

PROJECT LESSONS LEARNED REPORT

Total length of report: 6 pages

Please refer to the *Deliverable Description* for more information on the purpose and use of this report

Project Title:	UNDP-GEF project “Improving sustainability of the PA system in desert ecosystems through promotion of biodiversity-compatible livelihoods in and around PAs” (hereinafter referred to as project)
Country:	Republic of Kazakhstan
Related CPAP Outcome	Government, educators, communities, civil society and the academic community practice an integrated approach to natural resources management in national and transboundary perspectives.
Project Description and Key Lessons Learned	
Brief description of context	<p>Desert ecosystems make up most of the country covering 136.3 million hectares or about 50% of the country’s territory. Deserts are found in the Caspian lowlands, Mangyshlak peninsula, Ustyurt plateau, southern Turgay mesa and Kazakh melkosopochnik (Eastern Betpak-dala and Pribalhashye), 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. Kazakhstan’s desert ecosystems, however, continue to be under threat of habitat loss and degradation.</p> <p>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.</p>
Brief description of context	<p>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.</p> <p>The solution relies on three key elements.</p> <p>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.</p> <p>The second element 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 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.</p> <p>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.</p>
Key project successes	<p>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</p> <p>The following results were achieved under this outcome:</p> <p><i>Creation of new and expansion of existing PAs in the desert area:</i></p>

- the territory of the Altyn Yemel national park was **expanded** to an area of **146,500 hectares in December 2015** (Resolution of the Government of the Republic of Kazakhstan as of 24 December 2015, No. 1047);
- the Ile-Balkhash Reserve has been established on 27 June 2018 and has a total area of 415 164 ha (Resolution of the Government of the Republic of Kazakhstan as of 27 June 2018, No.381). The project has carried out extensive work on reserve's boundary harmonisation and land reservation at the local level and promotion of the issue of its establishment at the national level. The staff size will be 64 specialists and 39 support staff. Funding from the national budget in 2018 is KZT 115 million (\$338,235);
- the Arganaty Zakaznik (Sanctuary) of local importance (total area is **186 960 ha**) was established on 24 April 2018 by the government of Almaty region with the assistance of the project (decree of the Almaty region Akimat as of April 24, 2018, No. 188). The Arganaty Zakaznik is located within Alakol and Sarkand districts, Almaty region and will contribute to the conservation of mountain-valley subtype of desert ecosystems in the Ile-Balkhash region;
- technical documents (scientific background report and technical background report) were prepared for the expansion of the Ustyurt reserve by 78,000 hectares;
- the Zhabaiushkan sanctuary was established in 2015 by the Mangystau region Akimat on an area of **316,141 hectares** (Resolution No.53 as of February 27, 2015) with the assistance of the project;
- a dialogue platform for all stakeholders was formed for the expansion of the Barsakelmes Reserve. Land plots for the expansion of the reserve were set aside on the area of 2300 ha by the Akimat of Kyzylorda region (decree of the Akimat of Kyzylorda region, 10 October 2017, No.897).

Creation of an ecological corridor in the Ile-Balkhash area

- research was carried out to determine the boundaries of the ecological corridor in the Ile-Balkhash and Aral-Syrdarya project areas, and habitats of key animal species (goitered gazelle, argali, koulan) were identified;
- for the first time in Central Asia, navigational equipment (14 satellite collars) were installed on the rare species of goitered gazelles in the Ile-Balkhash area to track their migration routes;
- the wildlife corridor boundaries were identified and agreed with local executive bodies, the scientific background report was prepared and approved;
- an ecological corridor Kapshagai-Balkhash, with a total area of 973,765 ha was established pursuant to the decree of the government of Almaty oblast, No.51 dated 21 February 2018. This ecological corridor aims to ensure safe migration of large mammals from the territory of Altyn-Yemel National Park to the newly established Ile-Balkhash Reserve. Setting up the corridor was possible only through the sustainable partnership and support provided by local authorities and local communities.

In total, 3 new PAs created, 1 PA expanded, and an ecological corridor established on a total area of 2 million 388 thousand hectares under the project.

Enhancing the human and institutional capacity of PAs in Kazakhstan:

- a **comprehensive master's program was introduced** at two national agrotechnical universities, with 16 PA management specialists trained annually;
- **standard training modules** in 5 areas such as scientific research and monitoring; protection of sites; environmental education and ecotourism; PA management; financial and administrative management were **developed and**

approved at the national level;

- measures were taken to strengthen the capacity of PA employees, **256 employees** of Kazakhstan's reserves and national parks improved their knowledge;
- **2 study tours** for experience exchange were organised for the staff of the Forestry and Wildlife Committee and environmental institutions (PAs) to the national parks of Mongolia and Austria;

Improving the effectiveness of PA management:

- **Methodology for assessing the performance of environmental institutions (PAs)** based on international experience was developed for the objective analysis and assessment of existing PA management practices. This methodology has been approved by the Forestry and Wildlife Committee as a key document for the assessment of PA effectiveness at the national level;
- **a modern Visitor Centre was opened** with the assistance of the project in the Altyn Yemel National Park in October 2016 to develop ecotourism. This is the fifth Visitor Centre created with the assistance of international organisations, in particular UNDP in Kazakhstan. The project ensured development of the concept, technical documents and the design layout. The Visitor Centre will ensure an increase in the number of visitors and raise their awareness of the biodiversity of desert and semi-desert ecosystems;
- The project has provided technical and expert support in the development of 2018-2023 management plans for Barsakelmes and Ustyurt Reserves, Altyn Yemel National Park and the newly established Ile-Balkhash Reserve. The management plans of target PAs were submitted to the Forestry and Wildlife Committee for approval;
- For the purpose of increasing the sustainability of target PAs and territorial inspectorates, the following was purchased: 10 patrol vehicles; 87 radio sets; 67 GPS units 5 portable cabins for inspectors; 10 sets of computers with a projector and a screen; 3 cameras; 1 motor boat; 8 solar stations (1-3 kW) were installed.

Improving the monitoring system and habitats of key animal species:

- a biodiversity monitoring programme was developed and implemented to improve and systemise monitoring activities in 3 target PAs (Altyn Yemel national park, Barsakelmes and Ustyurt reserves). More than 950,000 hectares of desert and semi-desert ecosystems are covered by systemic monitoring, and **65** key species of **animals** and **46** plant species will be monitored on a permanent basis;
- two watering sites and one observation tower were installed on the Kaskakulan site to preserve the habitat of koulans in the Barsakelmes Reserve;
- management plans were prepared to ensure sustainable conservation of unique biodiversity in the Ile-Balkhash area for such species as koulans, goitered gazelle, Przewalski's horse.

Outcome 2: Landscape-level conservation planning and management are developed and implemented in target desert and semi-desert environments

The following results were achieved under this outcome:

Landscape planning

- Landuse planning schemes were developed for Aral-Syrdaria and Il-Balkhash project areas in accordance with Article 8, RK Land Code. More than **13.0 million hectares of land** is covered by territorial planning. In 2017, Landuse planning schemes of Aral-Syrdaria and Ile-Balkhash project areas were approved by decisions of maslikhats (local representative bodies) of 2 target regions. Landuse

planning maps were published at geo-portals of Almaty and Kyzylorda regions <http://geoportal.kz/7sumap/login> и <http://map.geoportal.kz/map/ru>;

- The Sustainable Landuse Strategies and Action Plans for Aral-Syrdaria project area were developed in which priority areas for landuse planning were identified, concrete actions for improving the landuse system, enhancing the economic, informational and educational potential were set out. The Sustainable Landuse Strategies and Action Plans were approved at the level of maslikhats of target districts;
- The Landuse Planning Atlases for Aral, Kazaly and Balkhash districts were released for the first time ever for desert regions in Kazakh and Russian (1500 copies). Each Atlas contains full cartographic information on the state of ecosystems, landuse, human impacts and socioeconomic condition of target districts. Atlases have been disseminated among all target partners and are used for planning of economic activities.

Demonstration of sustainable practices

- **40 pilot projects** were implemented in 3 regions of the country, in three types of productive landscapes (pastures, saxaul forests and wetlands) to demonstrate the best practices of sustainable use of natural resources in the following focus areas:
 - irrigated agriculture (2);
 - development of sustainable distant-pasture cattle breeding (16) and fodder production (3);
 - sustainable forest management (4);
 - presentation and introduction of mechanical and phytomeliorative methods of sand fixation (2);
 - fish rearing for sale (1);
 - ecological tourism (2) and environmental education (1).
 - deployment of alternative energy sources (9)

As the result of the implementation of pilot projects:

- 180 ha of high-potential feeding grounds created within pilot sites of country's 3 desert regions where their productivity increased twofold and consumption of irrigation water reduced by 60%;
- seasonal rotation grazing practice introduced on over 40,000 ha of degraded rangelands, 6 public committees on rangeland management established, 8 water points restored within 6 distant sites to supply water for over 3000 head of livestock, alternative energy sources installed, living conditions of 60 farmers and their families improved within distant ranges. The level of knowledge in sustainable rangeland management of 250 farmers enhanced;
- 8 ranges on 10 000 ha irrigated and 2000 head of livestock provided with water through the joint efforts of the UNDP-supported project and akimat (government) of Mangystau region in Ustyurt target area as part of the public-private partnership;
- the drip irrigation practice demonstrated on 2,0 ha in Kyzylorda region for rice and gourd crop irrigation. 23 000 cubic metres per hectare saved for rice irrigation.
- *In the Ile-Balkhash target area:*
 - works carried out for conservation and rehabilitation of Asiatic poplar forests on 1700 ha. A forest genetic reserve on 5,8 ha established. *Populus pruinosa* and *Populus diversifolia* seedlings grown in a laboratory for the first time in Kazakhstan – 500 seedlings;

- conditions created for Kaskelen forest nursery (44 ha) irrigation through the rehabilitation of the dam.
- *In the Aral-Syrdaria target area:*
 - A forest nursery (3 ha) of the Aral forest entity reconstructed with an annual output of 300,000 saxaul seedlings and 20,000 hardwoods for reclamation on the dry Aral Seabed and beautification of residential areas in the Aral region;
 - Methods of artificial growing of licorice successfully demonstrated on 5 ha;
 - The experience in applying phytomeliorative and mechanical methods of stabilising shifting sands demonstrated on 3 ha. This has resulted in planting of 40,000 seedlings of drought-resilient species within pilot sites and training of more than 100 local people from two target villages to apply integrated methods of combating shifting sands.
- *In the Ile-Balkhash target area:*
 - A tourist receiving area (up to 8000 people per season) was opened in the Tanbaly historical and archaeological complex in Zhambyl district, Almaty oblast. Here favourable conditions were created for the development of scientific and ecological tourism near the historical and archaeological complex “Petroglyphs in the Tamgaly archaeological landscape” through the installment of 5 yurts and a wind-solar station;
 - The Kairat recreation area (5 ha) created in Balkhash district, Almaty oblast to accommodate over 2000 people per season and 50 people per day. There are all necessary conditions within the site for leisure activities of tourists coming from the city of Almaty and Almaty region;
- 7 sets of solar stations (capacity from 1 to 3 kW) were installed within the forest ranger stations of the Bakanas forest entity, Altyn Yemel national park and Barsakelmes reserve. Now these stations have electricity, communication link, thus allowing for improved living conditions of inspectors, better protection of adjacent forests on total area of 32 905 ha and desert ecosystems on total area of 77 000 ha;
- The supplementary environmental education programme was introduced in 4 target schools in 3 project areas (Aral-Syrdaria, Ile-Balkhash and Ustyurt areas) and capital Astana. This programme is designed for 6,7,8 grades and aimed at obtaining additional knowledge about biodiversity of target desert regions. A methodical guide for teachers of secondary schools in Kazakh and Russian was developed and published. 128 science teachers from country’s three regions and capital Astana improved their capacities in teaching this course;
- Information on pilot projects is systematised and published on open information resource <http://pilots.biodiversity.kz/>;
- Work carried out jointly with the akimat of Kyzylorda region for the **certification of 8 unowned water canals with the total area of 110 ha**. The legal status of the canals restored, responsibility for the protection and management of water canals delegated to local authorities. The akimat of Kyzylorda region has allocated funding (**365 million KZT**) in 2018 to clean 3 water canals Balgabai, Basy Kara, Bes Zharma.

Improving the desert ecosystem condition monitoring system

- Works carried out for the expansion of the existing biodiversity monitoring information system <http://biodata.kz/>, which now includes 7 national PAs.

With the assistance of the project, Altyn Yemel National Park, Barsakelmes and Ustyurt Reserves have been included in the biodiversity monitoring information system and have an opportunity to conduct regular monitoring of animal and plant life condition and habitats using the electronic database;

	<ul style="list-style-type: none"> • A method and a geoportal were developed for the first time in Kazakhstan for space monitoring of desertification and land degradation processes http://geomonitoring.kz/ using the Aral-Syrdaria and Ile-Balkhash target areas as examples. These tools enable to monitor the state of desert ecosystems and identify dynamics of ecological processes. This information resource enables to receive scientific data on the dynamics of ecological processes within the Aral-Syrdaria and Ile-Balkhash target areas online; • inventory of saxaul plants on the dry Aral Seabed (DAS) was done. The state of 26,000 ha of saxaul was assessed using remote sensing data, recommendations were elaborated for further reclamation works on the DAS; • The Balykshy (Fisher) mobile application for information support of amateur fishing in Almaty region was developed and introduced. This application is intended for arranging sport fishing in fishery waters of Almaty region and forming legal literacy and culture of citizens. This app works on mobile devices iOS и Android. App's functional capabilities enable users to get information on fishing grounds, fish species, legal information and routes, etc. <p>Outcome 3: Community involvement in conservation and sustainable use of biodiversity in and around PAs is enhanced</p> <p>The following results were achieved under this outcome:</p> <ul style="list-style-type: none"> • The first ever public committees in Kazakhstan were established at the Barsakelmes and Ustyurt reserves and the Altyn Yemel National Park, allowing local people, local authorities, NGOs and the private sector to participate in the PA management decision-making; • a legislative framework was created for the functioning of the public committees and involvement of local communities in PA management. The Law of the Republic of Kazakhstan "On Specially Protected Natural Areas" has been amended in terms of creating public committees at environmental institutions (protected areas). The experience related to the establishment and operation of public committees tested under the project is legally recognised and will be replicated throughout the national PA network of Kazakhstan; • the Eco-Damu microcredit programme for 2014-2019 has been implemented in 3 regions of the country, with the lowest lending rate (4%) in the country. 83 business projects have been financed for the amount of 275.3 million tenge, enabling rural residents living near the PAs to develop fisheries, eco-tourism, guest houses, make souvenirs, national products, and do gardening, beekeeping, greenhouse business, poultry farming and mini-bakery. This microcredit programme has created permanent jobs for 209 rural residents. • three pilot payment schemes for ecosystem services have been implemented in the Aral-Syrdarya Project Area, including PES 1 scheme for ecotourism development and 2 PES schemes for fisheries. 3 Agreements for the implementation of PES schemes were signed. In accordance with the terms of PES Agreements, all stakeholders – Aral forestry entity, guest houses near Lake Kambash, government of Aral district, users of fish resources (lake leasers), fish producers (Zhambyl cooperative facility) are actively engaged in the implementation of schemes. In order to raise awareness of PES more than 70 people from amongst farmers, nature resource users, NGOs learnt about ecosystem services.
<p>Project shortcomings and solutions</p>	<p>1. The establishment of new PAs is a difficult task and is subject to a high risk as it requires government allocations, which is exacerbated by the effects of the global financial crisis and other economic processes in the country.</p>

	<p>At the beginning of its implementation the project faced a number of challenges and delays in the establishment of new PAs – Ile-Balkhash Reserve. The project assisted in setting aside lands for its establishment, support from district authorities and local communities was obtained.</p> <p>At the same time, the Government of Kazakhstan declared a moratorium on the increase in staff numbers in public institutions in 2015 in order to limit budget spending due to the global financial crisis. Therefore, there was a critical risk of not establishing the reserve by the end of the project.</p> <p>The project has undertaken timely measures to mitigate this risk, particularly:</p> <ul style="list-style-type: none"> - letters on behalf of UNDP in Kazakhstan to deputies of Mazhilis (Lower House of RK Parliament) and Government of Kazakhstan were initiated; - a broad awareness-raising campaign among all stakeholders and target groups, including local communities and local authorities was conducted to form bottom-up opinions and promote the issue of reserve establishment; - parliamentary hearings were initiated and held with the participation of the Minister of Agriculture, deputy corps. The hearings were dedicated to biodiversity conservation issues, including the most important issue – establishment of the Ile-Balkhash Reserve; - much groundwork was done to include the establishment of the Ile-Balkhash Reserve in the 2018-2020 national budget; - assistance was provided to the Forestry and Wildlife Committee to approve the draft decree of the RK Government establishing the Ile-Balkhash Reserve; <p>All the measures mentioned contributed to the achievement of the target set – expansion of the PA network in the desert zone of Kazakhstan and biodiversity conservation at the national level.</p> <p>2. There were minor difficulties at the beginning when the project was only just launching pilot PES schemes. This trend is completely new for Kazakhstan. The experience regarding the practical application of PES schemes was lacking in the country. Nature resource users, local authorities and local people lacked the knowledge concerning the use of this economic instrument. The global financial crisis and the decline in oil prices also hindered the promotion of PES as large nature resource users reduced their costs of conservation activities.</p> <p>The following stages of the work were implemented by the project to introduce the PES mechanism:</p> <ul style="list-style-type: none"> - identification of ecosystem services (definition of key suppliers and consumers of ecosystem services (2015)); - economic valuation of ecosystem services (2016); - negotiations with the consumers of ecosystem services, development of PES agreements and conclusion of contracts with the consumers of ecosystem services (2016-2017); - practical implementation of PES schemes (2018). <p>The Desert project is a part of the UNDP Biodiversity Projects Portfolio, therefore the methodological and expert support for the promotion of PES schemes was fully provided by the BIOFIN-Kazakhstan. The synergy of the UNDP Biodiversity Projects helped to successfully pilot this economic instrument to safeguard biodiversity in the Aral-Syrdaria region where 3 PES schemes were tested.</p>
Lessons learned	<p>1. The key lesson learned is that the proposal on the establishment of new PAs should be first of all initiated at the grassroots level and should be premised on the understanding of local communities of the benefits that they will have, if a new PA is established. This allows to greatly reduce the time spent on harmonising boundaries</p>

	<p>and land parcels of PAs, expedite land reservation, remove unnecessary administrative barriers.</p> <p>2. One of the successful lessons learned are coordinated efforts of the project management and project team that has enabled the implementation of the majority of project activities and achievement of results on such indicators as establishment of new PAs, territorial management, sustainable landscape management, engagement of local communities. During the project's final year the efforts have been focused on improving the results achieved in pilot areas and replicating widely the results achieved.</p> <p>3. A positive lesson learned is stable mutually beneficial relationships with key project partners established by the project team <u>at the provincial level</u>. Constructive interaction has resulted that government and community of Almaty region actively supported the establishment of the Arganaty Sanctuary and the Kapshagay-Balkhash wildlife corridor. In February 2018 government of Almaty region adopted a decision creating the wildlife corridor and in April of the same year adopted a decision creating the Arganaty Sanctuary with an annual allocation of funds from the oblast budget for their protection in the amount of US\$ 85 000.</p> <p>4. Another significant positive lesson learned is project's contribution to sourcing of co-financing for the implementation of pilot projects, Eco Damu microcredit line to ensure the sustainability of project results.</p> <p>In general, over the course of 5 years of the project leveraged more than 3 million of cofinancing from public and private sources (state budget, Coca-Cola grant funds, the International Fund for Saving the Aral Sea, CADI project, Fund for Financial Support of Agriculture and other).</p> <p>5. One more example of project sustainability is partnership of the project with the National Breeding Center on rehabilitation of Asiatic poplar forests in the Balkhash region. In 2015 the project developed the technology of artificial growing of Asiatic poplars that was tested in the breeding center. The Center is currently continuing growing of poplars. 250 seedlings of Asiatic poplars have been grown under laboratory conditions in 2017, it is planned to grow and plant up to 300 rare poplar species annually.</p>
<p>Follow-up Actions</p>	<p>1. Recommend the project to finalise the transfer of project equipment and assets to beneficiaries and partners in accordance with the decision of the final project board meeting.</p> <p>2. Recommend the RK Ministry of Agriculture's Forestry and Wildlife Committee to:</p> <ul style="list-style-type: none"> - expedite the issue of Barsakelmes reserve area expansion; - stipulate a special budget line for systemic PA staff capacity-building; - stipulate a special budget line for deployment of renewable energy sources within ranger stations of nature protection and forest entities that do not have access to traditional energy sources; - have talks with the management of KazAgro JSC and Fund for Financial Support of Agriculture regarding joint planning and budget financing of the phase II of the Eco-Damu microcredit line amounting to 2,7 billion KZT; - strengthen control and responsibility of target PAs to enter necessary data to the information system in a timely and good manner with administrative penalties, if necessary; - provide assistance in the transfer of the geoportal for desertification/LD monitoring (http://geomonitoring.kz/) and pilot projects portal (http://pilots.biodiversity.kz/) to Kazakh Forest Inventory Enterprise for further implementation and technical maintenance.

	<p>3. Recommend the MOA's Land Management Committee and governments of Almaty, Kyzylorda and Mangystau regions to disseminate and introduce landscape-based methods and approaches applied for land-use planning in Kyzylorda region (Aral and Kazaly districts) and Almaty region (Balkhash district) in other administrative districts.</p> <p>4. Recommend governments of Almaty, Kyzylorda and Mangystau regions to replicate project's approaches to creating conditions for developing distant livestock keeping, reducing rice crop areas by replacing them with forage crops (alfalfa) and combating shifting sands while also securing budget funding for the implementation of measures mentioned. 5. Recommend governments of Kyzylorda and Almaty regions to continue the policy towards agriculture diversification by phasing out rice crops by replacing them with drought-resilient crops (vegetable, oil and forage crops) from 81 000 ha to 70 000 ha until 2020 in Kyzylorda region and from 13 000 ha to 7 000 ha until 2020 in Almaty region.</p> <p>6. Recommend government of Mangystau region:</p> <ul style="list-style-type: none"> - expedite works towards establishing the buffer zone of the Ustyurt Reserve and setting aside land parcels for reserve's area expansion; - set special environmental requirements within the Kenderli-Kayasan conservation area for gas exploration and production; <p>7. Recommend government of Kyzylorda region to establish a buffer zone of the Barsakelmes Reserve;</p> <p>8. Government of Almaty region in agreement with the MOA's Forestry and Wildlife Committee to approve the Provision on Kapshagai-Balkhash wildlife corridor, setting out land allocation to protected areas of national and local importance and limited commercial activities.</p>
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Project Information	
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