGO	$754,000
o Private sector	$1,286,667
o Other	$2,032,952
• In-kind contributions	
o Government	$3,250,807
o IFAS	$140,000
o NGO	$286,200
o Other	$1,304,000
o UNDP	$100,000

Agreed by (Government):

NAME SIGNATURE Date/Month/Year

Agreed by (Executing Entity/Implementing Partner):

NAME SIGNATURE Date/Month/Year

Agreed by (UNDP):

NAME SIGNATURE Date/Month/Year