

## TERMS OF REFERENCE

<b>Position:</b>	Expert-mammologist for the development of sections of the Scientific Background report and Feasibility Study for the creation of 5 new PAs <sup>1</sup> and a program for monitoring the biodiversity of 5 pilot PAs <sup>2</sup>
<b>Project title and number:</b>	UNDP-GEF Project "Conservation and Sustainable Management of Key Globally Important Ecosystems for Multiple Benefits", 00101043
<b>Type of contract:</b>	Individual contract
<b>Duty station:</b>	Home-based with trips to East Kazakhstan, Almaty and Turkestan regions
<b>Duration of the contract:</b>	November 2021 - December 2022 (250 working days within 14 months (174 working days from home and 76 days on business trips in Kazakhstan)

## PROJECT DESCRIPTION

### a. Scope of project and background information

The total forest area in Kazakhstan is about 12.6 million hectares, which makes it one of the richest in forest countries in Eurasia, despite the low level of forest cover, which is only 4.6%. Approximately 95% of the forests (wooded areas) in Kazakhstan are managed by 123 forestry administrations, which are controlled by regional governments (akimats). There are three main types of forest ecosystems in Kazakhstan: alpine mountain forests, tugai (southern coastal) forests and saxaul landscapes (desert and semi-desert shrubs).

Since 2018, the GEF-UNDP project "Conservation and sustainable management of key globally significant ecosystems for obtaining various benefits" (hereinafter referred to as the project) has been implemented on the territory of the republic. The project strategy is to holistically address the conservation and sustainable use of forest ecosystems in Kazakhstan, through management approaches including both protected areas and sustainable use of associated HCVF landscapes (maps of the project areas are presented in Appendices 4, 5, 6 to the Terms of Reference).

To protect its globally significant biodiversity, Kazakhstan has established a system of protected areas covering 22,121,641 ha (8.1% of the total area of country). At the moment, PA system coverage include only 4.89% of forested areas. Some of the ecosystems which have globally important species remain outside the PA system notably the unique riparian (tugai) forest and

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<sup>1</sup> **PAs to be created:**

1. Usek sanctuary (Almaty region);
2. Koksuy sanctuary (Almaty region);
3. Ketmensky sanctuary (Almaty region);
4. Terskey reserved zone (Almaty region);
5. Saur-Manyrak reserved zone (East Kazakhstan region)

<sup>2</sup> **Pilot PAs:**

1. National Park Sairam-Ugam (Turkestan region)
2. Aksu-Zhabaglinsky sanctuary (Turkestan region)
3. Syrdaria-Turkestan regional park (Turkestan region)
4. Charyn National Park (Almaty region)
5. Ile-Alatau National Park (Almaty region))

floodplain ecosystems (have 0% representation country-wide), which support a number of endemic and threatened species, large stands of valuable coniferous forests in Altai region, representing an important CO<sub>2</sub> pools, and saxaul forests playing critical role in supporting wealth of local communities in a drylands zone. The current estate does not fully cover the habitat of the snow leopard population groups. Only 30-35% of its range in Kazakhstan is protected within the PA network, which bars effective protection from de-gazettement and poaching. Huge areas that provide a natural bridge and genetic interactions between the Tien Shan, Zhungar and Altai population groups of snow leopard stay outside of the existing protected areas network.

The problem of preserving the landscape and species diversity of plants and animals on the planet is one of the priorities national and international tasks, on the solution of which the harmonious coexistence of man and nature and ecological stability on the planet depends. And the first, most important link in this complex and lengthy process is monitoring the state of the habitat and its individual components. Ensuring the necessary control over ongoing changes and timely prevention of undesirable or harmful processes for biodiversity is the main task of systemic monitoring of the environment and its components.

Monitoring is an effective tool for measuring the effectiveness of measures taken to conserve biodiversity and for identifying biological trends, both natural and anthropogenic. Environmental monitoring makes it possible to assess abiotic and biotic changes in the ecosystems of the project area. Correct assessment of the processes occurring within a particular population, clarification of the causative factors and the adoption of timely measures to prevent negative consequences is the main task of monitoring biodiversity in pilot PAs.

Within the framework of UNDP Projects, a stable basis for systematic monitoring of biodiversity in PAs has been created, an information system for monitoring biodiversity biodata.kz has been developed, which includes 7 existing PAs, it is planned to connect pilot PAs to this system by the end of the project. To include pilot PAs in the monitoring program, it is necessary to carry out comprehensive scientific research, with an assessment of the current state of ecosystems and globally significant species, as well as to determine the baseline level of populations of important species.

According to the project document and work plan of the Project for 2021-2022, it is planned to create new PAs covering globally significant ecosystems, high conservation value forests and snow leopard habitat in the project areas of Almaty<sup>3</sup>, East Kazakhstan<sup>4</sup> and Turkestan<sup>5</sup> regions, and development of the Biodiversity Monitoring Program for 5 pilot PAs. Within the framework of these works, measures are planned to create 3 reserves and 2 protected areas.

The involvement of an expert is provided for in the activities of the 1st component of the Project Work Plan for 2021.

## **CONTEXT OF "MUST-HAVE" SERVICES**

### **a. Relevance and purpose of the required work in the context of the project**

The relevance of the work lies in the need to expand the PAs network of Kazakhstan to include the range of snow leopards and other globally significant species, improve the management of high

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<sup>3</sup> Project area of Almaty region - ecosystems of Zhongar Alatau (Zhetysu Alatau), Northern and Central Tien Shan;

<sup>4</sup> Project area of East Kazakhstan region - ecosystems of Altai and Saur-Tarbagatai;

<sup>5</sup> Project area of Turkestan region - Western Tien Shan;

conservation value forests and introduce an effective monitoring system to conduct research on the quantitative and qualitative parameters of the state of ecosystems and the environment.

**b. Related parties:**

- The Forestry and Wildlife Committee of the MEGNR of the Republic of Kazakhstan (hereinafter referred to as the Committee), a state body and department within the competence of the Ministry of Ecology, Geology and Natural Resources of the Republic of Kazakhstan, carrying out implementation, control and supervisory functions in the field of forestry, protection, reproduction and use of wildlife and protected areas;
- pilot protected areas of Kazakhstan (hereinafter - pilot PAs).

**c. Features of the planned work and security risks:**

- The implementation of the planned work involves analytical work at the location/residence of the expert and field trips to the East Kazakhstan, Almaty and Turkestan regions. The expert independently ensures his own safety during field trips to the project areas.

**PURPOSE OF WORK:**

1. Assessment of the state of theriofauna and biodiversity of the project areas and pilot PAs;
2. Development of a general part and a section on monitoring theriofauna in pilot PAs with recommendations.
3. Development of sections on the state of the animal world (theriofauna) of the Scientific Background report and Feasibility Study for the creation of new PAs;

**SCOPE OF WORK:**

***Pre-field preparation:***

1. Carries out preparatory work for field trips, completes expeditionary equipment, instrumental equipment necessary for work;
2. Collects systematizes and analyses printed materials (manuscript funds) and materials on the theriofauna of the research regions, maps of ecosystems, soils and landscapes, space images and topographic maps;
3. Draws up preliminary (working) lists of mammals for project areas and pilot PAs;
4. Analysis of thematic handwritten works, reports of scientific research works and Nature Records Book available at the pilot PAs;
5. Together with other experts, prepares plans for routes and sites for field surveys, forms for collecting field data to clarify the deliverables.

***Field studies:***

6. Within the planned timeframe, he makes field trips (according to the travel schedule) to the investigated territories and conducts field work in accordance with the goals set by the terms of reference, using agreed methods and the necessary technical equipment;
7. Conducts targeted meetings and discussions (according to the goals and objectives described in the TOR) with the management and employees of pilot PAs, state administrations of forestry, hunting farms and other environmental organizations, nature users (if any), Akimats, local government bodies, land users and other interested parties on the creation of new PAs;

8. Conducts route surveys of the project areas and pilot PAs, collects materials for an inventory of fauna (theriofauna);
9. Conducts theteriological survey of specific sites and pre-allocated ecosystems of the project areas and pilot PAs;
10. When conducting field research (at each point of the survey), an expert assesses the impact of negative factors (anthropogenic origin, such as: drying up of reservoirs due to water intake for irrigation, disturbance of ecosystems by grazed livestock, fires, tourist camps in an unallocated place, driving outside paved roads along the coast with a visual assessment of the size of the damaged areas; poaching fishing and hunting). These data are collected by polling, direct observations and the state of objects of flora and fauna;
11. Carries out the laying of monitoring sites for the subsequent long-term monitoring of theriofauna in pilot PAs;
12. Describes and maps these sites and routes using GPS, describes mammalian complexes and habitats from available sources for pilot PAs;
13. Carries out data collection, office processing and analysis of the received materials;
14. Draws up a map-scheme of routes and established sites in the study areas (for each pilot PAs);
15. Makes a map of the distribution of rare, key, Red Data Book species of mammals in pilot areas and pilot PAs;
16. Prepares a description and mapping of data from sites and routes of project areas and pilot PAs using GIS-based on GPS data, describes the routes of migration and flights according to available sources;
17. Performs photography (with the determination of geographical coordinates) of plants, phytocenosis, ecosystems, animals, tourist and historical sites, landscapes, other natural objects and sources of man-made impact and pollution;
18. Prepares a description and mapping of data from sites and routes of project areas and pilot PAs using GIS-based on GPS data, describes phytocenosis according to available sources;

***Cameral treatment and reporting:***

19. Identifies key, monitoring and indicator species of mammals for each pilot PAs and pilot study areas;
20. Analyses the thematic manuscripts available at PAS, reports of scientific research and the Chronicle of Nature;
21. Make recommendations for necessary and relevant research on theriofauna of each pilot PAs;
22. Identifies and analyses the causal relationship between external factors and changes in the state of theriofauna and ecosystems in general in the pilot PAs and project areas;
23. Creates a mammalian inventory for each pilot and PAs under development;
24. Compiles a list of specially protected species (International and National Red Data Books), key and monitoring mammalian species for pilot and established PAs;
25. Conducts a comprehensive expert assessment and analysis of the state of theriofauna, identifies the causes and factors of threats, formulates recommendations for their elimination for each pilot and created PAs;

26. According to the list of input data of the technical project "Development and implementation of an information system for monitoring biodiversity in pilot PAs in the Republic of Kazakhstan" (link: <https://cloud.mail.ru/public/FR1g/UfvZxLzz1>) prepares and fills in monitoring cards and transfers the completed data To the customer;
27. Participates in the preparation of thematic maps for monitoring programs for 5 pilot PAs, scientific justification feasibility report for the creation of 5 new PAs;
28. Introduces recommendations on the system of long-term monitoring and strengthening of protective measures in pilot PAS and created PAs;
29. The final report on the state of biodiversity and ecosystems is drawn up in accordance with the structure given in Appendix 1 to the Terms of Reference;
30. Develops a monitoring program for theriofauna according to the content for each pilot PAs (Appendix 2 to the Terms of Reference);
31. Develop sections on the animal world (theriofauna) of the scientific justification projects for the creation of 5 new PAs in accordance with the structure given in Appendix 3 to the Terms of Reference;
32. Transmits a base of photographic materials, reports, presentation of completed works and cartographic material in electronic media.

***Additionally:***

33. During the term of the contract, the expert takes part (online) in seminars, discussions, meetings of the Scientific and Technical Council of the FWC and other meetings on the development of the Monitoring Program for 5 pilot PAs.
34. During the term of the contract, the expert takes part (online) in seminars, discussions, meetings of the Scientific and Technical Council of the Committee, public hearings and other meetings on the creation of 5 new PAs.

**EXPECTED DELIVERABLES:**

No.	Deliverables	Estimated duration of tasks	Estimated completion date	Payment
1	<ul style="list-style-type: none"> <li>- The collection, systematization and analysis of printed materials (manuscript funds) and materials on the mammals of the research regions, maps of ecosystems, soils and landscapes, satellite images and topographic maps were carried out.</li> <li>- Preliminary (working) lists of mammals were compiled for the project areas and pilot PAs.</li> <li>- The analysis of thematic handwritten works, reports of research and development</li> </ul>	20 days	30 November, 2021	20%

	<p>works and Nature Records Book at the pilot PAs was carried out.</p> <p>- Pre-field preparation for field trips carried out</p> <p><b>Result 1. A literature review of the state of biodiversity of pilot PAs and project areas is presented (no more than 3 pages for each pilot PAs and pilot areas)</b></p>			
2	<p>Field trips to the project areas and pilot PAs were carried out, the necessary information was collected.</p> <p><b>Result 2. Final report on the state of biodiversity and ecosystems according to the structure of Appendix 1 (for each pilot PAs and project area)</b></p>	110 days	May 30, 2022	20 %
3	<p>The sections of the scientific background report for the creation of 5 new PAs have been prepared</p> <p><b>Result 3. The Science Background report of the Creation of 5 New PAs was presented</b></p>	50 days	July 30, 2021	30 %
4	<p>A program for monitoring mammals of the pilot PAs has been prepared</p> <p><b>Result 4. Mammals monitoring program according to the structure of Appendix 2 (for each pilot PAs)</b></p>	40 days	September 15, 2022	20 %

5	<p>Participated in the finalization of the scientific background report and the feasibility study for the creation of 5 new PAs</p> <p>The base of photo and video materials, reports, cartographic material and other materials in electronic media has been transferred.</p> <p><b>Result 5. The final versions of all reports, photo base, video materials and cartographic materials are presented.</b></p>	30 days	December 15, 2022	10 %
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The expert is expected to provide the prescribed deliverables in a timely and professional manner throughout the period this contract is in force.

#### ORGANIZATIONAL MEASURES:

- The Contractor should fully accept and agree with the TOR requirements and the General Conditions for Individual Contract including UNDP individual contract template;
- The Contractor is responsible for the safety of the collected materials, prepared product, and excludes the creation of counterfeit products;
- The Contractor undertakes to comply with the legislation of the Republic of Kazakhstan in the field of copyright and related rights;
- In the course of his work, the involved expert reports to the UNDP biodiversity project manager and the expert on improving the PAs management system. All actions related to the performance of this work without fail must be coordinated with the specified persons;
- The involved expert has no right to distribute, transfer data, materials, reports collected/prepared within the framework of this technical assignment without the permission of UNDP;
- The involved expert ensures timely and rational planning, execution of activities and achievement of results in accordance with this technical assignment.
- The reports must be submitted in accordance with the deadlines specified in the "Expected Results" section of this Terms of Reference.
- Regardless of the deadline for the completion of the individual contract, the involved expert, as necessary, participates in thematic seminars, discussions and meetings. Reports and other materials must be submitted on electronic media in Russian;

#### DURATION OF WORKS

##### a. Expected duration of work

The total duration of work is **250 working days** from the date of signing the contract in the period from November 2021 to December 2022.

##### b. Terms of consideration by UNDP with the Implementing Partners of the Project of the results, giving comments, agreeing on the results, etc.

The expert submits materials of the work performed to the UNDP project (addressed to the project manager) for comments and approval. The presented results are agreed in accordance with the expected results specified in this Terms of Reference within 5 working days via e-mail.

**c. Special causes of emergencies, as well as the serious consequences of any delays in the execution of work**

In case of poor quality of the expert's work, UNDP reserves the right to terminate the contract unilaterally. Therefore, the work must be done efficiently and on time, in accordance with the requirements of the contract.

The UNDP project reserves the right to make changes to the Terms of Reference (not more than 25%) that do not affect the general nature of the work.

**DUTY STATION:**

The involved expert performs work at the place of his location. In the course of the work, trips to the East Kazakhstan, Almaty and Turkestan regions are envisaged (see the travel schedule below) for conducting scientific field research, collecting information and meeting with nature users and other related parties.

**TRAVEL SCHEDULE:**

To complete the scope of work under this contract, the expert must travel in 2021-2022 to East Kazakhstan, Almaty and Turkestan regions.

A detailed work schedule and departure dates are preliminarily agreed upon with the project manager and landscape planning expert. Travel, accommodation and travel expenses of the expert must be included in the financial proposal when submitting documents for the competition.

A tentative travel schedule for the expert is given below.

Itinerary	Location	Number of trips	Number of days	Planned dates
<b>Departures: travel time</b>				
Home-base - Shymkent	Turkestan region	1	2	November 2021 (in the first ten days)
Shymkent - Zhabagly village	Turkestan region, Zhambyl region	1	1	November 2021 (in the second ten days)
Zhabagly village - Turkestan	Turkestan region	1	1	November 2021 (in the third ten days)
Turkestan - Home-base	-	1	2	
Home-base - Narynkol village	Almaty region	1	1	March 2022 (in the third ten days)



Narynkol village - Chundzha village	Almaty region	1	1	April 2022 (in the first ten days)
Chundzha village - the Home-base	-	1	1	April 2022 (in the second ten days)
Home-base - Saryozek village	Almaty region	1	1	April 2022 (in the third ten days)
Saryozek village – Zharkent	Almaty region	1	1	May 2022 (in the first ten days)
Zharkent - the Home-base	-	1	1	
Home-base - Talgar	Almaty region	1	1	May 2022 (in the second ten days)
Home-base – Zaysan	The East Kazakhstan region	1	2	May 2022 (in the third ten days)
Zaysan - the Home-base	-	1	2	
Field trips:				
Field trip to Sairam-Ugam National Park (149,037 hectares)	Kazygurt district, Tolebi district, Tyulkubassky district (Turkestan region)	1	6	November 2021 (in the first ten days)
Field trip to Aksu-Zhabaglinsky nature reserve (131 934 hectares)	Tulkubassky district, Tolebi district, Baidibek district (Turkestan region) Zhualinsky district (Zhambyl region)	1	5	November 2021 (in the second ten days)
Field trip to the Syrdarya-Turkestan regional park (119,978 hectares)	Otyrar district, Arys district, Baidibek district, Saryagash district (Turkestan region)	1	5	November 2021 (in the third ten days)
Field trip to the Terskei nature reserve zone (189 407 hectares)	Raiymbek district (Almaty region)	1	6	March 2022 (in the third ten days)

Field trip to the Ketmensky nature reserve (218 474 hectares)	Narynkol district, Uygur district (Almaty region)	1	7	April 2022 (in the first ten days)
Field trip to the Charyn National Park (127,050 hectares)	Uygur district (Almaty region)	1	6	April 2022 (in the second ten days)
Field trip to the Koksuy reserve (586 796 hectares)	Kerbulaksky district, Eskeldinsky district, Panfilovsky district (Almaty region)	1	7	April 2022 (in the third ten days)
Field trip to the Useksy nature reserve (197 684 hectares)	Panfilov district (Almaty region)	1	5	May 2022 (in the first ten days)
Field trip to the Ile-Alatau National Park (198 669 hectares)	Talgar district (Almaty region)	1	5	May 2022 (in the second ten days)
Field trip to Saur-Manyrak reserve zone (332,160 hectares)	Zaysan district, Tarbagatai district (East Kazakhstan region)	1	7	May 2022 (in the third ten days)
<b>Total:</b>			<b>76 days</b>	

### **INSTITUTIONAL MECHANISM (ACCOUNTABILITY AND INTERACTION)**

In the course of his work, the expert reports to the expert on improving the PAs system and the UNDP project manager in the field of biodiversity conservation. All actions related to the performance of this work without fail must be coordinated with the UNDP biodiversity project manager and the PAs management system improvement expert;

#### **a. Frequency of reporting:**

- all reports are sent for approval and approval to the UNDP biodiversity project manager and the PAs management system improvement expert.
  - the expert provides consultations for the project team during the entire period of the terms of reference through meetings, online conferences;
- b. Institutions, organizations, persons with whom the Contractor will keep in touch, interact and meet during the execution of work;
- in the course of performing the work, the expert must meet and interact through official requests with all target groups on which the results of the work depend.

### **QUALIFICATION OF A SUCCESSFUL INDIVIDUAL CONTRACTOR**

- Higher education in Biology/ Hunting management with a specialization in theriology;
- At least 3 years of experience in conducting research in theriology;

- Availability of scientific/popular science articles on theriology or hunting management;
- Work experience in government agencies, universities, research institutes and/or environmental organizations;
- Knowledge of the Laws of the Republic of Kazakhstan in the field of biological resources, PAs, protection and reproduction of the animal world;
- Knowledge of the specifics of PAs work;
- Ability to work in a team, excellent communication skills;
- Skills in the preparation of reports and analytical materials.
- Experience in international projects is a plus.
- Excellent knowledge of Russian language

### **FINANCIAL PROPOSAL AND PAYMENT SCHEDULE**

This contract is concluded for a fixed amount, including the costs of consulting services and transportation costs.

Payment will be made in instalments after satisfactory completion of each item of the scope of work of the Terms of Reference and authorization of the results by the UNDP Project Manager in the field of biodiversity conservation. The proposal must be submitted in the national currency tenge.

In this regard, the expert's proposal must be submitted with an indication of the lump sum payment in accordance with the following instalments:

<b>No.</b>	<b>Results</b>	<b>Amount</b>
1.	Tranche1. Result 1	20 %
2.	Tranche 2. Result 2	20 %
3.	Tranche 3. Result 3	30 %
4.	Tranche 4. Result 4	20 %
5.	Tranche 5. Result 5	10 %
	<b>TOTAL:</b>	<b>100%</b>

### **RECOMMENDATIONS FOR SUBMISSION OF PROPOSALS**

The following PDF documents must be attached to your proposal:

1. A duly completed and signed letter from the applicant to UNDP confirming his / her interest and readiness for the assignment of an individual contractor; The financial proposal must include all the costs of the contract, with a detailed breakdown of costs according to the attached UNDP form;

If an Offeror is employed by an organization/company/institution, and he/she expects his/her employer to charge a management fee in the process of releasing him/her to UNDP under Reimbursable Loan Agreement (RLA), the Offeror must indicate at this point, and ensure that

all such costs are duly incorporated in the financial proposal submitted to UNDP

2. Detailed CV, including all previous experience and skills relevant to the assignment, as well as all the necessary contact information (email, phone, etc.);
3. Documents confirming the qualifications of the Applicant (diplomas, certificates of advanced training, certificates of completion of courses);
4. Short essay:
  - explaining why the applicant considers himself the most suitable candidate for the announced position;
  - including a methodology on the application of an approach to the implementation of technical specifications;

#### **CRITERION FOR SELECTING THE BEST PROPOSAL:**

Individual consultants will be assessed based on cumulative analysis or combined assessment method. The award of the contract must be made to the individual consultant whose proposal has been assessed and determined as:

- I. acceptable and satisfying the minimum requirements
- II. got the highest score according to predefined technical and financial criteria:
  - a. Share of technical criteria: 70%;
  - b. Share of financial criteria: 30%

Technical assessment:

- 1) Only candidates obtained a minimum of 70% (from 400 points maximum) will be admitted to interview;
- 2) Only candidates obtained a minimum of 70% (from 100 points maximum) will be considered for financial evaluation (as a result of interview).

<b>Criteria</b>	<b>Weight / specific value</b>	<b>Minimum score</b>	<b>Maximum score</b>
Technical desk review			
Higher education in Biology/ Hunting management with specialization in theriology; <ul style="list-style-type: none"> <li>- bachelor's degree -70 points;</li> <li>- Master's degree - 80 points;</li> <li>- Doctor's degree (PhD) - 100 points</li> </ul>	20 %	70	100
At least 3 years of experience in conducting research in theriology; <ul style="list-style-type: none"> <li>- Less than 3 years – 0 points</li> <li>- 3 years - 70 points;</li> <li>- 4-5 years – 80 points</li> </ul>	20 %	70	100

<ul style="list-style-type: none"> <li>- 6-7 years - 90 points;</li> <li>- 8 years and more - 100 points</li> </ul>			
<p>Work experience in government agencies, universities, research institutes and / or environmental organizations</p> <ul style="list-style-type: none"> <li>- less than 3 years – 0 points</li> <li>- 3 years - 70 points;</li> <li>- 4-5 years – 80 points</li> <li>- 6-7 years - 90 points;</li> <li>- 8 years and more - 100 points</li> </ul>	20 %	70	100
<p>Availability of scientific / popular science articles on theriology or hunting management:</p> <p>less than 3 articles – 0 points</p> <ul style="list-style-type: none"> <li>- 3-5 articles - 70 points;</li> <li>- 6-9 articles - 85 points;</li> <li>- 10 articles and more - 100 points</li> </ul>	20 %	70	100
<i>Subtotal</i>	<i>80%</i>	<i>280</i>	<i>400</i>
Interview	20 %	70	100
<b>Overall technical score</b>	<b>100%</b>	<b>350</b>	<b>500</b>

Financial (Lower Offer/Offer*30)	<b>30%</b>
<b>Total Score</b>	Technical score 70% + 30% Financial

**Weight per Technical Competence**

Weak: Below 70%	The individual consultant/contractor has demonstrated a <b>WEAK</b> capacity for the analyzed competence
Satisfactory: 70-75%	The individual consultant/contractor has demonstrated a <b>SATISFACTORY</b> capacity for the analyzed competence
Good: 76-85%	The individual consultant/contractor has demonstrated a <b>GOOD</b> capacity for the analyzed competence
Very Good: 86-95%	The individual consultant/contractor has demonstrated a <b>VERY GOOD</b> capacity for the analyzed competence
Outstanding: 96-100%	The individual consultant/contractor has demonstrated a <b>OUTSTANDING</b> capacity for the analyzed competence

**Agreed**


Talgat Kerteshev

Project Manager

Date: 05-Oct-2021



Assel Nurbekova

Programme Analyst of Energy and Environment Unit

Date: 07-Oct-2021

## Appendix 1

### Structure of the report on the state of biodiversity and ecosystems<sup>6</sup>

1. Location and area of PAs
2. Status and brief history of the creation of PAs
3. Brief description and main features of the territory
4. Description of the relief, climate, geology, hydrology and soils of the territory (possibly according to literature data)
5. Biotic component
  - 5.1. Animals
    - 5.1.1. Mammals
    - 5.1.2. Species composition, the current state of populations
    - 5.1.3. Rare and background species
    - 5.1.4. Identifying threats to mammalian populations
    - 5.1.5. Definition of monitoring species (an annotated list highlighting the reasons why the species is proposed and its current state); and monitoring sites (routes) for Biodiversity Monitoring for PAs
6. Current state
  - 6.1. General assessment of the preservation of the complexes, anthropogenic disturbance
  - 6.2. Existing threats and problems
  - 6.3. Recommendations for improving the condition

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<sup>6</sup> The research report is provided in accordance with the Interstate System of standards on information, librarianship and publishing. (GOST 7.32-2017 SSILPS)

## **Appendix 2**

### **Biodiversity Monitoring Program in Pilot PAs**

#### **CONTENT (can be expanded at the discretion of the performer)**

Preface

Introduction

Chapter 1. Current state of biodiversity of pilot PAS

Chapter 2. Purpose and objectives of monitoring

Chapter 3. Stages of monitoring and implementers

Chapter 4. Objects of monitoring

Chapter 5. Basic situation. Status of monitoring species at the time of the start of regular tracking

Chapter 6. Methodology for conducting field observations

Chapter 7. Necessary devices and equipment

Chapter 8. Office processing and systematization of field observation data

Chapter 9. Analysis of the received data. Monitoring deliverables. Assessment of the state of monitoring species

Chapter 10. Conclusions and recommendations. Preparing an expanded report

Appendices



**Appendix 3****Structure of the Scientific Background Report for New PAs Creation<sup>7</sup>**

Chapter 1. The uniqueness, significance and representativeness of the natural complexes of the project area and the objects of the state nature reserve fund located on it

Chapter 2. Assessment of the state of socio-economic conditions in the study area

Chapter 3. The state of ecological systems and objects of the state natural reserve fund in the study area, risks, threats to conservation and measures for their protection, protection, restoration and use;

Chapter 4. Description of objects of study of the natural environment: relief, soil, climate, geology, surface and underground waters, physical and geological processes occurring in the territory.

Chapter 5. Engineering and geological characteristics of the project area, analysis of negative physical and geological processes, the possibility of preserving unique geological objects.

Chapter 6. Revealing the degree of comfort of the environment, possible ways to improve it and use a specially protected natural area, analysis and assessment of the general climatic background.

Chapter 7. Hydrological assessment of the territory: analysis of existing water bodies and watercourses, their length, area, regime, speed, depth and width, the flow of water bodies, swampiness of the territory, hydromineral and other medicinal resources

Chapter 8. Analysis of the state of the animal world (theriofauna)

Chapter 9. The state of ecological systems and objects of the state natural reserve fund in the study area

Chapter 10. Description of ecosystems and landscapes

Chapter 11. Comprehensive assessment of the territory (nature conservation; recreational; landscape and aesthetic).

Chapter 12. Economic activity and its impact on the natural complexes of the study area

Chapter 13. Measures for the protection of ecological systems of a specially protected natural area

Chapter 14. Environmental Protection Measures:

- Plant protection;
- Protection of the animal world;
- Soil protection;
- Landscape protection;
- Protection of water sources;
- Air basin protection;
- Protection of ecological systems from recreational impact;
- Protection of monuments of history and culture;

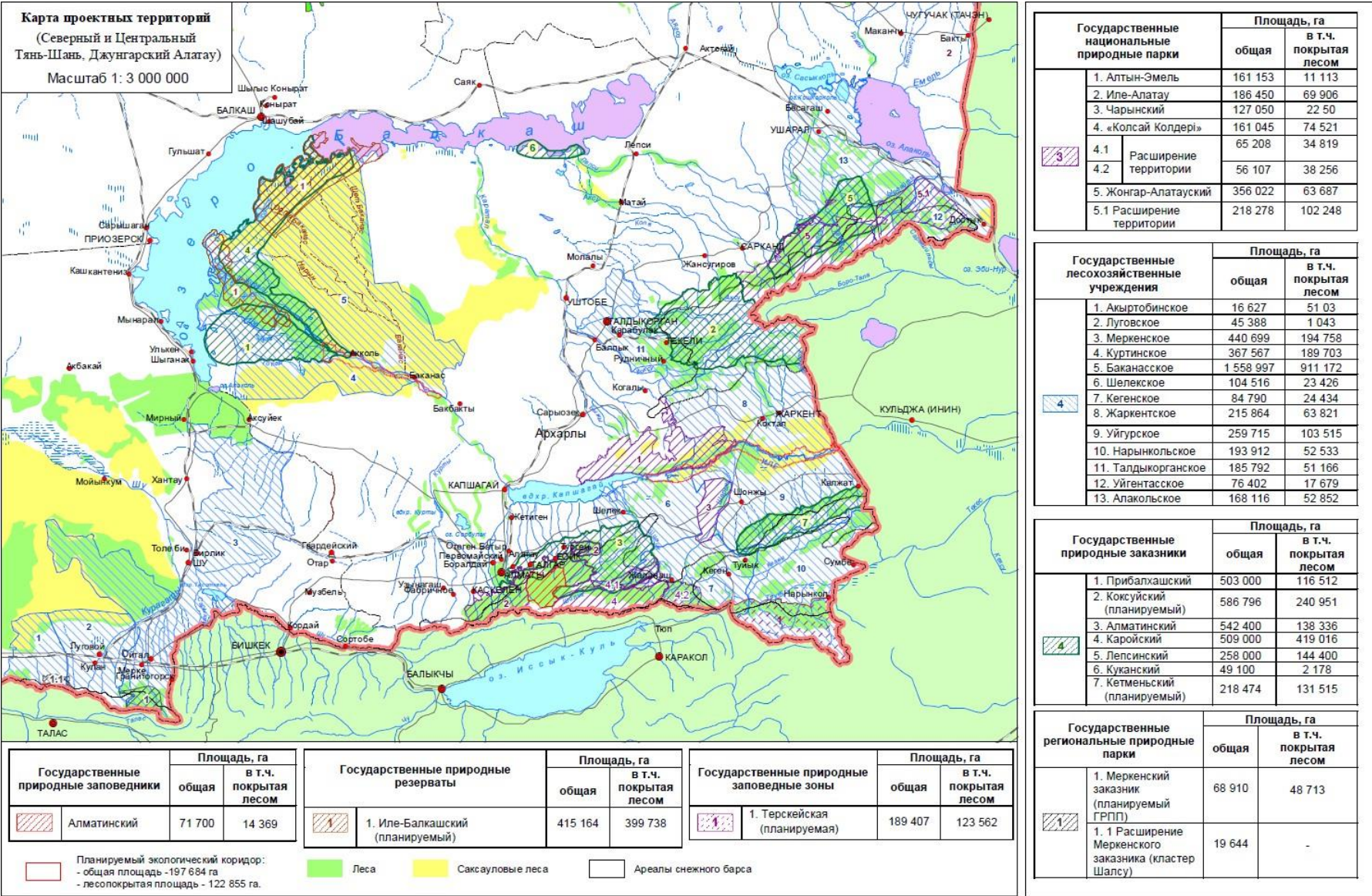
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<sup>7</sup> The report is presented in accordance with the structure approved by the Order of the acting Of the Minister of Agriculture of the Republic of Kazakhstan dated September 1, 2010, No. 558. Registered with the Ministry of Justice of the Republic of Kazakhstan on October 5, 2010, No. 6518 "On approval of the Rules for the development of projects of natural scientific and feasibility studies for the creation or expansion of specially protected natural areas, as well as adjustments to the feasibility study"

- Engineering protection of protected areas from hazardous geological processes and phenomena.

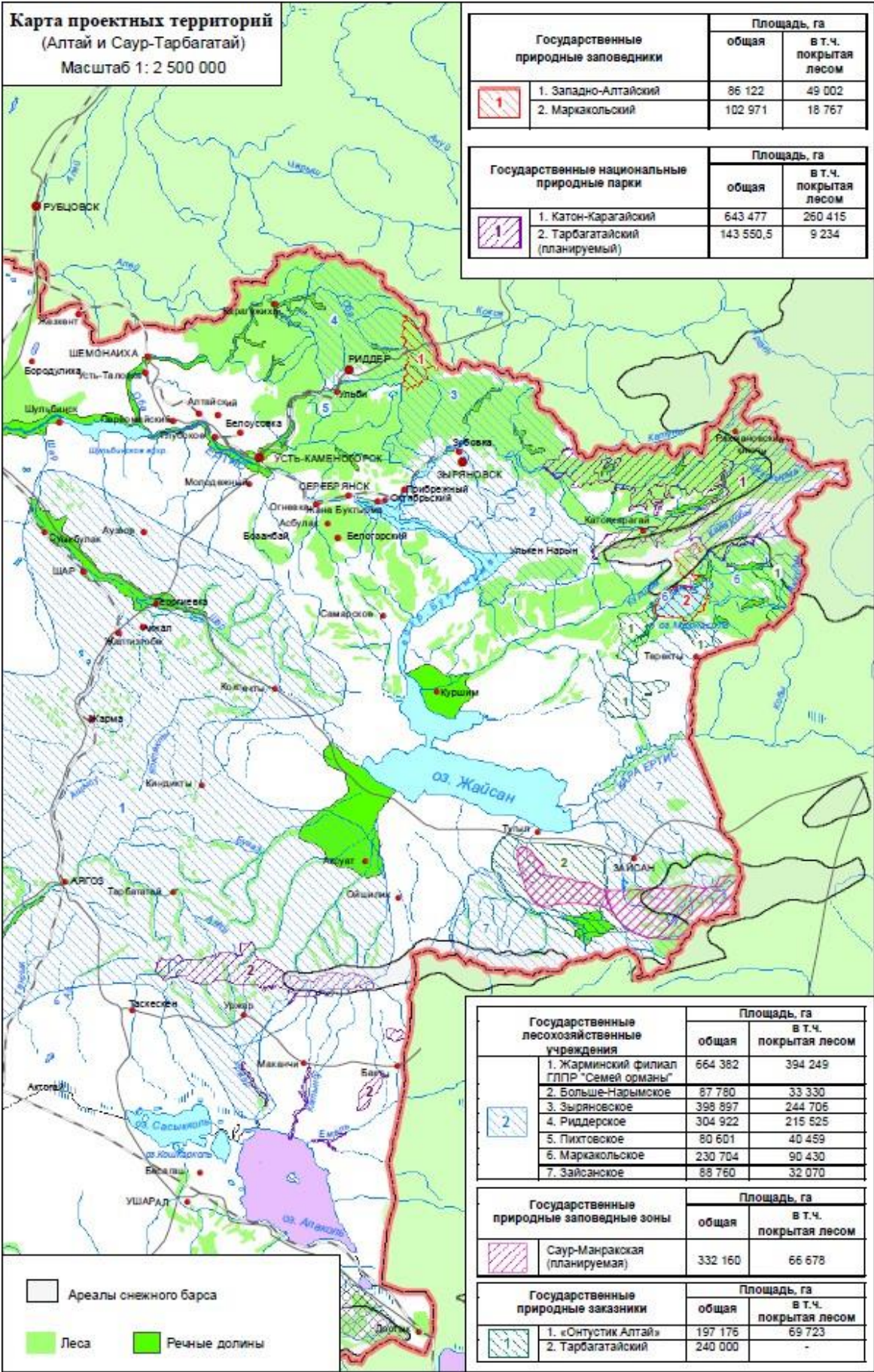
## Chapter 15. PAs Category, Boundaries and Area

Appendix 4. Map of the project area of Almaty region





Appendix 5. Map of the project area of the East Kazakhstan region





Appendix 6. Map of the project area of the Turkestan region

