

"Agreed"

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National Nature Park Yagnob Management Plan 2025-2029.



*Prepared by the PO "Tabiati Yoboi" under
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ABBREVIATIONS

WUA	Water Users Associations
FAGRT	Forestry Agency under the Government of the Republic of Tajikistan
SCLAGRT	State Committee on Land Administration and Geodesy of the Republic of Tajikistan
SWMB	State Water Management Board (rayvodkhozes)
SISPNA	State Institution of Specially Protected Natural Areas
DF	Dekhkan farms
CEPRT	Committee for Environmental Protection under the Government of the Republic of Tajikistan
PO	Public organization
SPNA	Specially protected natural areas
IO	International organizations
IUCN	International Union for Conservation of Nature
MART	Ministry of Agriculture of the Republic of Tajikistan
NAST	National Academy of Sciences of Tajikistan
NNPY	National Nature Park Yagnob
FRI	Forest Research Institute FAGRT
MP	Management plan
RT	Republic of Tajikistan
UNESCO	United Nations Educational, Scientific and Cultural Organization

INTRODUCTION

This Medium Term Management Plan for the National Nature Park Yagnob (YNNP) for 2025-2029 has been developed by experts of the Public organization (PO) "Tabiati Yoboi" in cooperation with the staff of the State Institution of Specially Protected Natural Areas (SPNA) of the Committee on Environmental Protection under the Government of the Republic of Tajikistan (CEP) and the National Academy of Sciences of Tajikistan (NAST). The "Guidelines for Specially Protected Areas Management Plan" published under the "Tajikistan Sustainable Landscape Restoration Project (TSRP) (P171524)" funded by the World Bank under the RESILAND CA+ Program were used in the development.

A management plan is a medium-term development program consisting of measures aimed at the conservation of a specially protected natural area through scientific research, monitoring, environmental education and conservation activities.

The purpose of development of the NNPY management plan is to ensure improvement of the state management and planning in the sphere of organization and conduct of NNPY activities in accordance with the Law of the Republic of Tajikistan "On Specially Protected Natural Areas" dated 26 December 2011. The international obligations of the Republic of Tajikistan on biodiversity conservation and other international documents are also taken into account.

The management plan is intended to fulfill an important role in informing the public about the activities of the NNPY, as well as in promoting environmental knowledge among the population in the NNPY area, the main task is to educate people to take care of nature, to form a sense of personal responsibility for the state of the environment.

The Management Plan was based on the existing information on the NNPY's resources, analysis of its practical activities, as well as study and analysis of existing problems in the process of functioning. The baseline data for the work was specially conducted research, stock materials and developments.

An important component of this work was interaction with the local population, regional state and local authorities, landowners and land users, scientific institutions, non-governmental environmental organizations. For this purpose, working meetings were held with the invitation of representatives of third-party stakeholder organizations and the local population, at which the main directions and opportunities for further development of the NNP Yagnob were identified and consensus on the issues under consideration was reached.

In 2006, the State Committee for Environmental Protection and Forestry of the Republic of Tajikistan inscribed the NNP Yagnob as part of the Fann Mountains on the Tentative List of Candidate World Heritage Sites of UNESCO[1].

A list of participants in the working group for the NNP Yagnob management plan is provided in Appendix 1.

SECTION 1. BASIC INFORMATION ABOUT NNP "YAGNOB"

1.1 Location and brief description

Name of the protected area: National Nature Park Yagnob

Governing body: State Institution of Specially Protected Natural Areas of the Committee for Environmental Protection under the Government of the Republic of Tajikistan.

National Category: Natural Park.

IUCN Category: II.

Management plan date: May 2024

Management Plan period: 5 years (2025 - 2029).

Location of the main office of NNP "Yagnob": 734025, Sughd region, Ayni district, Jamoat "Yagnob" Dushanbe, Tajikistan, tel: + (992) 92 783 70 52; E-mail: firdawas.khudoyorov95@mail.ru.

Date of establishment: the National Natural Park "Yagnob" was established by the Decree of the Government of the Republic of Tajikistan on 2 May 2019 №227 with the purpose of preservation and restoration of natural complexes with special ecological importance, protection of cultural heritage, including ethnographic, archaeological and historical waters, development of ecological tourism, promotion of scientific works and sustainable use and natural resources.

Description of the general boundaries of NNP "Yagnob"

In the north, the border of NNP Yagnob coincides with the border of Matcha district, in the north-east - with the border of Ayni district, in the south-east - with the border of Vahdat city, in the south-west - with the border of Varzob district and in the north-west - with the border of Ayni district.

Area (in hectares): The total area of NNP Yagnob is 57,544.00 hectares. It is located on the territory of Ayni district of Sughd province. Land resources and land categories of NNP Yagnob are given in *Table 1*.

Table 1

Land resources and categories of land of NNP "Yagnob"

Land category	Area, ha	% of total area
Pastures	21,408.58	37,20
Forest belts and shrubs	251,69	0,44
Glaciers	2,169.56	3,77
Homestead plots	49,00	0,08

Rivers	260,43	0,45
Rocks and scree	18,980.72	33,00
Dirt roads	36,21	0,06
Other land in agriculture	14,387.81	25,00
Total:	57,544.00	100%

1.1 Purpose and objectives of the NNP Yagnob

The park was created for the purpose of:

- ☐ preservation of unique natural complexes, as well as historical, cultural and other cultural heritage sites (ethnographic and local history sites);
- ☐ restoration and conservation of biological diversity and rational use of natural resources;
- ☐ preservation of cultural and historical heritage;
- ☐ conducting research programs for the protection and reproduction of flora and fauna, including rare and endangered species;
- ☐ revival and preservation of national traditions, improvement of social, cultural and living conditions of the population, development of traditional methods of nature management;
- ☐ assistance in the development of ecological and cultural tourism;
- ☐ organization of tourist and excursion activities in the mode of a recreational area, promotion of educational work among the population;
- development and implementation of scientific methods of preserving natural complexes, carrying out ecological monitoring and eco-education of the population.

1.1 Legal status of NNP Yagnob

The National Natural Park "Yagnob" is a natural park of state importance. Its legal status is determined by the following state legislative acts:

- Law of the Republic of Tajikistan "On Specially Protected Natural Areas", 26 December 2011, No. 788.
- Resolution of the Government of the Republic of Tajikistan of 2 May 2019, No. 227 "On the establishment of the National Natural Park "Yagnob".
- The National Natural Park "Yagnob" is organized in accordance with Article 27 of the Law of the Republic of Tajikistan "On Specially Protected Natural Areas" in order to strengthen the protection and conservation of valuable landscape complexes, rare and endangered species of flora and fauna, natural, cultural and historical monuments, to conduct scientific research, to revive folk traditions, to create favourable conditions for the development of tourism, as well as sustainable nature management.

- ☐ Control over the activities and compliance with the legislation related to the territory of NNP "Yagnob" is assigned to the SISPNA.

The following activities are allowed at NNP Yagnob:

- ☐ carrying out activities on preservation, restoration and prevention of changes in natural complexes as a result of anthropogenic impact, as well as fulfillment of tasks on conducting research works assigned to the Park;
- ☐ carrying out activities to improve the sanitary condition of forests, as well as other types of limited economic activities and rational use of natural resources, which are necessary for the fulfillment of the Park's planned activities and do not have a negative impact;
- ☐ limited grazing in accordance with established regulations;
- ☐ Implementation of measures to develop the Park infrastructure and tourist facilities.

Economic activities contrary to the purpose of the Park and its activities are prohibited on the territory of the NNP Yagnob, including:

- ☐ any activity that threatens the existence of natural complexes and protected historical and cultural sites;
- ☐ geological exploration and mineral development;
- ☐ actions that alter the hydrological regime;
- ☐ economic activities in the territory of ecological and ethnographic sites that lead to degradation of the environment and biological resources;
- ☐ introduction of plants and animals alien to local flora and fauna;
- ☐ disposal of all types of industrial and domestic waste;
- ☐ camping, setting up tents, making fires outside the designated areas;
- ☐ collecting zoological, botanical, and mineralogical collections, except as provided for in the park's scientific research themes and plans;
- other activities that cause a reduction in natural, scientific, aesthetic, and cultural values.

SECTION 2. DESCRIPTION OF THE NATURAL CONDITIONS OF NNP "YAGNOB"

2.1 Physical and geographical sketch of NNP "Yagnob"

Geographically, the Yagnob valley is located in the south-eastern part of the Zeravshan zone, i.e. south of the Zeravshan ridge, and is administratively part of the Ayni district of Sughd province. The maximum absolute height reaches 5145 m. on the Zeravshan ridge and the water's edge is at the heights of 2200-2800 m., respectively, the excesses are from 1500 to 2000 meters. (in some places up to 2500 meters).

The territory of the valley has a peculiar and complex relief, where the elevation from sea level ranges from 2400 to 3000 meters. By the character of relief and peculiarities of geological structure, the Yagnob valley represents an area of ancient ducking, composed of Mesozoic sediments. The crests of the ridges have a typical alpine character with steep pointed peaks up to 5-5,500 meters.

The hydrographic network of the valley is represented by the Yagnob River and its tributaries. The Yagnob River belongs to the Zeravshan River basin. Its valley is 116 kilometers long and its basin covers approximately 1,660 km². Glaciation in the Yagnob valley is predominantly developed in the south-eastern part. The Yagnob River is formed by the confluence of the Kumbil and Barzanga rivers, which originate in the glaciers of the Takali mountain junction. It flows parallel to the Zeravshan River and separates the Zeravshan Range from the Hissar Range. The Kumbil and Barzangi rivers and part of the upper Yagnob flow in low banks through a vast highland basin known as the Gulbas. This area is famous for its alpine and subalpine meadows. In summer, numerous flocks of sheep, brought here from the southern and northern regions of Tajikistan, graze here.

The Yagnob River is characterized by a high specific water carrying capacity due to good moisture content of the high-mountain slopes in the catchment area. The water discharge reaches its maximum in June and is equal to 26.5 l/s. The period of maximum water discharge coincides favourably with the period of irrigation of fields. The Yagnobians practically do not use the main water artery (rather it is an obstacle, e.g. for transport communication). All mills are located on side tributaries of the Yagnob, and irrigation channels are diverted from numerous small streams.

Terrain conditions allow the construction of relatively small canals, usually to meet the water needs of one, with rare exceptions, two neighboring villages. At present, most irrigation canals are abandoned.

Small villages are scattered in the middle reaches, where the Yagnob valley is relatively wide and open. The valley slopes are covered in summer with dense

and lush grasses, many rosehip and ephedra bushes, and mountain currant bushes near the riverbed (*Figure 1*).



Figure 1: The Yagnob River in the middle reaches (photo by PO "Tabiati yoboi")

The Zeravshan juniper and poplar are rare. In the vicinity of villages there are small fields where barley, peas, wheat, and sometimes potatoes are grown. Excellent pastures and hayfields create good conditions for cattle breeding. Geological structure (according to materials of Guni A. 2001), tectonics and seismicity of Yagnob are connected with the history of development of Gissar-Alai - Hercynian folding structure, which underwent mainly in Mesozoic period the stage of platform development, which was replaced then by the latest mountain formation. According to the composition of stratigraphic-lithological complexes of rocks composing the Yagnob valley, it is part of the Zeravshan-Gissar structural-formational zone.

The oldest rocks of the Lower Palaeozoic age dominate among other rock complexes and are represented by the Yagnob Shale Formation, which is characterized by corrugated and plate-like strata, a high degree of metamorphism, and an exclusively shale composition with rare interlayers of siliceous rocks and limestone. They compose the Yagnob valley in its axial part and wedge out in the upper reaches and at the tributary slopes. Shale-carbonate complexes of Silurian age rocks are represented in the study area fragmentarily, in the form of lenses, and are of little landscape significance. Weak metamorphisation and peculiarities of the lithologic composition determine the steeply sloping character of the relief. In the central part of the Yagnob valley, calcareous rocks are found in the middle and

even in the lower parts of the slopes of the right side of the valley, which determines the rocky character of landscapes, their relative dryness, sharp differentiation of the settlement system and practically no plough terraces.

According to the current intensity of neotectonic phenomena, Yagnob belongs to the zone of 9-magnitude earthquakes with a recurrence of 1000-2000 years. Quite frequent are considered earthquakes of 4-5 magnitude, the strength of which increases to 5-6 magnitude in the upper parts of the slopes. Seismic dislocations are very widespread: grandiose seismogenic landslides and collapses, seismogenic cracks, ditches, "dykes", fracture systems. Weak earthquakes (4-5 magnitude) already affect the development of active and potentially unstable landslides, sometimes causing their catastrophic displacement. The formation of landslides is also favoured by the "undercutting" of the slopes of the Yagnob River during the construction of roads and trails. Geological factors had a special impact on the formation of natural-resource environment of Yagnobians. The prevalence of stone dwellings as opposed to loess-clay ("earthen") dwellings in most of the surrounding areas (Karategin, Gissar, Zeravshan valley, etc.) is striking. Apparently, it is connected with cultural traditions of dwelling construction, maximally adapted to the conditions of the natural environment. Loess-clay material is less common (on landslide slopes), almost everywhere contains a large amount of stones and rubble and is used only as a cementing material. Flat chippings of crystalline shales prevail in construction. As a rule, houses are squat, often a natural surface - a rocky ledge, a bend in the relief - serves as one of the walls.

The alpine relief of the Zeravshan Range is represented by kar forms and exarational relief forms created by hanging glaciers - karas and glacial cirques. The Zeravshan Range, which is narrow and has steep slopes for most of its length, does not present favourable orographic conditions for the formation of extensive cirques where significant masses of firn could accumulate, so glaciation here is absolutely negligible. For the most part, it is reduced to small firn spots lying in steeply sloping karas under the saddles of passes.

The glaciation of the Gissar Ridge is much more developed, as it has a northern exposure and relatively more gentle slopes. More powerful glaciation of the Gissar Range also created valley glaciers in some side tributaries of the Yagnob (e.g., Tagrich, etc.). Some of them are laid along deep trog valleys and are the result of merging of several smaller glaciers. Due to inordinate grazing, erosion processes develop quite intensively on the slopes of the southern exposure, and a network of "goat trails" is often observed. Solifluction processes are more developed on the slopes of northern exposure above 2800 - 3000 m. and are represented mainly by solifluction terraces, often broken as a result of cattle

grazing. According to information recorded by M.S. Andreev (1970) from the words of old residents, up to 300 families lived in the uppermost part of the valley of the Gulbas tract about 200 years ago and then left for Karategin because of constant avalanches. Distribution and intensity of dangerous slope processes, primarily avalanches and landslides. The development of mudflows has a fragmentary character in Yagnob. The resource environment is increasingly affected by anthropogenically stimulated slope processes, primarily erosion in the lower and middle parts of slopes subjected to pasture digression, as well as along the old geologic road from the side of the Romit gorge and the new road from Khshirtob.

2.2 Climatic conditions

The climate of the upper Yagnob basin is characterized by short temperate summers and severe long winters with a lot of snow. According to some indications (Anzoba stations of the Climate Handbook (1966)), snow in the Yagnob valley lasts for 6-8 months, and frosts reach 20-30 °C. There are no precise data on the annual precipitation; based on materials from the stations Dekhauz and Iskanderkul (from adjacent areas), it can be assumed that it does not exceed 300 mm.

Deeply incised and far into the mountains, the Yagnob valley receives little precipitation and is somewhat dry. In the western part, in the villages of Margeba and Khishortoba, the rainfall is a little more than 300 mm, while in the Piskon area it is less than 250 mm, and in the Nawabad area, already less than 200 mm. The average July temperature is above 20 degrees Celsius. In the eastern part of the valley, due to the high altitude, the valley has a steppe character, but with a cool climate, with an average July temperature of up to 15 °C. Winter is relatively mild in the whole valley, but due to avalanches the existing road is not functional for more than 5 months of the year. Mountains influence circulation processes, temperature regime and moisture regime, causing a pronounced vertical climate belt. A very important feature of climate for vegetation is the specific character of seasonal distribution of precipitation, which, in our area, as well as in the whole Tajikistan, is concentrated mainly in the cold season; in summer only a negligible part of their annual sum falls. In this regard, the development of vegetation is mainly due to the reserves of spring moisture in the soil (according to temperature conditions, mainly snow moisture) and with the depletion of these reserves and the onset of summer drought, stops. Thus, summer drought further shortens (at least for many plants) the already short growing season. In the region, a large amplitude of altitudes determines a sharp expression of vertical climate changes. With increasing absolute altitudes, temperatures gradually decrease, the summer period

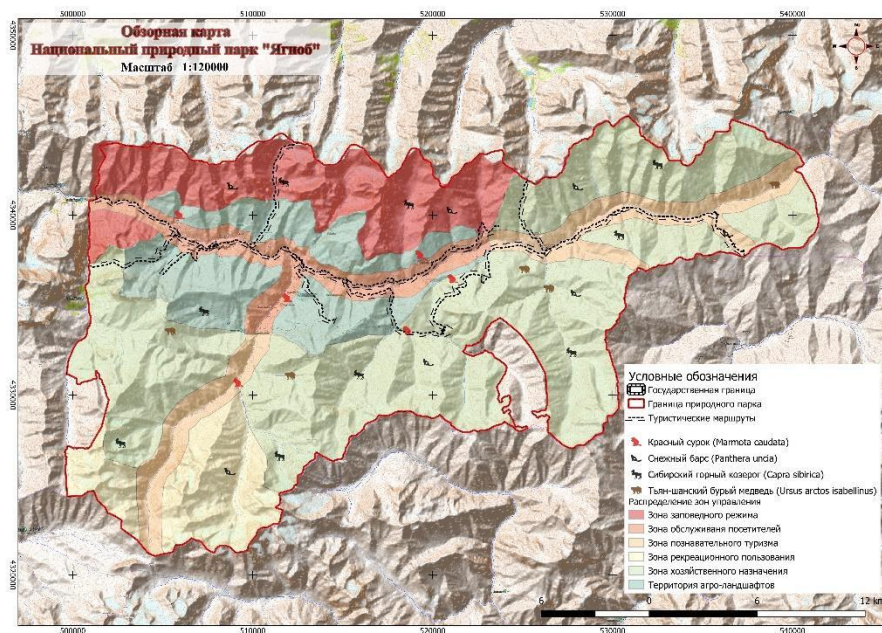
(and the period of summer drought) shortens, at the expense of which the duration of the winter period and snow cover increases; the amount of precipitation also changes, apparently in the direction of decrease. Climatic conditions

2.3 Brief description of NNP Yagnob zones

The territory of the Park is divided into the following zones:

- zone of the reserve regime, within which any economic and recreational activity is prohibited;
- zone of the reserved regime, providing protective conditions of natural objects, within which strictly regulated recreational use is allowed. In the zone of customary regime it is allowed to create conditions for short-term recreation of citizens by organizing tourist routes, setting up tents, small shelters and natural corners for inspection;
- zone of cognitive tourism, intended for the organization of environmental education and familiarization with the attractions of the Park;
- zone of recreational use, including territories intended for sport and amateur hunting, fishing, film and photo shooting;
- zone of protection of historical and cultural objects, providing conditions for the protection of natural objects;
- zone of protection of historical and cultural objects, providing conditions for the protection of natural objects;
- zone of recreational use, including territories intended for sport and amateur hunting, fishing, film and photo shooting;
- zone of protection of historical and cultural objects, providing conditions for the protection of historical and cultural objects.

The regimes of the zones of reserved, ordered, zone of cognitive tourism, recreational zone, zone of protection of historical and cultural objects, zone of service of visitors and zone of economic purpose are determined by the authorised state body in the field of specially protected natural territories in coordination with the National Academy of Sciences of Tajikistan and the Committee on Environmental Protection under the Government of the Republic of Tajikistan. Distribution of the territory of NNP "Yagnob" by zones is given in *Map 1*.



Map 1: Distribution of the territory of NNP "Yagnob" by zones.

2.4. Flora NNP "Yagnob"

Yagnob is located between the two latitudinal mountain ranges of Zeravshan and Gissar and stretches from the confluence of these ranges in the mountain junction of Takali in the east to the meridian of the Anzob Pass in the west. Taking into account the wide distribution in Gissaro-Darvaz of species of this group, not only forming special associations, but also penetrating into the most diverse associations of other types. Hence, it can be emphasized that of the group of vegetation edificators represented in Yagnab, mainly xerophytes are thriving and actively dispersing. The group of mesophytes, psychrophytes and even the representative of Eurasian steppe vegetation are in the period of decline, apparently, reduce the area of their distribution. The vegetation cover of the upper Yagnab basin, along with the diversity of composition, is also characterized by complexity, mosaic distribution, which is due to the diversity and diversity of external (mainly oro-climatic) conditions (A. Davlatov. The vegetation of the Yagnab valley is described by K.Z. Zakirov (1955), Y.S. Grigoriev (1944), G.E. Sidorenko, T.G. Strizhova and A.G. Chukavina (1964). According to the materials of the description of this territory, a completely different pattern of zonality in different parts of this province stands out. On the northern slopes of the Zeravshan and partially Gissar ridges, vegetation is observed as follows:

I. 1200-2000 (2200) m. - the belt of saltwormwort and wormwood deserts. Deserts of this belt, formed by *Artemisia tenuisecta* (*Artemisia tenuisecta*), semi-shrubs - *Salsola montana* (*Salsola montana*), kiurek (*Salsola rigida*) and teresken (*Eurotia ceratoides*), are very sparse. Sagebrush and ephemerals occur in associations, but their role is insignificant. In the western part of the Zeravshan, the

role of ephemeroid wheatgrasses is great. A part of the belt communities is characterised by the shibliaceous tier. Kara-juniper and groves of Turkestan maple occur. The shibliak tier is represented by Bukhara almond (*Amygdalus bucharica*), maple (*Acer regelii*). The vegetation of this belt serves as winter-spring pasture.

II. 2000-2700 м. - belt of deserted steppes and junipers. Archovniks here are composed mainly of Zeravshan juniper and less often of hemispherical juniper, plantations of different closeness, so the grass cover has the character of steppe, ephemeroid, desert, or even meadow, and where the junipers are deserted, the dominance of thin-crossed wormwood or Korzhin, Caucasian and Krygiz grasses. The desert-steppe vegetation of this belt is dominated by Korzhinsky and elongated *Artemisia*, Caucasian wormwood, teresken, cousinia, astragalus, *Acantholimon tatar* and Komarova, yugshan and ferula are common here. Shrubs include Echison's rosehip, warty cherry, Dzungarian lomonosus, and few ephemerals. In river floodplains birch forests of Turkestan birch, less often poplar forests.

III. 2700-3400 м. - belt of subalpine steppes and juniper steppes. Here, on fine-grained slopes, typechak steppes with sprawling bluegrass (*Poa relaxa*), Kyrgyz and hairy grasses (*Stipa kirghisorum*, *Stipa trichoides*), Lehmann's wormwood (*Artemisia lehmanniana*) dominate. These are dominants. They are supplemented by the following herbs: hill geranium, thyme, geranium griffica, prickly goat, astragalus mochrantii and alatava, cousinia from thorny grasses. Lemanoanian-pollinator and estragonniki are common on rubbly slopes. Overgrazing in this belt usually results in the appearance of cusinia and acantholimonniki in the east and associations of prickly sainfoin in the west.

Meadows and meadow-steppes in the upper reaches of the Zeravshan and its tributaries are found in this belt in small patches. Thoron (*Polygonum coriarium*), meadow bluegrass (*Poa pratensis*), rock geranium (*Geranium saxatile*) are common here. The junipers are composed mainly of Turkestan juniper, in the lower part of the belt in the form of low trees, in the upper part of the belt - in the form of shrubs; on dry stony slopes large patches of Ephedra horsetail - an excellent raw material for the medicinal industry - are common.

III. 3400-3800 м. - A belt of low grass meadows, cushion meadows, in some places thorny grasses. Due to the sharp relief, there are many rocks and screes here, and closed vegetation does not develop everywhere. A great role is played by cushion meadows of laphwort and ostrolodochniki, in which alpine herbs take part besides cushion plants. In grass meadows of cereal character shiny bark (*Stipnopleum laguroides*), Olga's brome (*Leucopoa olgae*), and targyl (*Hordeum turkestanicum*) dominate. Spiny-tailed shrews are represented by Cousinaceae, mainly from (*Cousinia franchetii*).

This is the vegetation on the left bank of the Zeravshan. The right bank of

the Zeravshan, i.e. the southern slopes of the Turkestan ridge, has a completely different and more xerophytic character, and the vegetation is quite different in different parts of the ridge. The following vegetation belts are distinguished here:

1. 1800-2600 m. - desert belt. Deserts with Sogdian wormwood, elongated wormwood and thinly dissected wormwood dominate. Ephemeral tier of viviparous bluegrass, desert sedge and zopnik is common.

2. 2600-3500 m. - A belt of steppes with spots of junipers. Typchak steppes dominate, represented by several groups of associations. In typical steppes, not only *Artemisia lemana* (desert steppes) and Karatavian white-meatgrass, but also *Acantholymon tatar* and *Acantholymon reddish* join Tipchak.

3. Above 3600 m. - A belt of alpine cushion meadows and low grass meadows. Pillow meadows are dominated by (*Sibbaldia tetrandra*) and (*Oxytropis immerge*), on meadow patches by alpine grasses: *Potentilla flabellate*, Edelweiss (*Leontopodium ochroleucum*), *Cerastium cerastioides*, Sazic groupings at snowfields are characterized by dominance of sedges. The main use of vegetation is fodder lands, forests are mostly reduced, and from useful plants of wild flora it is possible to recommend collection of ephedra, which is very abundant.

The main prospects for utilizing the vegetation of this province are the creation of terraces and on them woody vegetation in the mid-mountains and the improvement of high-mountain pastures by eliminating thorny grasses.

The Yagnob mountain meadows and steppes have and still do make up for the lack of summer pasture, which has always been felt in the more arid adjacent areas. Increases in local stocking rates, on the other hand, have always been limited by the lack of forage during the long winter period. Nowadays, many pastures are severely degraded as a result of overgrazing, and large areas are heavily overgrazed and weedy with poorly eaten and poisonous herbs (e.g. *Artemisia hissarica*, etc.). More than three dozen species of plants are used as medicinal plants. According to literature sources, currants growing in Yagnob were highly valued at markets in Tashkent and sold even to Russia (Gunya A. 2001).

2.5 Fauna of the NNP Yagnob

The fauna of this region is characterized by a peculiarity of species composition and faunal complexes confined to certain landscape zones. It is interesting not only in faunistic terms, narrow ranges of individual species, high endemism and the presence of subendemic forms, but also in its multifaceted links with the fauna of remote zoogeographic areas.

The territory of Tajikistan has long been subjected to the increased influence of tectonic transformations, which in turn led to the dissection of its relief, preservation and formation of a distinctive, original flora of varying degrees of

antiquity, having links with the floras of other continents. All these consequences have caused such a huge biodiversity of the fauna of Tajikistan.

The fauna of amphibians and reptiles is quite diverse. In the Yagnob valley, the habitats have changed and the numbers of many reptile species have decreased, such as gyurza, epha, and some species of lizards have become very rare. Among amphibians there is 1 species of tailless green toad (*Bufo viridis*), found up to 3800 m above sea level, but invariably where there are temporary or permanent water bodies. The gray cephalopod gecko (*Gymnodactylus russowi*) and the Turkestan cephalopod gecko (*G. fedtschenkoi*) are common, one of the geckos waking up early from hibernation.

Characteristic are agamas: Himalayan agama (*Agama himalaena*), Turkestan agama (*A. lahmanni*) - a typical inhabitant of the mountains of Northern Tajikistan. Typically desert forms of reptiles are relatively poor in species. They are represented by such characteristic inhabitants of clay, clay-sand and typical sandy deserts as takyr roundworm (*Phrynocephalus helioscopus*), reticulated roundworm (*Ph. reticulatus*). Among snakes there are: patterned stripe, arrow snake, viper (*Vipera libetina*).

Of particular interest is the upper Zeravshan River (from Penjikent and above), which occupies altitudes of 900-2600 meters above sea level and covers the valley of the river itself, its tributaries, the northern slope of the Zeravshan ridge.

The existing small mountain villages are located along both banks of the Zeravshan River and look like isolated islands. This is obviously the main reason for the poverty of its avifauna. Nevertheless, a complex of birds characteristic of this mountain valley has formed here: Lesser Spotted Plover (*Charadrius dubius*), Carrier (*Tringa hypoleucos*), Sicklebill (*Ibidorhyncha struthersi*), Himalayan Merganser (*Mergus merganser orientalis*), Mountain Wagtail (*Motacilla cinerea*), White Wagtail (*M. alba*), black-backed wagtail (*M. citreola*), brown nuthatch (*Cinclus pallasi*), white-bellied nuthatch (*C. cinclus*), cavity thrush (*Microcichla scouleri*), great waterthrush (*Chaimarrornis leucocephala*).

Of the 11 named birds, 6 are sedentary and 5 are migratory-breeding forms. All sedentary birds descend below their breeding level for the winter and form conspicuous aggregations (e.g., Great Blackbird) or disperse scattered from each other. The bird population of the upper Zeravshan River is characterised by the presence of Sicklebill, Greater Water Thrush, Tengmalm's Thrush, Bluethroat and others not found in the flat part of the Syr Darya River.

Within the Zeravshan River, which occupies altitudes from 1000 to 2500 m and higher, is inhabited by birds characteristic of stony and rubbly mountain slopes and capable of nesting on the ground, in stones, crevices and on rare shrubs.

Background species are: Kestrel (*Falco tinunculus*), Stone Sparrow (*Petronia petronia*), Wheatear (*Cannabina cannabina*), Bluethroat (*Sita neumayer*), Blue Thrush (*Monticola solitarius*), Rock Swallow (*Riparia rupestris*) and others. Most species are fly-nesting and only a few are sedentary.

As for the northern slopes of the Zeravshan and Gissar ranges (from 1000-1200 to 2000-3000 m above sea level and higher), the fauna of nesting birds is more diverse. In the strip of mountains with shrub thickets, insignificant rocky outcrops, and river terraces developed for rainfed crops, such birds as the Red-necked Phalarope and Bearded Phalarope are found nesting, bearded eagle (*Guriatus barbatus hemachalanus*), vulture (*Gyps vulvus*), golden eagle (*Aquila chrysaetus*), eider (*Solumba palumbus*), cuckoo (*Cuculus canorus*), Himalayan eagle, puffin, quail, magpie, grouse (*Pyrchorax pyrrhocorax*), alpine eider (*P. graculus*), raven (*Corvus corax*), red-backed finch (*Serinus pussilus*), great lentil (*Errythrina rubicilla*), rose lentil (*Errythrina grandis*), common lentil (*E. errythrina*), and others.

Of the 47 species, 20 are migratory-nesting and 27 are sedentary. Most sedentary birds migrate due to worsening living conditions in fall and winter.

The animal life of the Yagnob River is generally quite sparse. The background species here are the long-tailed marmot, Siberian goat, snow leopard, ermine, tolai hare and badger.

The most valuable species is the snow leopard (*Uncia uncia*) (Figure 2).

It is also necessary to organize nurseries of tree plantations (juniper, walnut, apple, snuf, pear, rosehip, cherry, etc.). Experimentally, one can try to "stock" the tributaries of the Yagnob with trout. The harvesting and cultivation of medicinal herbs is also promising.



Figure 2: Snow leopard (*Uncia uncia*) (image from camera trap Fauna Flora International, 2011)

Among birds, the most common are magpie, great turtle, woodpecker, ruffed grouse, alpine jackdaw, kestrel, brown dipper, mountain swallow, mountain wagtail, Himalayan curlew, waterthrush. Red-listed species include golden eagle, bearded eagle, shahin, bluebird and others.

Mammals (theriofauna)

Of the 85 species of mammals inhabiting Tajikistan, 33 species are found on the territory of the NNP Yagnob. These include: red marmot (*Marmota caudata*), weasel (*Mustela nivalis*), big-eared pika (*Ochonota macrotis*), snow leopard (*Panthera uncia uncia*), brown bear (*Ursus arctos isabellinus*), Siberian ibex (*Capra sibirica*) and others.

Rare species

Many mammal species inhabiting the park are listed in the Red Book of Tajikistan: brown bear (*Ursus arctos isabellinus*), weasel (*Mustela nivalis*) and snow leopard (*Panthera uncia*) are listed as endangered by the IUCN.

The snow leopard (*Uncia uncia*) lives at high altitudes of more than 2000 meters and hunts mainly marmot, wild ungulates and livestock, especially in winter. The total number of snow leopards in the territory of the Yagnob NNP is still unknown.

2.6. Cultural features of the NNP Yagnob

The houses in the local villages are built of slate slabs. They are closely pressed together and often share a roof where fuel and fodder for livestock are stacked (*Figure 3*). The ceiling is supported by carved wooden beams; niches for household items are arranged in the steppes. Cookers and fireplaces are a must in all dwellings. Some houses (Vagenzoi, Kashi) have small verandas with carved wooden columns.



Figure 3: A typical house made of slate slabs in Yagnob (photo by the PO «Tabiati Yoboi»)

Many archaic features have been preserved in the mur (traditional dwelling of highlanders), where there are holes (instead of windows) in the ceiling for smoke escape. The traditional dwelling is divided into mur, where there is an inkir (tandyr for baking tortillas), divided into kanna (room for storing and processing dairy products), pistik (pantry) and passageway (corridor).

Traditional clothing is almost identical to that of neighbouring districts. The basic elements of both men's and women's costume are mostly the same. The exception is the kuluta headdress (a thin headdress for women), which has been preserved in Yagnob and the mountainous Matche. Dishes and other household utensils are made using local pottery, as well as metal utensils made in the cities or purchased in modern trade shops in the valley regions.

Funerary objects

Most of the discovered funerary objects are burial mounds and historic dwellings.

The mounds appear externally as round or square mounds up to 1.5 meters high. These are typical burial sites of local inhabitants; most of the mounds date back to the early centuries before the settlement of the Yagnob inhabitants.



Figure 4: Burial sites at Yagnob NNP (photo by PO «Tabiati Yoboi»)

Petroglyphs (rock paintings) are drawings made with colored pigments of plants, minerals, and/or other natural substances on the surface of rocks. The drawings exist in Daxan, their period is still unclear; they are quite fragile and require protection.



Figure 5: Rock paintings at NNP Yagnob (photo by PO «Tabiati Yoboi»)

SECTION 3. BRIEF DESCRIPTION OF THE USE OF LAND PLOTS IN NNP "YAGNOB"

3.1 A brief description of land use

Ethnic History. The population of the Sogdian Villages are Sogdians. They are the direct ancestors of modern Yagnob people, who preserved the dialect of Sogdian language in the inaccessible upper reaches of the Zeravshan River in the valley of Yagnob. The appearance of man on the territory of Yagnob is associated with the oppression of the ancestors of the Tajik people by invaders - foreigners who, from the second half of the IV century BC to the XVII century AD, gradually penetrated into the territory of Central Asia.

The resettlement of the ancestors of the Tajik people from valley areas and cities to mountainous regions was especially noticeable during the Arab conquest of Sogd and Tahoristan, two culturally historic oases of Central Asia in the early Middle Ages. After the fall of Samarkand and the retreat of Devashtich (ruler of Sogd) to the upper reaches of the Zeravshan River, the Sogd-speaking population of the cities and valley districts of Sogd were forced to leave their homes and migrate to the mountainous, inaccessible regions of Kuhistan (the upper reaches of the Zarafshan and its tributary the Yagnob River). According to folk legends, the king of Sogd divided people into 3 groups and sent them to Matcha, Falgar and Yagnob.

As is known, the formation of the Tajik people in the era of Samanids (IX-X centuries), was based on the ancient sedentary and agricultural population of the oases of the Central Asian interfluvium Sogdians, Bactrians (Takharistanians) Ferghans, Saks and others, who spoke East Iranian languages. In the process of consolidation of these nationalities into a single nation, they gradually adopted the Dari-Tajik language.

However, the mountainous regions of modern Tajikistan, which were far from the main cultural centres, have preserved the ancient languages spoken by the ancestors of the Tajik people - Sogdians, Bactrians Sakis and others.

The Yagnobians are ethnically not different from the Tajiks and together with the Pripamir Tajiks constitute a single ethnos. Despite this, the Yagnobians as direct descendants of the Sogdians have preserved one of the dialects of the Sogdian language - Yagnob (Novosogdian) and some customs and traditions of their ancestors. Therefore, we can say that the Yagnobians are representatives of a separate small ethnographic group, which is at the stage of active assimilation with all tajiks.

It should be emphasised that the preservation of the Yagnob-New Sogdian language and the Yagnobians as an ethnographic group has an important cultural

and historical significance for the recent history of Tajikistan and for future generations.

3.2 Land use on the territory of NNP "Yagnob"

The territory of the NNP Yagnob is legally classified as a conservation area. This means that any activity contrary to the nature conservation designation is prohibited. The territory is remote. Most of its territory is occupied by high-mountain pastures.

Currently, after the return of a small group of people, less than half of the land has been developed and the rest has been turned into pasture for cattle breeding. The main agricultural tools of the Yagnob people, like all Tajiks, are the plow (omoch) and yarmo (yug), a cast iron plowshare for omoch, hoe (khorkan), shovel (bel), harrow (mola), and in recent years have begun to use ketmen (kaland), pulling animals are bulls as before. There is no modern agricultural machinery.

Yagnobians primarily grow wheat, barley, mushk, potatoes and other crops. Gardening has emerged in recent decades and is not yet widespread. Distant cattle breeding is also widespread in Yagnob, which is combined with farming. Before resettlement, herds were moved to mountain pastures - hoon (letovka) for summer, where part of the population went with them, who in summer were engaged in processing of dairy products. But nowadays cattle graze on pastures adjacent to the village, and for wintering they store a significant amount of fodder.

In addition to farming and cattle breeding, there were domestic trades and crafts before the resettlement. Craftsmen made ceramic and wooden dishes, tools, pottery. Each family produced necessary items - namta (felt), weaved boroni (a type of coarse woollen cloth and clothing), and sewed clothes, kurpa (blanket) and kurpacha, as well as pustak (leather track). At present, these crafts are practically non-existent.

Currently, the management of the Yagnob NNP, based on the approved status of the park by the Government of the Republic of Tajikistan, takes this situation into account when determining management priorities, which include:

- Monitoring of wildlife populations;
- Monitoring of land use in areas assigned to local communities for farming, grazing, hay, plants and firewood;
- Promotion of environmental monitoring, in particular the impact of global warming on glaciers;
- Anti-poaching;
- Guiding and managing tourism, including mountaineering;

- Education and awareness raising for local people, decision makers, teachers, school children and visitors;
- Developing, monitoring and enforcing guidelines for local communities to collect medicinal plants and fruits;
- Monitoring and control of their implementation.

3.1 Land use on adjacent territories

The main agricultural implements of Yagnob people as well as all Tajiks are plow (omoch) and yarmo (yug), cast iron plowshare for omoch, hoe (khorkan), shovel (bel), harrow (mola) and in recent years began to use ketmen (kaland), pulling animals are bulls as before. Modern agricultural machinery is practically absent.

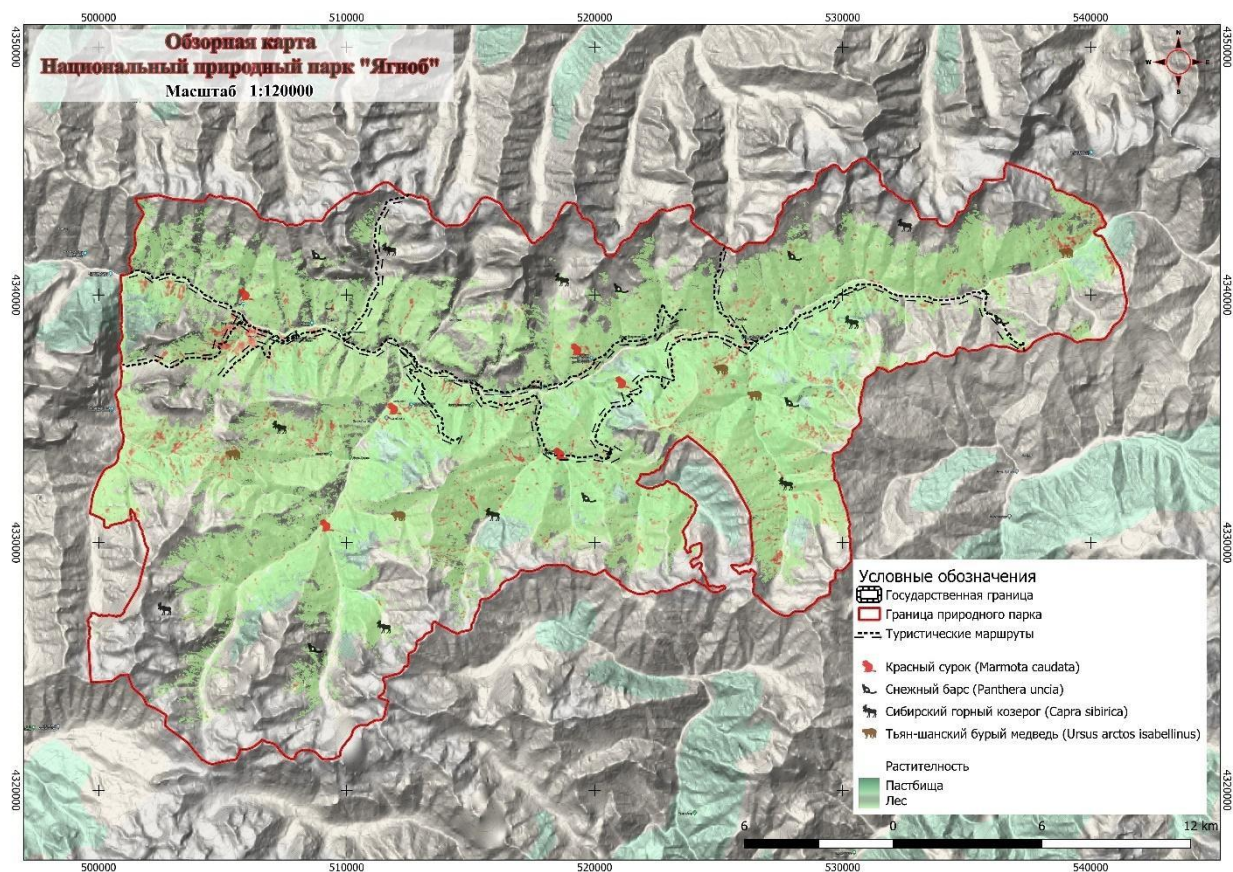
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3.1 Plans for reforestation and degraded pastures in NNP Yagnob

Within the framework of "Tajikistan Sustainable Landscape Restoration Project (TSLRP) (P171524)" funded by the World Bank under the RESILAND CA+ Program, reforestation and degraded pastures for biodiversity conservation in NNP Yagnob will be carried out. The area for reforestation and degraded pastures in NNP Yagnob is shown in the developed *map 1*. These maps show that within the framework of the SLRP project, reforestation and degraded pastures in the park will be carried out on an area of more than 1000 ha during 2025-2027.

The pastures and forest areas of the park are shown on *Map 1*.



Map 1: Grassland and forest areas of the park.

CHAPTER 4. YAGNOB NNP ADMINISTRATION AND RESOURCES

4.1 The composition of the staff of NNP "Yagnob" according to the data for 2024 is presented in Table 2.

Table 2

According to the staffing table	Actual	
	Total	Including those with higher education
Total number of employees of NNP Yagnob		
10	8	1
Guidance		
3	2	1
Heads of subdivisions of NNP Yagnob		
2	1	0
Chief specialists		
3	1	0
Leading specialists		
3	1	0
Employees of the security service of NNP Yagnob		
10	3	0
Accounting and planning staff		
2	1	0
Service personnel		
5	0	0

4.2 Financial support for the activities of NNP "Yagnob".

The structure of funds received to ensure the core activities of NNP "Yagnob" according to the data for 2024 is presented in Table 3.

Table 3

Source of funding	In somoni
Funds received from the state budget of the Republic of Tajikistan	
including: Salaries of employees of NNP "Yagnob"	10,278.00
Household goods	4,500.00
Fuel consumption (petrol, diesel)	8,000.00
Building renovation	0.00
Expenses for economic needs	2,500.00
Expenses for utilities and heating	3,000.00
Annual biotechnical activities	12,000.00
Expenses for internet services	1,200.00
Total:	41,478.00

4.3. Yagnob NNP Infrastructure.

The infrastructure of the NNP Yagnob is currently insufficient.

Table 4.

Name	Quantity	Condition
Buildings:		
Office of the NNP administration	1	The main office of the administration of Yagnob NNP is located in Ayni district of Sughd region.
Niva cars	1	New

Telephones - Office Mobile	1 All employees	Working
Uniform	Availability of 70 %	
Weapons	-	-
Binoculars	2	Working
Computers	1	Working
Digital camera	1	Working
GPS navigation device	1	Working
Camera trap	3	Working
Drone	0	Working

4.4. The main stakeholders, excluding the SISPNA, are presented in Table 5.

Table 5

No	Stakeholders
1	Committee for Environmental Protection under the Government of the Republic of Tajikistan
2	Ministry of Economic Development and Trade of RT
3	Ministry of Foreign Affairs of the Republic of Tajikistan
4	Committee for Tourism Development under the Government of the Republic of Tajikistan
5	National Academy of Sciences Tajikistan
6	Local executive authorities
7	Local population living around the Yagnob NNP
8	International environmental organisations

Protection of the NNP "Yagnob" and its protection zones is organized by state inspectors, permanently residing directly on the territory of the reserve, as well as by employees of nature protection departments of Ayni district located around the park. The main types of violations are illegal hunting, cutting of forests and grazing of domestic animals, illegal presence and driving on the territory of the park.

Scientific research and ecological monitoring on the territory of NNP "Yagnob" are organized and carried out by staff members together with scientists of NAST according to the approved joint plans during the year. Mainly, scientific works include: counting and condition of wild animals, birds, phenological observations of plants, determination of food reserves, time of arrival and departure of birds.

Environmental education activities are carried out by the park staff and the Department of Science and Eco-Education of the SI SPNA, with the involvement of POs and international organizations.

SECTION 5: THREAT ANALYSIS AND RESPONSES

5.1 Main threats to SPNA

Threat 1	Weak material and technical base - which does not ensure the normal operation of NNP "Yagnob".
Threat 2	Reduced ecosystem productivity, vegetation growth and development and ecosystem degradation, and degradation of wildlife grazing lands.
Threat 3	Poaching and reduction of rare and valuable species of fauna, deterioration of their habitats
Threat 4	Negative anthropogenic impact on the park's natural complexes due to illegal poaching, collection of medicinal plants by the population living near the park's territory, unregulated cattle grazing in the park's buffer zones.
Threat 5	Low environmental consciousness of the population.
Threat 6	Intensive land use in the buffer area near the park in violation of agronomic requirements.
Root causes of threats	• Weak material and technical base of protected areas. • High level of poverty of the population living in the park zone. • Lack of application of advanced agricultural soil-saving technologies. • Lack of alternative energy sources. • Low level of environmental education of the population.

5.2 Management goals and objectives of NNP Yagnob (in response to threats)

The following tasks are assigned to NNP "Yagnob":

- Preservation of natural complexes of reference and unique sites and objects of nature;
- Preservation of natural landscapes and ensuring the conservation and restoration of biodiversity;
- Organization of research works in the park;
- Development and implementation of scientific methods of nature conservation;
- Organization of environmental education of the population and conducted in the Educational Centre of the park.

Table 6 shows the plan of tasks to eliminate the threat in NNP "Yagnob".

Table 6

Objectives to achieve the goal:	Tasks	Targeted threat
Task 1	Strengthen park infrastructure, maintain and develop the administrative, technical capacity and resources of the reserve.	Threat 1
Task 2	Maintaining and improving the ecological condition of the park through the implementation of environmental protection measures and activities aimed at biodiversity conservation and environmental restoration, implementation of permanent monitoring.	Threat 3
Task 3	Improvement of natural ecosystems and habitats of protected animal species.	Threat 2

Task 4	Organization of research works in the park with the participation of research institutes and leading scientists of the country's universities	Threat 4
Task 5	Conducting environmental education of the population in the park area in order to raise awareness and understanding of the values of the reserve and potential benefits that can be derived from the conservation of unique natural complexes, increasing the level of support from the local population.	Threat 5
Task 6	Improvement of territorial management within the buffer zone of NNP Yagnob on Ayni district.	Threat 4, Threat 6

5.2. Specific constraints to the effective management of NNP Yagnob

Limitations	Rationale	Solutions
Technical knowledge of staff/training	Management and engineering staff, as well as gamekeepers, are deprived of opportunities to improve their qualifications and level of professional and technical knowledge. Young specialists entering the labour force after graduation from universities, as a rule, have a very low level of knowledge and lack of practical work skills.	Organization of thematic seminars and trainings for engineering and technical staff of NNP "Yagnob" with the involvement of researchers from the Research Institute of Botany, Zoology and Parasitology of NAST and staff of the SISPNA, as well as international organizations.
Equipment	NNP "Yagnob" was established relatively recently and therefore does not have its own office and is not technically equipped. Therefore, the park needs, first of all, high passability motor transport. Construction of an office and its equipping with necessary equipment for normal work of park employees.	Resolving issues regarding the construction of the office and its basic infrastructure and equipment for NNP Yagnob
Funding	Limited funding from the state budget (for infrastructure improvements, fuel and lubricants, etc.) hampers management actions and opportunities.	Development of a business plan, identifying financial needs and sources of funding.
Monitoring	Lack of a mechanism for monitoring the effectiveness of management and its positive and negative impact on the achievement of goals and objectives of NNP Yagnob.	Monitoring of management effectiveness based on indicators developed in the Management Plan.

SECTION 6. MANAGEMENT PLAN OF NNP "YAGNOB" 2025-2029 (FOR A PERIOD OF 5 YEARS): MAIN MANAGEMENT OBJECTIVES AND THREAT PREVENTION ACTIVITIES

BLOCK 1. JAGNOB NNP ACTIVITIES

Yagnob NNP Programme - "Conservation of unique ecosystems of the park and its components"

Programme Goal: Implementation by the park of the functions of a regional environmental, scientific, practical and propaganda centre for the conservation of the region's ecosystems and their components.

Expected results: reduction of violations of the park's protection regime; improvement of the efficiency and quality of inspection work; reduction of violations of environmental legislation in the region; application of rational and sustainable nature management in the territories adjacent to the park.

Objectives and activities	Actions	Timing	Performer	Indicators	Finance costs, thousand somoni	Sources of funding
Task 1	Strengthening park infrastructure and facilities by maintaining and developing administrative, technical capacity and resources					
Activity 1.1	Acquisition of vehicles, individual vehicles for the security service, provision of uniforms, night vision binoculars and communication equipment for the security service, solar batteries and other equipment.	2025-2029	SI SPNA, NNP "Yagnob"	Provision of the security service with transport, uniforms, communication equipment	500.00	Donors and budget
Activity 1.2	Provision of systematic patrols by gamekeepers in areas where wild animals congregate and eco-corridors during their migrations.	2025-2029	SI SPNA, NNP "Yagnob"	Reduction of poaching and other offences	100.00	Donors and budget
Activity 1.3	Purchase of camera traps, office equipment and other equipment	2025-2029	CEP, SI SPNA, NNP "Yagnob"	Improving the efficiency of fleet management and ensuring monitoring of key species	100.00	Donors and budget
Activity 1.4	Installation of poles with appropriate inscriptions	2025-2029	SI SPNA, NNP "Yagnob"	Increased protection of the park (especially from grazing, felling)	20.00	Donors and budget
Activity 1.5	Establishment of 2 gamekeeper cordons.	2025-2029	SI SPNA,	Improving the effectiveness of park	200.00	Donors and budget

			NNP "Yagnob"	protection, improving conditions for scientific work		
Activity 1.6	Repair of unpaved roads to the entrance to the park	2025-20 29	SI SPNA, NNP "Yagnob", Local executive body of state power	• Availability of repaired roads • Improved park protection regime	500.00	Donors and budget
Activity 1.7	Construction of 2 field observation posts and equipping them with communication facilities.	2025-20 29	SI SPNA, NNP "Yagnob"	Strengthening the effectiveness of security	100.00	Donors and budget
Task 2	Maintaining and improving the ecological condition of the park through conservation measures and activities aimed at preserving biodiversity and restoring the environment					
Activity 2.1	Restoration of the park's ecosystems through reforestation measures on an area of 20 hectares annually.	2025-20 29	SI SPNA, NNP "Yagnob"	Volumes of work performed by year - reforestation area, ha	200.00	Donors and budget
Activity 2.2	Annual biotechnical measures strictly in the buffer zone: • hay harvesting for wild ungulates - 20 tons, • harvesting of succulent fodder - 5 tons and laying out in winter • arrangement of feeding grounds - 10 pieces, • - laying out solonchaks - 10 pieces.	2025-20 29	SI SPNA, NNP "Yagnob"	Increase in the number of valuable and rare wildlife species	100.00	Donors and budget
Activity 2.3	• Restoration of the population of rare and endangered species of fauna, such as: snow leopard (<i>Uncia uncia</i>), Siberian ibex (<i>Sagra sibirica</i>), marmot (<i>Marmota caudata</i>), golden eagle (<i>Aquila chrysaetus</i>), Mongolian saker	2025-20 29	SI SPNA, NNP "Yagnob"	Achievement of optimal numbers and improvement of the condition of populations of rare and valuable animal species	100.00	Donors and budget

	falcon (<i>Falko cherrug milvipes</i>). Organisation of permanent monitoring of the status of rare and valuable animal species.					
Activity 2.4	Carrying out biotechnical measures to improve the number of wild animals in the park	2025-2029	SI SPNA, NNP "Yagnob"	Increase in the number of key wildlife species	80.00	Donors and budget
Activity 2.5	Organization of permanent monitoring of rare and valuable plant species.	2025-2029	SI SPNA, NNP "Yagnob"	Availability of prepared maps, and scientific publications	50.00	Donors and budget
Activity 2.6	Improvement of habitats of argali, Siberian ibex (<i>Carpa sibirica</i>) and snow leopard (<i>Uncia uncia</i>) by restricting or banning grazing and restricting visits of local people to the habitats of these rare species to prevent poaching, as well as work on restoration of natural pastures for wild animals.	2025-2029	SI SPNA, NNP "Yagnob"	Increase in the number of wild animals	150.00	Donors and budget
Task 3	Carrying out organizational measures to improve the condition of natural ecosystems and implementing biotechnical measures.					
Activity 3.1	Installation of environmental protection signs 20 pieces	2025-2029	SI SPNA, NNP "Yagnob"	Work plans	20.00	Donors and budget
Activity 3.2	Equipping with equipment, availability of necessary fuel and lubricants, availability of equipped fire-fighting boards in all gamekeeper's rounds	2025-2029	SI SPNA, NNP "Yagnob"	Preparedness	150.00	Donors and budget
Program "Development of scientific research and environmental monitoring" Program Objective: To develop the scientific basis for the conservation and restoration of the park's ecosystems Expected results: data on ecosystem components; increased mobility, volume and quality of work; increased information on the state of the region's ecosystems and their components; improved ability to analyze data; more complete and better collection and analysis of information on the state and change of the park's ecosystems to adjust its conservation regime.						
Task 4	Organization and conduct of scientific research in NNP "Yagnob"					
Activity 4.1.	Keeping gamekeeper diaries and conducting phenological observations of indicator species of animals and plants and systematic (annual) assessment of the state of fauna and flora on the	2025-2029	SI SPNA, NNP "Yagnob", NAST	Scientific Report on the Dynamics of Fauna and Flora Status Changes.	50.00	Donors and budget

	basis of data from the annual animal count and inventory of rare plant species.			• Annual prepared by		
Activity 4.2.	Jointly with the Institute of Zoology and Parasitology of the National Academy of Sciences to conduct scientific research on the following topics: • "Study of the state of the Siberian ibex in the park and development of measures to bring their numbers to the optimum". • - "Counting the number of snow leopards".	2025-2029	SI SPNA, NNP "Yagnob", NAST	Prepared Research Reports and Practical Recommendations - data on the state of ecosystems and its components	100.00	Donors and budget
Activity 4.3	• Jointly with the Scientific Research Institute of FAGRT to carry out scientific research on the following topics: • "Study of the state and dynamics of forest change" • "Survey and determination of the current sanitary condition of forest plantations of NNP "Yagnob".	2025-2029	SI SPNA, NNP "Yagnob", FRI	Research reports and practical recommendations prepared	50.00	Donors and budget
Activity 4.4	• Jointly with the Institute of Botany of the NAST to conduct scientific research on the following topics: • - Identification of indicator species and determination of succession processes in different ecosystems of the park; • - Determination of the species composition of phytocenoses of low-grass semi-savannahs, meadows and grassy bogs;	2025-2029	SI SPNA, NNP "Yagnob", FRI	Research reports and practical recommendations prepared	50.00	Donors and budget

	Identification of the main pests of indicator species in phytocenoses.					
Activity 4.5	Implementation of scientific developments and prepared recommendations into the practice of environmental protection and scientific-educational activities	2025-2029	SI SPNA, NNP "Yagnob", NAST	Research reports and practical recommendations prepared	50.00	Donors and budget
Activity 4.6	Maintaining the book - Chronicle of Nature of NNP "Yagnob"	2025-2029	SI SPNA, NNP "Yagnob", NAST	Maintaining the book - Chronicle of Nature of NNP "Yagnob"	50.00	Donors and budget
Activity 4.7	Training in modern research methods: - Inviting specialists, holding seminars, business trips to exchange work experience, participation in scientific conferences, meetings; - Inviting specialists from abroad	2025-2029	SI SPNA, NNP "Yagnob", NAST	Improved quality of work Obtaining data on unstudied ecosystem components	150.00	Donors and budget
Activity 4.8	Acquisition of scientific equipment, instruments	2025-2029	CEP, SI SPNA	Increased mobility, volume and quality of work improved	100.00	Donors and budget
Task 5	Environmental monitoring of the state of natural ecosystems of the Reserve and adjacent areas (buffer zone)					
Activity 5.1	Development of monitoring guidelines for park staff	2025-2029	SI SPNA, NNP "Yagnob", NAST	Availability of prepared monitoring manuals	40.00	Donors and budget
Activity 5.2	Organization of an optimal network of permanent observation points and improvement of the primary data collection system (regularity, reliability).	2025-2029	SI SPNA, NNP "Yagnob", NAST	Availability of a network of observation points - Improved quality and quantity of information on the state of the region's ecosystems and their components	30.00	Donors and budget

Activity 5.3	Ensure annual systematic observations of wild animals and the condition of their habitat.	2025-2029	SI SPNA, NNP "Yagnob", NAST	Obtaining data on the status of wildlife populations	100.00	Donors and budget
Activity 5.4	Annual comprehensive monitoring of the park's ecosystems (pastures, water, high-mountain landscapes, etc.).	2025-2029	SI SPNA, NNP "Yagnob", NAST	Availability of monitoring data to adjust the territorial management system	100.00	Donors and budget
Task 6	Advanced training of scientific personnel and specialists in the field of environmental protection					
Activity 6.1	Preparation of training programs for scientific and engineering staff of the Reserve on the following topics: « Rights and duties of park officials and gamekeepers ». • "Conducting environmental monitoring within the framework of the national system of environmental monitoring" with a duration of 6 hours. • "Rules for conducting observations of wild animals taking into account their species characteristics", lasting 8 hours. • "Counting the park's wildlife in their natural habitat". • "Keeping a Nature's Chronicle book." • - "Opportunities for ecotourism development in SPNAs and rules for working with ecotourists". • - "Ecosystem approach in the management of SPNAs"	2025-2029	SI SPNA, NNP "Yagnob", NAST	Availability of prepared training programs for scientific and engineering staff of the park	200.00	Donors and budget

	- "Legislative and legal mechanisms regulating the environmental protection activities of SPNAs". - "Red Data Book - Indicator species of flora and fauna for the park". - Exchange of experience on reserve management with other parks of Tajikistan, CIS and Russian Federation.					
Activity 6.2.	Annual training sessions and training workshops with scientific and engineering staff of the park.	2025-2029	SI SPNA, NNP "Yagnob", NAST	- Improved quality of work - Indicator - Number of sessions conducted and number of staff trained	100.00	Donors and budget
Environmental Education Development Program Program objective: To raise the public value of the Yagnob NNP and ensure its support by the general public as an object of natural national heritage. Expected results: increased public awareness; increased awareness of the local population about the reserve, formation of a positive opinion; increased public awareness of the local nature; increased environmental education of visitors; application of ecologically efficient farming methods by the local population; organization of ecological routes strictly in buffer zones.						
Task 7	Carrying out eco-educational work with the population, eco-propaganda and development of cognitive excursion visit of specially prepared eco-educational routes strictly in the buffer zone of the park.					
Activity 7.1	Conduct trainings and short-term courses to prepare and train trainers to work with the population on basic rules of attitude to wildlife and sustainable nature management in the buffer zone of the park	2025-2029	SI SPNA, NNP "Yagnob", NAST	Improving the quality of work Indicator - Number of events held and number of trainers trained	50.00	Donors and budget
Activity 7.2.	To study possibilities of cognitive ecotourism, to define excursion routes, to determine the order	2025-2029	SI SPNA, NNP "Yagnob"	Approval of excursion routes, rules and tariffs	20.00	Donors and budget

	and rules of visiting excursion routes in the buffer zone of the park			for visiting ecological routes in the buffer zone		
Activity 7.3	Preparation of ecological routes (ecological trails) on the ground, technical equipment, provision of information materials	2025-2029	CEP, SI SPNA, NNP "Yagnob"	Availability of approved excursion routes	100.00	Donors and budget
Activity 7.4.	Conducting eco-educational work with local communities through talks, trainings and seminars on nature conservation, restoration of lost biodiversity and ecosystem approach in the use of natural resources.	2025-2029	SI SPNA, NNP "Yagnob"	Application of rational nature management in the territories adjacent to the park. Indicator - number of events organized and number of persons trained	50.00	Donors and budget
Activity 7.5	Prepare and publish an illustrated booklet on ecological routes and promotional booklets	2025-2029	SI SPNA, NNP "Yagnob"	Availability of advertising leaflets on ecological routes in the buffer zone of the park	50.00	Donors and budget
Activity 7.6	Popularization of NNP Yagnob through mass media	2025-2029	SI SPNA, NNP "Yagnob"	Information about the park is regularly placed in the media. Raising awareness of the local population	10.00	Budget
Activity 7.7	Regular informing of the local community about the park's activities through local authorities	2025-2029	SI SPNA, NNP "Yagnob"	Increasing environmental awareness of the population and tourists	10.00	Budget
BLOCK 2. LIAISON WITH THE ADMINISTRATION OF THE ENTIRE TERRITORY ADJUSTING TO NNP YAGNOB (for the region as a whole)						
Task 8.1	Improvement of territorial management on the territory of NNP "Yagnob"					
	Agriculture. Objective - to increase the efficiency of land resources utilization					
Activity 8.1.1	Conducting trainings with farmers and pasture users on the following topics: "Teaching the rules of crop cultivation" "Permissible loads of livestock grazing in the territory of the zone of limited"	2025-2029	CEP, SI SPNA, NNP "Yagnob"	Sustainable land management in the buffer zone of the park without negative impacts on nature	100.00	Donors

	economic nature use, buffer zone of the park and measures to increase the productivity of pastures" - "Carrying out measures to increase the productivity of hayfields".					
Activity 8.1.2	Measures to regulate grazing in the zone of limited economic nature use and the buffer zone of the park: • Determination of pasture productivity (cadastral assessment) in the territory of the zone of limited economic nature use and the buffer zone of the park. Determination of pasture capacity and permissible loads on pastures by seasons of the year. • Determination and establishment of pasture boundaries on the ground and setting of boundary posts and identification of permanent and temporary pasture users. • Control over correct use of pasture lands by users and compliance with the norms of load on pastures. • Designing measures to implement measures to increase productivity of rangelands and compliance with pasture rotations.	2025-2029	CEP, SI SPNA, NNP "Yagnob", NAST	Improvement of pasture condition	100.00	Donors
Activity 8.1.3	Growing medicinal plants on demonstration plots - 2 pcs.	2025-2029	DHA, CEP, SI SPNA, NNP "Yagnob", NAST	Increased income and reduced pressure on the park	300.00	Local executive body of state power, WUA, land

						users, Donors, PO
Activity 8.1.4	Introduction of cost-effective, energy-saving technologies for processing agricultural products (solar dryers, kitchens, etc.)	2025-2029	DHA, CEP, SI SPNA, NNP "Yagnob", NAST	Reducing the pressure on the park's natural resources, increasing the income of the population around the park	300.00	Local executive body of state power, WUA, land users, Donors, PO
Activity 8.1.5	Carrying out anti-erosion measures (terracing, forest amelioration, etc.)	2025-2029	DHA, CEP, SI SPNA, NNP "Yagnob", NAST	Improvement of land resources	200.00	Local executive body of state power, WUA, land users, Donors, PO
Task 8.2						
Activity 8.2.1	- Installation of solar panels in the buffer zone of the park. - Installation of mini-hydropower plants in the economically limited nature use zone and the buffer zone of the park.	2025-2029	DHA, CEP, SI SPNA, NNP "Yagnob", NAST	Electricity supply to the population	300.00	Local executive body of state power, WUA, land users, Donors, PO
Task 8.3						
Improvement of forest resources and biodiversity in the areas of districts adjacent to the park						
Action 8.3.1.	Creation of forest belts	2025-2029	DHA, CEP, SI SPNA, NNP "Yagnob", NAST	Increase in the area covered by forests	300.00	Local executive body of state power, WUA, land users, Donors, PO
Action 8.3.2.	Establishment of nurseries of fast-growing high-yielding forest species (poplar) -	2025-2029	DHA, CEP, SI SPNA,	Reduction of tree felling incidents	300.00	Local executive

	development of a forest management system based on local community management		NNP "Yagnob", NAST			body of state power, WUA, land users,, Donors, PO
Action 8.3.3.	Implementation of forest amelioration measures	2025-2029	DHA, CEP, SI SPNA, NNP "Yagnob", NAST	Improvement of natural resources	300.00	Local executive body of state power, WUA, land users, Donors, PO
Action 8.3.4.	Strengthening of slopes with trees	2025-2029	DHA, CEP, SI SPNA, NNP "Yagnob", NAST	Increasing the area covered by forests, reducing land degradation	300.00	Local executive body of state power, WUA, land users, Donors, PO
TOTAL:					6,330.00	

Approved
by the Chairman of the Committee for
Environmental Protection under the
Government of Tajikistan
_____ B. A. Sheralizoda
" _____ " June 2024

6.1. APPROVED ANNUAL PLAN FOR NNP YAGNOB 2025.

Activity	Responsible authorities	Indicators	Financing, in somoni	
			Budget	Donors
Organisation of permanent monitoring of the state of the natural environment	NNP "Yagnob"	Maintaining the Annals of Nature of NNP "Yagnob"	0.00	50,000.00
Provision of vehicles, uniforms, communications equipment, weapons, binoculars and cameras to the security service	CEP, SI SPNA	Availability of vehicles, uniforms, communication equipment, weapons, binoculars, camera, etc.	0.00	500,000.00
Conducting cadastral assessment of the condition of the forage base of wild ungulates in their permanent habitat on the territory of NNP Yagnob	CEP, SI SPNA, NNP "Yagnob", NAST	Availability of cadastral assessment of wild ungulate grazing lands on the territory of NNP "Yagnob"	0.00	50,000.00
Identify bird nesting sites around the park and restrict land use in these areas	SI SPNA, NNP "Yagnob", NAST	Availability of a prepared map showing bird ranges and nesting sites	0.00	50,000.00
Establishment of wintering grounds for the Siberian goat and hunting campaigns in its range and restriction of land use in these areas	SI SPNA, NNP "Yagnob", NAST	Availability of a prepared map showing the ranges and locations of Siberian ibex hunting companies	0.00	50,000.00
Preparation of a simple and practical monitoring methodology for tracking key indicator species of flora and fauna	SI SPNA, NNP "Yagnob", NAST	Availability of Methodology for monitoring	0.00	50,000.00
Conducting training for TNP engineering and technical staff (ITD) to develop practical skills in monitoring species diversity of flora and fauna and natural resources	SI SPNA, NNP "Yagnob", NAST	Number of seminars, trainings, topics and persons trained in specialities conducted	0.00	30,000.00
Conducting spring and autumn wildlife surveys in the park and surveying the productivity of habitats and animal habitats	SI SPNA, NNP "Yagnob", NAST	Availability of reliable data on wildlife population counts	0.00	50,000.00

Development of tourist routes in the territory of NNP Yagnob	SI SPNA, NNP "Yagnob", NAST	Availability of tourist routes developed and approved by the management of the SPNAs in the territory of the NNP Yagnob	0.00	100,000.00
Establishment of guest houses and training of the population on reception and rules of service for foreign tourists	CEP, SI SPNA, NNP "Yagnob"	Number of equipped guest houses and their capacity to accommodate guests	0.00	1000,000.00
Production of advertising booklets, maps with tourist routes, natural and historical-cultural sights, etc.	CEP, SI SPNA, NNP "Yagnob"	Availability of advertising leaflets	0.00	50,000.00
Acquisition of vehicles, quadricycles, motorbikes and motorboats, as well as tents, sleeping bags and other equipment and materials necessary for tourism development	CEP, SI SPNA, NNP "Yagnob"	Availability of motor vehicles, motor boats, tents and other tourist equipment on the balance of the NNP Yagnob	0.00	200,000.00
Ensuring systematic patrols by gamekeepers of wildlife aggregations and eco-corridors during their migration	CEP, SI SPNA, NNP "Yagnob"	Reduction of poaching in the park's territory	0.00	50,000.00
Development of a module, program and plan for environmental education of the population, schoolchildren and government officials on the importance of the park and its historical and natural values.	CEP, SI SPNA, NNP "Yagnob"	Number of seminars, trainings, topics and persons trained by category	0.00	50,000.00
Provision of pasture and hay plots to the local population	SI SPNA, NNP "Yagnob"	List of persons and total area of allotments granted	0.00	0.00
Periodic media appearances by management, researchers and specialists on biodiversity conservation and activities of NNP Yagnob»	CEP, SI SPNA, NNP "Yagnob"	Number of articles, speeches, etc.	0.00	0.00
Analysis of the implementation of the standard annual action plan for the activities of the NNP Yagnob	SI SPNA, NNP "Yagnob"	Evaluation of NNP Yagnob 's performance in the reporting year	0.00	0.00
Acquisition of uniforms	CEP, SI SPNA		0.00	50,000.00
Salaries and wages of employees of NNP Yagnob			10,278.00	0.00
Household goods			4,500.00	0.00
Fuel consumption (petrol, diesel)			8,000.00	0.00
Building renovation			0.00	0.00
Expenses for economic needs			2,500.00	0.00
Expenses for utilities and heating			3,000.00	0.00
Funds to carry out a set of biotechnical measures and pasture restoration to improve wildlife habitats			12,000.00	100,000.00
Expenses for internet services			1,200.00	0.00
TOTAL:			41,478.00	2,430,000.00

Head of the SI SPNA

Kh. Shamsiddinzoda

LIST OF PARTICIPANTS IN THE WORKING GROUP ON THE NNP JAGNOB MANAGEMENT PLAN

1. Shamsiddinzoda Kh. - Head of the State Institution of Specially Protected Natural Areas (SPNA) of the Committee for Environmental Protection under the Government of the Republic of Tajikistan.
2. Karimov Niyoz - Director of NNP "Yagnob".
3. Najmudinov N. Project Manager from PO "Tabiati yoboi".
4. Saidov N. - Specialist on management of specially protected natural territories and biodiversity conservation of TSRP.
5. Khudoyorov F. - employee of PO "Tabiati yoboi".
6. Fattokhov H. - employee of PO "Tabiati yoboi".
7. Faizulloev S. - an employee of PO "Tabiati yoboi".
8. Kholmatov Ismoil - Public Organisation "Alifboyi Tabiati Tojikiston".
9. Ustyan I.P. - Chief Specialist of the Institute of Forestry, Tajikistan.
10. Murodov R. - Senior Researcher at the Institute of Zoology and Parasitology, NAST.
11. Ilazarov Behruz - Cartographer and GIS consultant.

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