EXECUTIVE SUMMARY

State Party:
Republic of Tajikistan

State, Province or Region
Vanj, Rushan, Murghab districts of Gorno-Badakhshan Autonomous Region and Tavildara, Jirgatol districts of Regions of Republican Subordination.

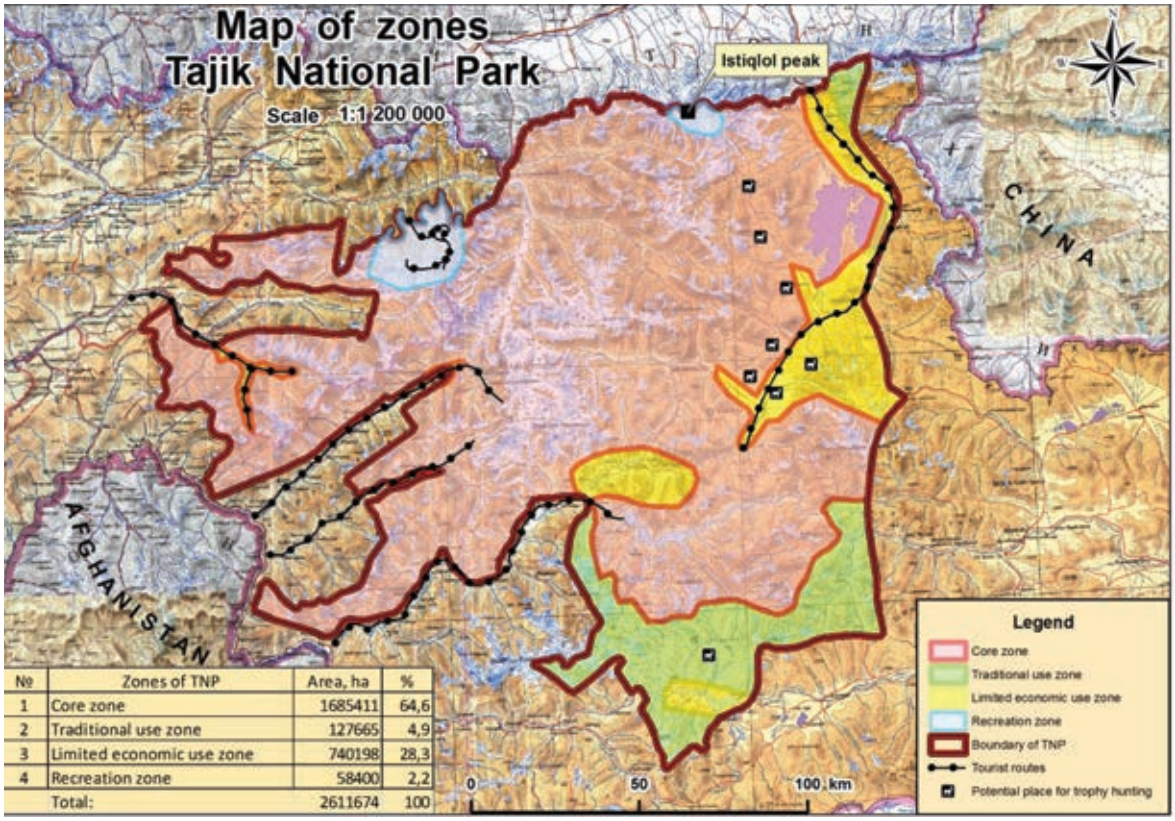
Name of Property
Tajik National Park (Mountains of the Pamirs)

Geographical coordinates to the nearest second
The area proposed for inscription to the World Heritage List is the whole area of the Tajik National Park, having the following geographical coordinates:

- The utmost north point:
  E 73° 31′ 00″, N 39° 28′ 00″;
- The utmost south point:
  E 72° 45′ 20″; N 37° 33′ 45″;
- The utmost west point:
  E 71° 02′ 00″; N 38° 45′ 00″;
- The utmost east point:
  E 73° 35′ 30″; N 39° 03′ 30″

Description of the boundary(ies) of the nominated property
The entire Tajik National Park (TNP) is nominated for being included into the World Heritage List of UNESCO. In the north the border of TNP coincides with the state border of the Republic of Tajikistan with the Republic of Kyrgyzstan until Altyn-Mazar. To the west it follows the mountain range along the left-bank of Muksu River until the peaks of Severtsov and Pulisangin in the Jirgatol district. In the west the border coincides with the borders of “Sangvor” Natural Reserve (*zakaznik*) which belongs to Tavilidara Forestry Enterprise. From here it runs up to 3059 m up to Pieda, Viskharv, Kurgovad mounting passes until Pshikharv settlement of Vanj district. In the southeast borders follow the valleys of Vanj and Yazgulom rivers whose territory belongs to Vanj Forestry Enterprise and to agricultural enterprises of Vanj district. The southern border of TNP passes the Bartang gorge upwards to Barjadiv village, from here it runs to Patkhor peak in Shugnan district and from there to Yashilkul Lake. Along its eastern border, it runs north of Northern Alichur range, then the

border crosses Pshart range and Pshart valley, from there via Akbaytal mountain to the east shore of Karakul Lake, it continues then to Markansu mountain valley and from there to the Kyzyl-Art mountain pass at the state border of Tajikistan with Kyrgyzstan. Efforts are under way to establish a transborder conservation area across the border between Tajikistan and Kyrgystan.



№	Zones of TNP	Area, ha	%
1	Core zone	1685411	64,6
2	Traditional use zone	127665	4,9
3	Limited economic use zone	740198	28,3
4	Recreation zone	58400	2,2
	Total:	2611674	100

Map of the nominated property, showing boundaries, core zone, zone for limited economic use, traditional use zone and recreation zone.

Justification

Statement of Outstanding Universal Value

TNP includes the higher, central part of the Pamirs which are an exceptional assembly of natural, cultural and historic monuments and are known as the “Roof of the World”. The National Park covers a stunning high mountain environment including the picturesque Sangvor valley, Karakul, Yashilkul and Sarez mountain lakes, the Academy of Sciences and Zaalai mountain ranges with the highest peaks Somoni (7,495 m.), Lenin (7,134 m.) and Korzhenevskaya Peak (7105 m), the massive Fedchenko glacier, hot mineral springs, meteorite craters, and one of the biggest caves of Central Asia, at an altitude of 4,100 m; and gene pools for wild relatives of cultivated plants, which are of global importance.

TNP features the most outstanding natural complexes of the Pamirs, huge mountains linked to the highest mountain systems of Central Asia and the world: Hindukush in the south, Karakorum and Himalayas in the south-east, Kunlun in the east, Pamiro-Alai in the north and Parapamiz in the west. The park is part of the Central Pamir geographical zone, which covers the northern part of the Eastern Pamir. The area is characterised by a system of grandiose east-west running mountain chains, separated from each other by 3,000 m deep river valleys. High mountains with peaks covered by huge glaciers above 7,000 m, high mountain plateaus and locked basin with lakes are the most typical features of the park. Low rainfall and very low temperatures in winter cause deep freezing of the soil. High daily and annual temperature fluctuations shape the high mountain environment together with strong insolation and constant winds. Mountain tops are covered with glaciers or snow. Vanj and Yazgulem mountain ranges reach 5,000 to 6,000 m.

The glaciers of Pamirs, covering more than 8 thousands sq.km add up to the “Water Tower of Central Asia”. 80% are located inside TNP; making the park the water tower for the surrounding countries. The largest glaciers of Central Asia are situated in TNP; including “Fedchenko”, the longest and one of the biggest glaciers in the world outside the polar region. “Fedchenko” is also the largest middle-latitude valley type glacier in the world, with a length of 77 km, 2 to 3 km wide, covering an area of 1,000 km^2 and a maximum thickness of the ice of 1,000 m. Fedchenko being situated on elevations from 2,900 m up to 6,200 m, is also declining but, compared to other glacier in the Pamir, seems to be one of the few glaciers with some resistant to climate change. Impact of global warming caused the glacier tongue to retreat by 1 km since 1933 causing a loss of 2 km^3, which is 5 % of its volume, but relatively little compared to other melting glaciers in the Pamirs, which have been reduced

by 30 to 35 % over the last 20 years, similar to those in the Hindukush, the European Alps and the Caucasus.

Further east Grum-Grzhimailo glacier (length 37 km and area of 143 km^2) is located. Garmo glacier, which lies between Peter the Great and Darvaz ranges, has a length of 30.4 km and area of over 114 km^2. The glaciers of TNP provide a reservoir of several hundreds of cubic kilometes of frozen fresh water on which the wellbeing of large parts of Central Asian depends.

Run off from these glaciers feeds the Amu Darya and other river sytems, which are vital for maintaining agriculture (food production), drinking water, fisheries, hydro power, and the life support system for Tajikistan, Uzbekistan, and Turkmenistan in general. It is estimated that the largest contributory of the Amu Darya, the Panj River, annually takes an average of 26-28 km^3 of unpolluted drinking water from the Pamirs. It is important to underline, the park is unique in Central Asia by acting as its main storage of fresh water. There is no such protected area in any other Asian country.

The overall picture of the Park's relief is determined by dramatic mountain ranges like Academy of Sciences, Zaalai, Beleuli, Zulumart, and North Alichur, the eastern parts of Vanj, Yazgulom, Rushan, and Darvaz. The territory is characterized by large differences of altitudes and heavily dissected terrain and shaped by glaciers during the last glacial period ending about 12,000 years ago. All forms of glacier morphology are found here, different types of moraines, glacier shaped valleys, glacier mills carved deep into rocks and rock surfaces polished by glaciers. The main part of the park is located in the Eastern Pamir. Only Yazgulom range and the eastern part of Darvaz range belong to the Western Pamir. The Eastern Pamir part of the park is an elevated plateau about 6,000 m above sea level carved by rivers and valleys at 3,600 to 5,000 m. Some of the river valleys are 10 to 15 km wide, e.g. Murghab and Alichur. The Western Pamir section of the park, in contrast to the east, is shaped by fast running rivers and deep gorges with steep slopes, for instance 2,000 to 5,000 meters in the Bartang River with its tributaries.

Two meteorite craters are exceptional landmarks. The largest one is occupied by Lake Karakul, which is situated in a circular impression interpreted as a meteorite impact crater, an incident dating 25 million years back. The other one, much smaller, but not less impressive, is situated in south part of TNP.

The Badakhshan area of the TNP is part of the Central Asian Vavilov center and renowned for wild relatives of cereals and legumes. The Tavildara section of TNP is another important gene-pool; it includes "Walnut-Fruit-Forests", in the species composition of which participate

wild relatives of fruit trees and berries. These plants are becoming increasingly important for improving agricultural production and for maintaining sustainable agriculture. With the advent of climate change and greater ecosystem instability, crop wild relatives are likely to prove a critical resource in ensuring food security for the new millennium. TNP contributes to the conservation of these genetic resources and contributes in the long term for improving food production and increasing food security.

In summary, these are the important features justifying the inclusion of TNP into the UNESCO World Heritage list:

- The park with its massive glaciers forms the "Water Tower" of the Pamirs, which supplies millions of people in the surrounding countries with fresh watter.
- Several natural phenomena of global significance are included such as: Somoni Peak – the highest peak of the Pamirs, and numerous high mountain glaciers, including Fedchenko Glacier – one of the largest mountainous-valley glaciers in the world.
- The largest lakes of the Pamir: Karakul with area 364 sq km, Sarez 88 sq km (in core zone) and Yashilkul 35.6 sq km (Limited Economic Use Zone). Karakul is by surface the largest lake in the Pamirs and Sarez by water volume, with 17 $km^3$of water and a maximum depth 500 metres. In addition to these large lakes, the park has more than 400 small ones.
- Karakul is the highest large mountain lake of the world, excluding those in Tibet and even Titicaca. The lake is situated in a meteorite crater and surrounded by swampy and wet meadows and bogs with a rich flora and fauna and several endemic species. Flooding, melting permafrost and buried ice sheets shape the landscape with small hillocks and a large variety of small creeks and water courses between 3,500 and 4,000 m. The rich plant cover is grazed by wild and domestic ungulates. These wetlands represent also critical breeding and feeding habitats for resident and migratory birds such as Indian goose, Brown-headed gull, Tibetan and Himalayan Snow cock and several waders.
- Sarez Lake, above 3,000 meters appeared in 1911 as a result of an earthquake, is the largest fresh water deposit in Tajikistan and Central Asia. The lake is situated between the Muzkul and North Alichur ranges in the core area of TNP. It is considered one of the most recent creations on Earth. As a result of a nine magnitudes earthquake during the night of 18 to 19 February 1911, a six billion ton landslide blocked the Murghab River and created the Uzoi Dam, the highest dam, both manmade and natural, in the world (567 m). The lake flooded a large

valley with several villages, one of which gave its name to lake.

- Significant parts of the park are covered by cold continental deserts. This extremely interesting and specific biome is grossly underrepresented in the current WH List of UNESCO. “Tajik National Park” would become the first object in this list, where a major piece of this biome will be present.
- TNP is one of the highest regions of our planet with heights up to 7,500 m. “Tajik National Park” may become the third (after Sagarmatha and Nanda-Devi Parks in Himalaya) high-mountain site to be included into the Natural World Heritage List.
- It is one of the world centers of mountain glaciation, watertower of Central Asia, where glaciers and mountainous lakes store and supply large quantities of high-quality fresh water for the surrounding countries.
- Landscapes of the Pamir high-mountains are characterized by their unique beauty. The main elements of their landscape are classic forms of alpine relief, large mountainous glaciers, small and big lakes. A specific feature of this territory is the combination of high-mountains with vast highmountain plateaus
- Impacts of climate change, some glaciers in the TNP seem to be more resilient to climate change than those in other high mountain areas.
- The park includes a Vavilov center, with wild relatives of cereals, legumes, fruit trees and berries (walnut-fruit forest). TNP contributes to the conservation of these genetic resources which are important in the long term for improving food production and increasing food security.
- TNP provides a large and thriving population of Marco Polo sheep, the largest sheep in the world, with all critical habitats all year round and a strong population of the highly endangered snow leopard.

Criteria under which property is nominated (itemize criteria)

vii, viii, x

Name and contact information of official local institution/agency

Organization: Committee for Environmental Protection under the Government of the Republic of Tajikistan
Address: 5/1, Shamsi Street, Dushanbe, Tajikistan, 734024,
Tel: + (992 37) 2 36 40 59
E-mail: muhit@hifzitabiat.tj and tajikpark@yahoo.com

NOMINATION

TAJIK NATIONAL PARK
(MOUNTAINS OF THE PAMIRS)

(REPUBLIC OF TAJIKISTAN)

For inscription to
UNESCO World Cultural and Natural Heritage List

Prepared by:

- **State Agency of Natural Protected Areas**
- **Academy of Sciences of the Republic of Tajikistan**

With support of:

- **World Heritage Fund, UNESCO**
- **Natural Heritage Protection Fund**

2012

Moskvin Glacier (Core Zone). Photo by Kasirov K.

1. IDENTIFICATION OF THE PROPERTY

1. a Country (and State Party if different)

Republic of Tajikistan

1. b State, Province or Region

The site is situated on the territory of the Republic of Tajikistan and covers the territory of the several territorial regions: Vanj, Rushan, Murghab districts of the Gorno-Badakhshan Autonomous region and Tavildara, Jirgatol districts of the Region of Republican Subordination.

1. c Name of Property

"Tajik National Park" (Mountains of the Pamirs)

1. d Geographical coordinates to the nearest second

The area proposed for inscription to the World Heritage List is the whole area of the Tajik National Park, with the following geographical coordinates:

- The utmost north point:
  E 73° 31′ 00″, N 39° 28′ 00″;
- The utmost south point:
  E 72° 45′ 20″; N 37° 33′ 45″;
- The utmost west point:
  E 71° 02′ 00″; N 38° 45′ 00″;
- The utmost east point:
  E 73° 35′ 30″; N 39° 03′ 30″

1. e Maps and plans, showing the boundaries of the nominated property and its zones

1. Map of the nominated property, showing boundaries, core zone, zone for limited economic use, traditional use zone and recreation zone. Scale 1:1 200 000.
2. Map of TNP view.
3. The main glaciers in the territory of TNP. Scale 1:1 200 000.
4. Map of distribution of Wild Relatives of Cereals and Leguminous Plants in the Vanj and Bartang Valleys. Scale 1:500 000.
5. Map of distribution of Walnut-Fruit Forest in the Tavildara Valley of TNP. Scale 1:400 000.
6. Overview map of archaeological sites in TNP. Scale 1:1 200 000.
7. Map of position of TNP in Central Asian Region. Scale 1:3 000 000.
8. Map of recreation zone of TNP. Scale 1:1 200 000.
9. Map of ranger posts in TNP Areas. Scale 1:1 100 000.

1. f Area of nominated property (ha.) and proposed zones (ha)

The entire Tajik National Park is nominated for inclusion into the WH List. According to the Laws of the Republic Tajikistan "On Natural Protected Areas and Objects", the criteria of the International Union for the Conservation of Nature (IUCN), advice from United Nations Environment Program (UNEP), specialists of State Agency of Natural Protected Areas (SANPA), advice from scientists from the Academy of Sciences of the Republic Tajikistan, an IUCN international expert, and representatives of local authorities it was decided to divide the existing 2,611,674 hectares of TNP into the following zones (Map 1).

- Core Zone: 1,685,411 ha, or about 64.6% of the TNP area.
- Traditional Use Zone: 127,665 ha or 4.9 % of the TNP area. This zone includes grasslands for hay making and high mountain pastures where traditional rights for summer and winter grazing are being maintained for local people. Controlled firewood collection is allowed.
- Limited Economic Use Zone: 740,198 ha or 28.3 % of the TNP area; it is established along and around fragile sites of the core area. Limited development is permitted, as long as this is not detrimental to the values of the Park.
- Recreation Zone: 58,400 ha or 2.2% of the TNP area. This zone allows recreation and tourism as well as placement of supporting facilities.

According the Decision of the Government of Tajikistan from the 11.06.2001 No. 253 (Attachment B5) for the establishment of the Tajik National Park 2,611,674 ha of land have been allocated to the park, including:

1. Regional Directorate of Tajik National Park for Gorno-Badakhshan Autonomous Region – 2,235,149 ha:

Vanj District – 270,000 ha

Rushan District – 350,000 ha

Shugnan District – 128,100 ha

Murghab District – 1,487,049 ha

2. Tavildara Regional Directorate of Tajik National Park – 306,613 ha

3. Djirgital Regional Directorate of Tajik National Park – 69,912 ha

Map of Tajik National Park view.

Karakul Lake 3914 m - Core Zone of TNP. Photo by Jungius H.

2. DESCRIPTION

2.a Description of Property

Geology

TNP includes branches of the grandiose Central-Asian mountain ranges which are the result of the uplifting of the Pamirs which started 25 millions years ago and which is still ongoing. The diverse rock types are an impressive record for the history of the earth; this includes deeply metamorphosed Pre-Cambrian formations, such as gneisses and different crystalline shales and marbles. Moreover, Pre-Cambrian limestone sediments in the north. Within the Akbaytal Pass Coal-Measures (coal-bearing part of the Upper Carboniferous System) represented by shales and limestones are found. In the northwest part of the park the Lowperm sediments contain shales and limestone layers. Perm carbonate sediments are found in the northeast part of the park. Triassic sediments are represented by loamy pyroclastic rock formations. The territory of the park includes also intrusive rocks containing granite and granodiorite compositions of Paleozoic age. The richest minerals of the Tajik National Park are molybdenic ores in the headwater of Vanj River and fluorite in the headwater of Tanymas River.

Soil gamma of Murghab mountains (Core Zone). Photo by Saidov N.

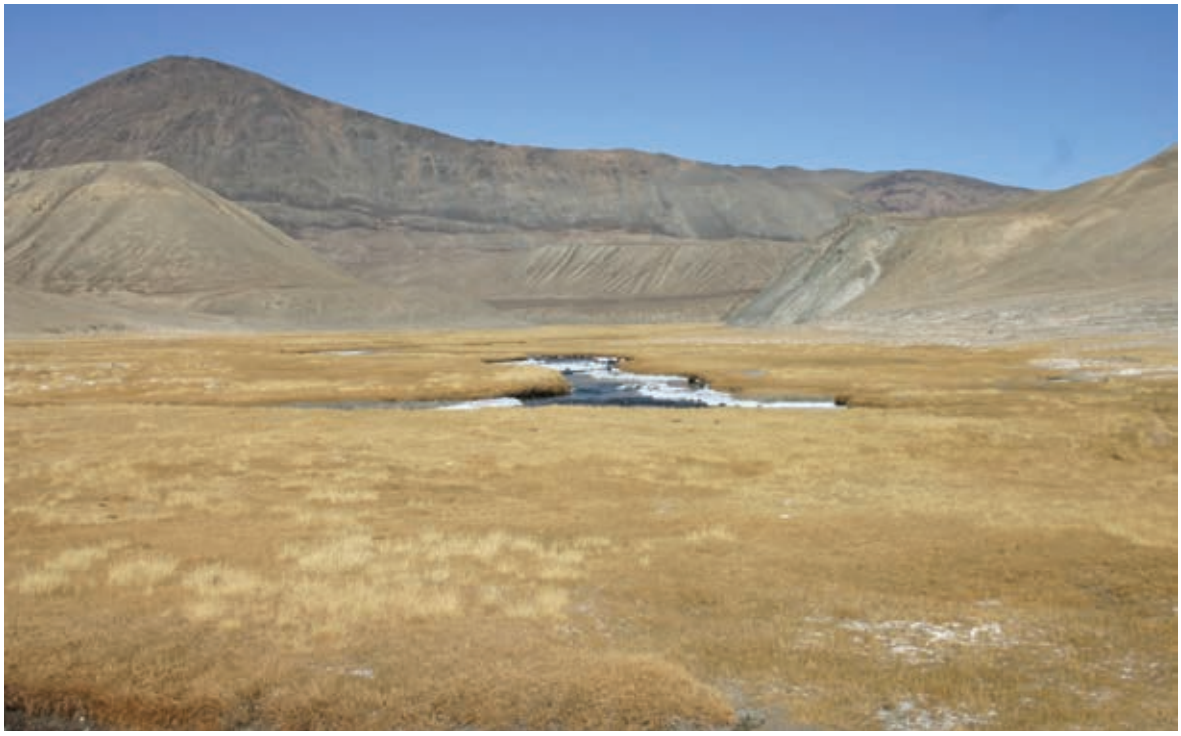
Landscape

The Pamirs – well known as the "Roof of the World" – is one of the highly elevated regions not only of Tajikistan, but of the world and standing next to the highest mountain ranges of Tibet. The nominated area includes the highest-mountain ranges of the Pamirs with the highest peaks of Central Asian: Istiqlol peak (former Lenin's peak) (7,134), Somoni peak (7,495) and Korzhenevskaya peak (7,105 m). The general landscape aspects of the nominated property are huge mountain ridges: the Academy of Science, Zaalayskiy, Beleuli, Zulumart, North-Alichur, eastern parts of Vanj, Yazgulom, Darvoz, and Rushan. The area is further characterized by dramatic deep mountain valleys. The basic relief has and still is formed by glaciers, including glacier valleys, spurs, moraines, kars and combs. Different forms of moraines are wide spread in the core zone of park. Practically all types of the microrelief are the result of the extensive permafrost.

The main part of the core zone of Tajik National Park is situated in the East Pamirs. Only the Yazgulom Range and the eastern part of Darvaz Range are related to the West Pamirs. The Eastern Pamir part of the park is characterized by high elevated plateaus with altitudes of the bottoms of valleys and rivers between 3,600-5,000 m and mountain ridges up to more than 6,000 m. Valleys formed by glaciers, flown through by rivers, are 10 to 15 km wide.

Bartang Valley (Core Zone). Photo by Abdulnazarov A.

The West Pamir part is dominated by river landscapes and contrary to the eastern part jagged by deep gorges such as Bartang valley and by naked talus formation between 2,000 to 5,000 m.



Source of Kokuybel River (Core zone). Photo by Butorin A.

Cold mountain desert on a 4000 m high plateau, surrounded by mountains toped by glaciers (Core Zone). Photo by Saidov N.

Climate

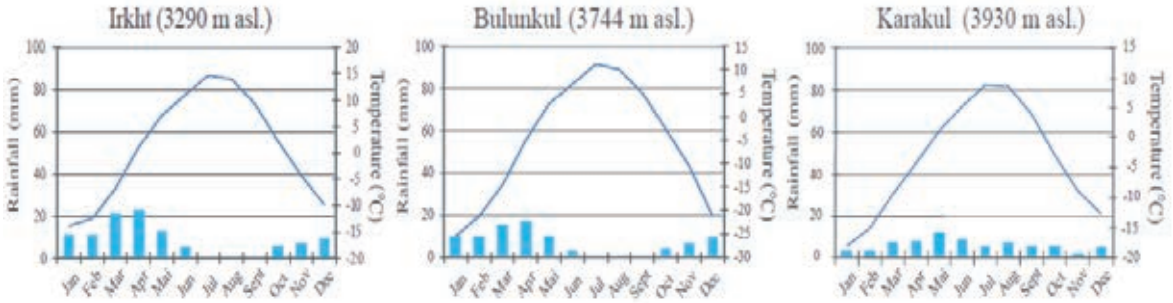
The climate is typical for Central Asia's high mountain regions with cool summers and harsh winters with little snow. The park is characterized by very low temperatures, high insolation, thin air and short summers.

The relief and huge difference in elevations led to the formation of distinctive local types of climate. The park is surrounded by several high mountain ranges, such as the Zaalai range in the north, Kashgar range in the east, the Hindu Kush with its high peaks in the south, and the Kokhi Lal ridge in the west. The inner mountain ranges of the park, such as Academy of Sciences, Zulumart, Muzkul, South Alichur and others are much lower. The park looks therefore like a huge bowl with raised edges. This structure leads to the isolation of the park from the humid air masses coming from the west (Atlantic Ocean via Mediterranean) and the south (Indian Ocean). This isolation, together with other factors is an important reason for the park's aridity in comparison to adjacent territories.

The park is characterized by a sharply continental climate, with large seasonal and daily fluctuations. Lowest temperatures are reported in January at an altitude of 4,000 m with a measured extreme of -63°C (winter 1959, Bulunkul), highest temperatures are reported in July at an altitude of 3,700 m, with +31°C. The annual amplitude reaches 94 degrees. The average temperature for the warmest month, July is 10 to 13°C; the coldest, January -18 to -25°C.

In the Eastern Pamir the mean annual precipitation varies from 63 mm to 117 mm while extreme annual values are between 21 to 159 mm. In the Western Pamir total precipitation is 300 to 500 mm on leeward slopes and increases to 1,200 to 1,800 mm on windward slopes. In the northeastern part of the TNP the annual rainfall is between 1,500 and 1,600 mm. The maximal amount of rainfall has been registered with a mean of 2,234 mm around Fedchenko Glacier on 4,300 m. Precipitation is much lower at the same altitude in the southern mountain ranges.

The distribution of precipitation over seasons is irregular. In the western parts of the Pamirs rainfall mainly occurs in winter and early spring, in the east highest rain falls in spring and summer. In total during autumn and winter precipitation is about 24% of annual rainfall and during the spring and summer 76%. A small amount of precipitation in spring and summer falls as snow. It should be noted that rainfall varies depending on the location of the valleys and wind direction.



Climate diagrams of different meteorological stations located inside or close to the TNP: Irkht (lake Sarez) and Bulunkul represent the conditions in the centre of the TNP. They are located along the segue from the Western to the Eastern Pamir and show a regime typical for the Western Pamir. Karakul, located in the eastern part of the TNP, indicates the typical climatic conditions of the Eastern Pamir. (Haslinger, 2004, based on data from Meteoservice GBAO, 2002).

Seasonal snow cover stays in some places until the end of April and sometimes until the beginning of May. In some places, depending on slope exposure, snow cover persists till 15-25 May. In general, the region is characterized by irregular snow cover. Its thickness increases with altitude. At altitude of 3,860 m above sea level thickness of snow cover reaches 4-16 cm, while at altitude of 4,760 m it is 1-2 m. Wind and slope exposure have great influence in redistribution of snow cover. At high altitudes, mainly on northern slopes, snow may stay all year round.

The Park is exposed to strong winds almost throughout the year. They reach the greatest strength in wide west to east running valleys, e.g. Markansu valley.

Due to the intense solar radiation, dry climate, low temperatures and limited precipitation most of the territory is considered as cold high-mountain desert: average annual temperature is below zero, amplitude of diurnal temperature variation is large and reaches 30°C; frost-free period is only 40-80 days; snow may even fall in summer at altitudes above 3,000 m, and may stay for a few days. The meteorological conditions vary considerably due to altitude. In summer, air temperature drops 0.5°C at each 100 m elevation.

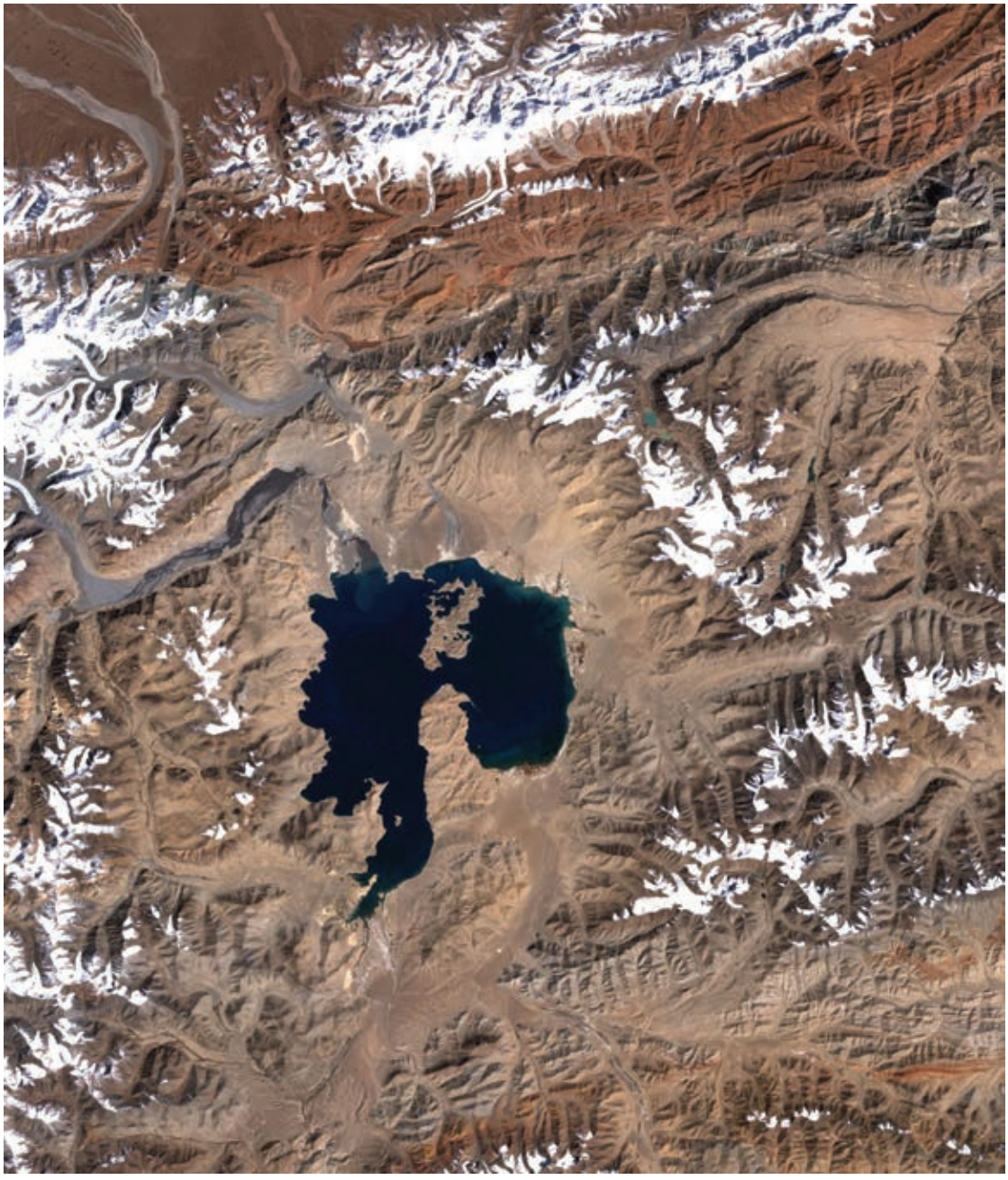
Hydrography

TNP includes large and small lakes, wild rivers, high waterfalls and mineral springs.

Lakes:

The largest lakes of TNP are Sarez, Karakul and Yashilkul. The biggest lake of Pamir in area extent is the Karakul, and by volume of water - Sarez Lake containing almost 17 km^3 cubic meters of water. Besides these large lakes, the territory contains over 400 small lakes, with a water-surface from several ten sq.m up to 1 to 2 sq.km.

Karakul Lake lies within a circular depression at 3.900 m, interpreted as a meteorite impact crater with a rim diameter of 52 km. A peninsula projecting from the south shore and an island off the north shore divide the lake into two basins, a smaller eastern one which is relatively shallow, between 13 to 19 m deep, and a larger western one, 221 to 230 m deep. It has no drainage outlet. The lake is surrounded by large wetlands. It is one of the major attractions of the park.



Karakul Lake Structure. (Core Zone). NASA Earth Observatory. Image from Wikipedia.org

Lake Sarez, at 3,239 m, appeared in 1911 as a result of an earthquake, which created the largest fresh water deposit in Tajikistan and Central Asia. The lake is situated between Muzkul and North Alichur ranges in the core area of TNP and considered one of the newest creations of the Earth. As a result of nine magnitudes earthquake during the night of 18 to 19 February 1911 a 2,2 cubic km landslide buried the village of Uzoi which blocked the Murghab River and created the highest dam, both natural and manmade, in the world (567 m). The lake flooded a large valley with several villages, one of which (Sarez) gave its name to lake. The current water level was reached in 1920, it is 505 m deep and covers 80 square km.

The status of the lake remains very unstable. Geologists fear that a new large magnitude earth-quake might break loose 3 cubic km of rock which would crush into the lake and create another major wave which might break the dam with disastrous consequences for the Murghab Valley below. One more landslide occurred already in 1968, which caused 2 m high waves in the lake, without damaging the dam. The lake is a natural laboratory for study of evolution and development of lacustrine ecosystems and geological phenomena. It is unique on a global scale.

Uzoi dam of Sarez Lake. (Core Zone). Photo by Hausibek from www.google.com.

Sarez Lake (Core Zone). Photo by Yusufbekov Y.

Rivers:

TNP is crossed by hundreds small rivers which give rise to several large rivers of the Pamir such as Gunt, Bartang, Yazgulom, Vanj and Obikhingou. The most significant internal rivers of the park's core zone are: Alichur, Marjanoy, Katadara, Pahchakiv, Kokuybel, Murghab, Tanymas, Belandkiik, Akjilga, Karajilga, Beleuli, Markansu, Sauksay etc. all together more than 1,500 km long.

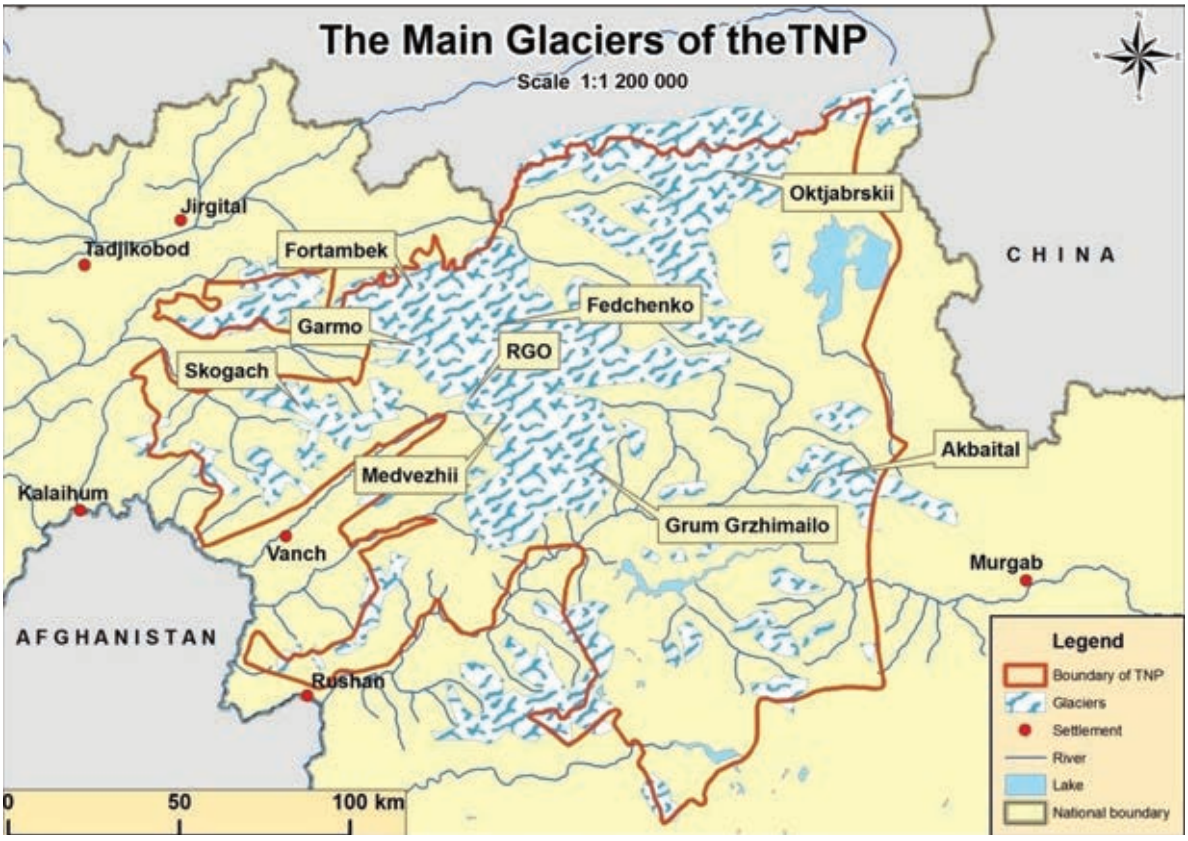
Glaciers:

The TNP area is a major source of the fresh water for the Central Asian region. It is an area of dazzling high mountain wilderness, characterized by several mountain peaks over 7,000 m, deep valleys, high plateaus and an outstanding assembly of enormous glaciers, including the glacier complex named after A. Fedchenko, which is one of the biggest in the world with a length of 77 km and a thickness of ice of more than 1,000 m**.** The glacier is situated at elevations from 2,900 m up to 6,200 m, and seems to be one of the glaciers most resistant to

global climate change. Impact of global warming has caused the glacier tongue to retreat by 1 km since 1933 equivalent to a loss of 2 cubic km, which is 5 % of its volume, but relatively little compared to the melting glaciers in other parts of the Pamirs as well as in the European Alps and the Caucasus.

Further east the Grum-Grzhimailo glacier (length 37 km and area of 143 sq km) is located. The Garmo glacier, which lies between the Peter the Great and Darvaz ranges, has a length of 30.4 km and an area of over 114 sq km (Annex 4). Besides these three larest glaciers, there are more glaciers with a length of more than 20 km; among them Oshanin, Akjilga, Vavilov, Chatkal, Tanymas-1, Tanymas-2, Tanymas-3, Yazgulom, Small Tanymas, Moskvin, Fortambek, and Nalivkina glaciers. Further there are dozens of other smaller glaciers in TNP, with a length of more than 2 km.

All glaciers constitute an important source and reservoir of fresh water on which the wellbeing of large parts of Central Asian depends. It is estimated that the largest contributory of the Amu Darya, the Panj River, annually takes an average of 26-28 cubic kilometers of unpolluted drinking water from the Pamirs. It is important to underline, that the park is unique in Central Asia by acting as its main storage of fresh water. There is no such place in other Central Asian countries. TNP is the main water-tower of Central Asia.



The main Glaciers of the TNP.

Tajik NP Massive black ice of the RSC glacier tongue at 2.500 m, part of the Fetschenko Massive. Photo by Jungius H.

Grum-Grzhimailo glacier. (Core Zone). Photo from www.turclubmau.ru

The Amu Darya River Basin covers parts of Tajikistan, Kyrgyzstan, Afghanistan, Uzbekistan, Turkmenistan. Several major cities, industrial complexes and agricultural regions depend on it such as Khorog, Kulyab, Kurghan-Tube in Tajikistan, Badakhshan, Faizabad, Mazorisharif in Afghanistan, Termez, Urgench, Karshi, Bukhara, Khiva, Nukus in Uzbekistan and Kerki, Mary, Turkmenabad (Chardzhou), Dashoguz in Turkmenistan.

The Amu Darya River is the largest river in Central Asia. Its length from the headwaters of the Pyanj River is 2,450 km; its watershed covers 309 thousand sq km. The Amu Darya River gets this name when Pyanj and Vakhsh River, which get most of their water from TNP region, meet in Tajikistan. Thus the TNP is the main area of formation of water flow of the Amu Darya River. The table below shows the total irrigated area in the Amu Darya River basin (without Afghanistan).

Irrigated area in the Amu Darya River Basin

Country	Irrigated area, thousand hectares			
	1960 year	1985 year	1990 year	1998 year
Kyrgyzstan	5,0	11,0	23,6	22,0
Tajikistan	210,0	450,0	474,2	469,0
Turkmenistan	435,0	1234,4	1329,3	1735,0
Uzbekistan	1625,0	2001,3	2280,2	2321,0
Total in Amu Darya River Basin	2275,0	3696,7	4107,3	4547,0

The annual average areas of agricultural land irrigated from the Amu Darya watershed in Uzbekistan, Turkmenistan, Tajikistan and Kyrgyzstan are 4,0-4,5 million hectares. Most of this water comes from the glaciers of TNP.

The Core Zone of the park is characterized by undisturbed ecological and geomorphological processes, including a high diversity of glacial formation, glacier dynamics, landscapes and special features formed by glaciers (e.g. deep glacier miles carved into solid rock), fast running rivers and wide flood plains covered with gravel and rocks.

Ice capped mountains, three above 7,000 m, 40 above 6,000 m, and more than 100 around 5,000 m add to the aesthetic value to the area. Waterfalls of crystal clear waters are a special attraction in the harsh mountain landscape. There are many geothermal, radon, and hydro-sulphide sources in TNP. The most famous are Madiyan, Suman, and Uzyuk. Hot springs are resting and treatment places for tourists and locals. Widely known for its hot spring is Yashilkul, where hundreds of people treat annually.

Flora

Most of the Park's territory belongs to the Central Pamir which covers the northern part of the Eastern Pamir. The Western Pamir belongs to the southwestern Asia floristic region, the Eastern Pamir to the Central Asian floristic region.

The general character of vegetation in the Park is desert; large parts are classified as "Cold Winter Desert" (Udvardy). There are rare-grass steppes in the central part of the territory. On the slopes of the mountains and especially on the bottom of cliffs the vegetation is somewhat richer due to more moisture with elements of steppe feather grass and onions.

57 families, 248 genera, and 639 species of plants have been identified in the Central Pamir. The largest families of plants are *Poaceae* (32 genera, 92 species), *Asteraceae* (118 species) and *Brassicaceae* (34 genera, 64 species). Next are *Fabaceae, Rosaceae, Boraginaceae, Caryophyllaceae, Chenopodiaceae, Juncaceae, Lamiaceae, Liliaceae, Polygonaceae, Primulacae, Scrophulariaceae,* and *Apiaceae*. The other plant families account for a limited number of species, sometimes only one.

In all on the territory of the Tajik National Park grow more than 2100 species of vascular plants, many of which are endemic and rare. The list main plant species in TNP presented in Annex C1.

The outstanding vegetation and habitat types, relevant for the nomination are:

- Cold Winter Desert
- Vavilov Centers for wild relatives of cultivated plants

Cold Winter Desert

High mountain desert ecosystems exist from 2,800 up to 4,500 meters above sea level in the eastern part of National Park (about 11,500 sq km or 44%). The prevailing plants are: Teresken (*Eurotia ceratoides*), wormwoods (*Artemisia pamirica, A. korshinskyi*), ajania (*Ajania tibetica*), feather grasses (*Stipa glareosa*), oxytropis (*Oxytropis immersa, O. poncinsii*), and thorny cushion plant formations (*Acantholimon diaspensioides, A. pamiricum*).

Aridity and a continental climate with strong differences of seasonal temperatures ranging from +32°C in summer to –48°C in winter, with permafrost, strong winds and intensive insolation are typical features of this environment. Such landscapes with gravel plains and stony sandy soil, with no or sparse vegetation, dominated by teresken and wormwoods, are widespread in the sub-alpine and alpine zones (at 4,000 to 5,000 m meters above sea level) in the Eastern part of the National Park. This habitat type of continental deserts with cold winter is not well represented in WH sites. Adding the Tajik National Park to the World Natural Heritage list would overcome this deficit.

Teresken. Photo by Abdulnazarov A.

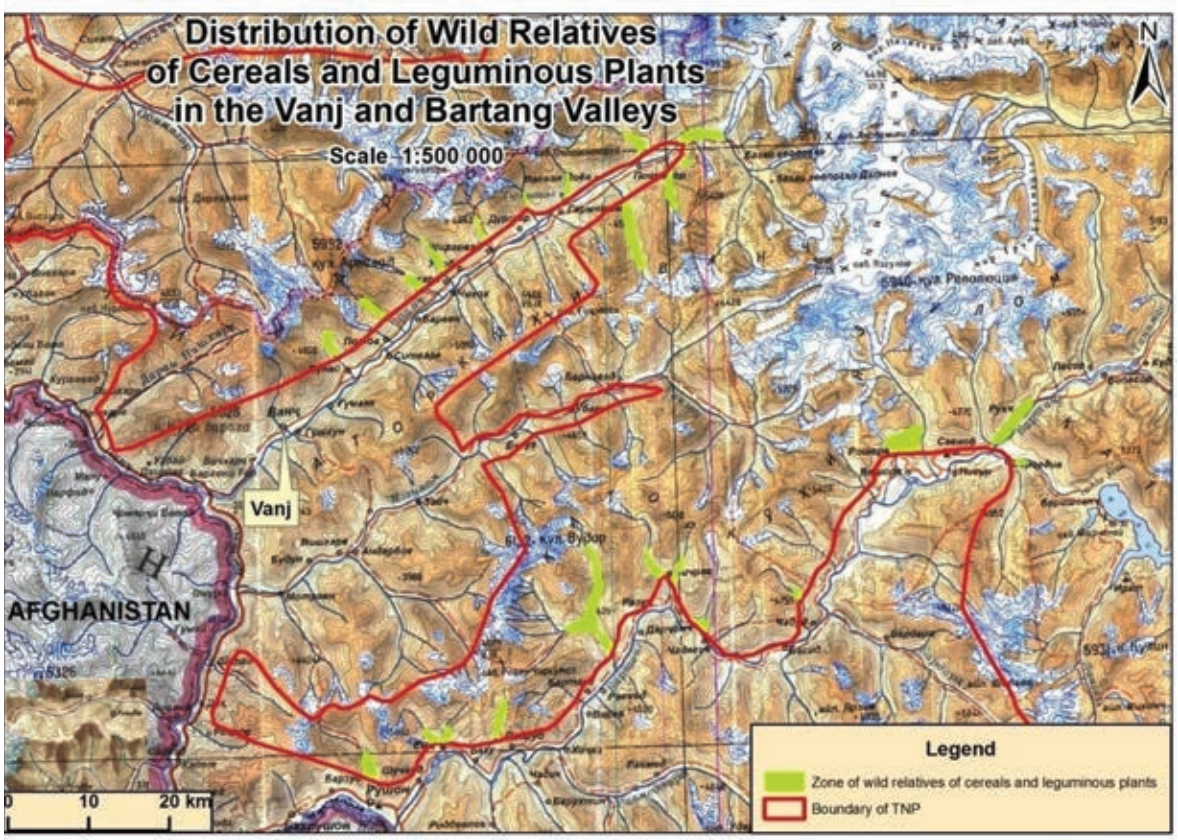
Primula. Photo by Abdulnazarov A.

Tanning Persicaria. Photo by Abdulnazarov A.

Ferula plants association in Vanjob rever basin in TNP. Photo by Saidov N.

Vavilov Centers

The Western Pamir, including the Badakhshan area of the TNP belongs to the Vavilov Center of Central Asia, which is renowned for wild relatives of cultivated plants. This includes a large number of varieties of soft and club wheat and ranks first in number of botanic diversity of *Triticum L.* species, 151 out of 273. The diversity of endemic local varieties of wheat, compact club wheat, and its wild relatives is unique, it includes: *Triticum aestivum L. var. japschorvi Nigm., var. ruchczianum Nigm, var. meridionale inflatum Nigm. var. nova., var. quasimeridionale-inflatum Nigm.var. nova., var. quasiheraticum Nigm var. nova.;* soft wheat without ligulae: *var. sarezicum Nigm., var. Bar-Darai Nigm.; spring club wheat: Tr. compactum Host. var. Humboldti-inflatum Vav. et Kob.*

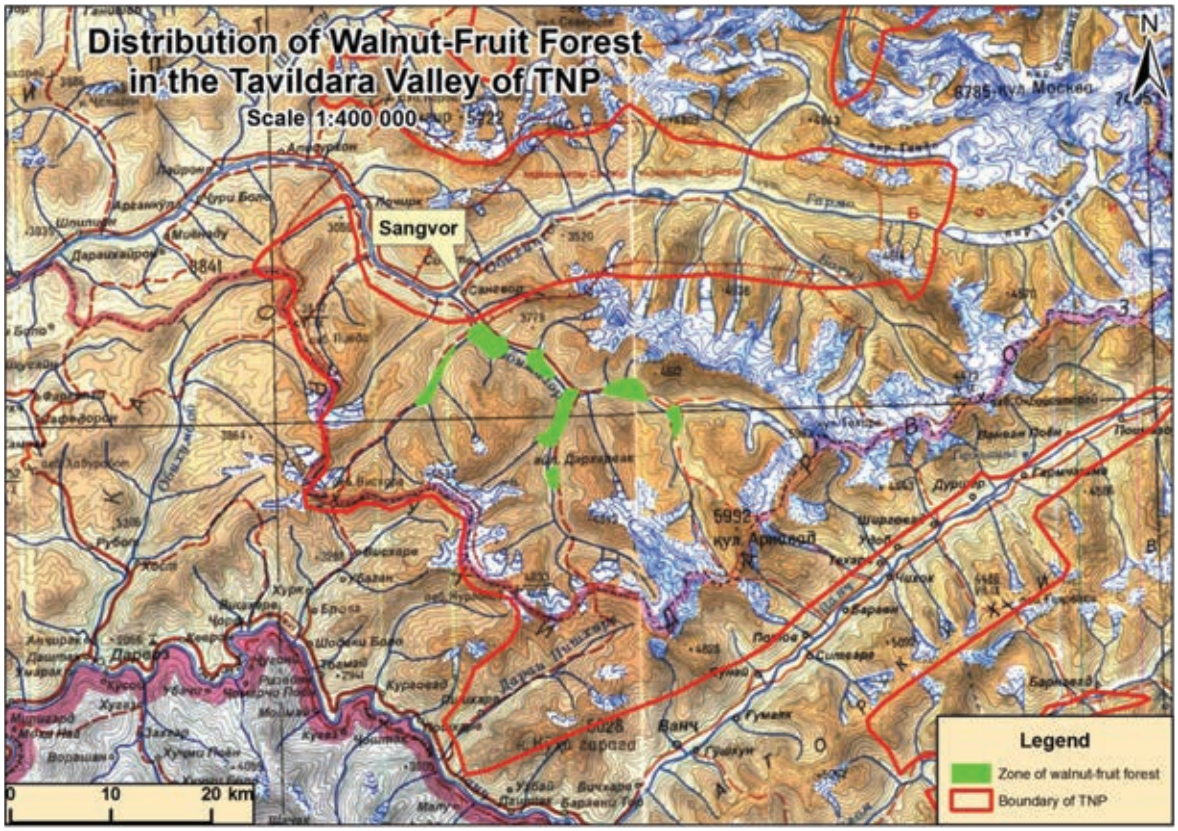


Distribution of Wild Relatives of Cereals and Leguminous Plants in the Vanj and Bartang Valleys.

The Tavildara section of TNP is another outstanding gene-pool, as it includes "Walnut-Fruit-Forests". This is a forest ecosystem dominated by wild fruit and berry bearing woody plants. Wild apple (*Malus sieversii*) Tajikistan pear (*Pyrus tadshikistanica*), Bukhara pear (*Pyrus bucharica*), walnut (*Juglans regia*), Tajikistan cherry (*Cerasus tadshikistanica*), veracious of cheery tree (*Cerasus verrucosa*), plum (*Prunus domestica*), Darvaz plum (*Prunus darvasica*), Bukhara almond (*Amygdalus bucharica*), Vavilov almond (*Amygdalus vavilovii*), Pontic

hawthorn (*Crataegus pontica*), Turkestan hawthorn (*Crataegus turkestanica*), Songorian hawthorn (*Crataegus songorica*), Hissar hawthorn (*Crataegus hissarica*), heterobotryoidal barberry (*Berberis heterobotrys*) are found here.

These plants are becoming increasingly important for improving agricultural production and for maintaining sustainable agriculture. With the advent of climate change and greater ecosystem instability, crop wild relatives are likely to prove a critical resource in ensuring food security for the new millennium. TNP plays a significant role in conservation of these genetic resources and contributes in the long term for improving food production and increasing food security.



Distribution of Walnut-Fruit Forest in the Tavildara Valley of TNP.

Fauna

The fauna of the Pamirs, including the nominated area, was greatly influenced by the glaciations of the Tien Shan, the Pamiro-Alai and the Pamirs, by general climatic changes during glacial and interglacial periods, as well as by various migrants during the last ice age from other mountain systems of the Palaearctic region, e.g Tibet, Himalaya, and the mountains of Iran and Afghanistan.

In zoogeographical sense, the protected area of TNP belongs completely to the Pamir region, and relates to the Central-Asian fauna.

Herd of Marco Polo sheep rams. Photo by Dragesco E.

Ichthyofauna

The ichthyofauna of the Pamirs belongs to an ancient group originating from India. It is characterized by poorness of species, absence of prey representatives, resistance to low temperatures and endemism. Tectonic processes and glaciations caused complete isolation and unique environmental conditions; as a result fishes developed specific adaptive features: black peritoneum, protecting gonads from high radiation, one-time spawning, taking place in a short time and ensuring preservation of offspring during short summer; toxicity of roe, protecting it from spawn-eaters.

The false osman (*Schizopygopsis stoliczkai*), in Tajikistan, is found only in the Pamirs. Other populations exist far away in tributaries of Indus and Brahmaputra rivers in India and in some rivers of the Tibetan Plateau. It is the largest fish in the Pamirs. A river and a lake variety are found in TNP. The species is very cold-resistant, adapting to high altitudes and productive, it is of great scientific and economic (sport fishing, farming) interest. Different forms/subspecies of the osman add to its interest for science, in particular in context of evolutionary research and speciation.

Karakul stone loach (*Nemachilus stoliczkai lacusnigri*) is an endemic subspecies. It differs from other subspecies of the Tibetan stone loach (*Nemachilus stoliczkai*) by the shape of the head and longer fins. Its length does not exceed 10 cm. This species lives in the salty Karakul Lake (core zone) and in freshwater streams and rivers flowing into it. Its biology has not been studied.

Since the late Pliocene, there have been no considerable changes in Pamir's ichthyofauna. All four species which occur in the Park (Annex C2) belong to a relict fauna, characterized by high isolation over a long time. Barriers formed by glaciers during the Pliocene led to the isolation of individual lakes, leading to high endemism, among others the Karakul stone loach. Relative stability of environmental conditions in the lakes and absence of human disturbance have contributed to preservation of an undisturbed ichthyofauna in the National Park.

Amphibians and Reptiles

Amphibians and reptiles occur only along border areas of the park. E.g. on the borders with Badakhshan in the west and Alai in the east. Snake-eyed skink (*Ablepharus alaicus*), Himalayan agama (*Laudakia himalayana*), water snake (*Natrix tesselata*), and green toad (*Bufo viridis* complex) are observed. The green toads are of high interest from an evolutionary point of view as there are different species with differing genetic characteristics (especially differing caryotypes) which are morphologically difficult to distinguish. The green toad is the only known amphibian species complex that comprises diploid (2n), triploid (3n) and tetraploid (4n) bisexually reproducing taxa. Tadpoles of the green toad were also observed in one of the water filled glacier mills near the glacier tongue of the RSC glacier at 2.400 m and adult animals in hot springs near Yashilkul (3,719 m).

Avifauna

The Park is inhabited by 162 bird species (Annex C3). 25 species are resident all year round, 30 are only visiting the park for breeding, others use the park for resting and breeding during migrations. The composition of breeding birds is closely related the avifauna of Tibet.

The area is inhabited by several endemic subspecies: *Charadrius mongolus pamirensis, Oenanthe xanthoprymna chrysopygia, Montifringilla nivalis alpicola, Carduelis flavirostris pamirensis, Leucosticte brandti pamirensis*.

Many species of TNP are listed in the Red Book of Tajikistan. These include: mountain goose (*Anser indicus*), Himalayan griffon (*Gyps himalayensis*), bearded vulture (*Gypaetus barbatus*), golden eagle (*Aquila chrysaetus*), Central Asian saker falcon (*Falco cherrug coatsi*), Tibetan snow cock (*Tetraogallus tibetanus*), brevirostrate plover (*Charadrius*

mongolus pamirensis), brown-headed gull (*Larus brunnicephalus*), Pallas' sand grouse (*Syrrhaptes tibetanus*), snow pigeon (*Columba leuconota*).

Himalayan snow cock. Photo by camera trap from FFI and Panthera Found, Zorkul reserve, Pamirs 2011.

Mammals (Theriofauna)

The terrestrial vertebrate fauna of TNP is very distinctive, and has much in common with the fauna of Tibet, and partially with that of Central Tien-Shan. Out of 85 mammal species inhabiting Tajikistan, 33 live inside TNP. This includes: Pamir vole (*Microtus juldaschi*), grey hamster (*Cricetulus migratorius coereulescens*), red marmot (*Marmota caudata*), tolai hare (*Lepus tolai pamirensis*), big-eared pika (*Ochonota macrotis*), silvery vole (*Alticola argentata*), snow leopard (*Panthera (Uncia) uncia*), Alpine weasel (*Mustella altaica* subsp.), caress (*Mustella nivalis pallida*), stone marten (*Martes foina intermedia*), Tibetan wolf (*Canius lupus laniges*), fox (*Vulpes vulpes ferganensis*), otter (*Lutra lutra*), brown bear (*Ursus arctos isabellinus*). Siberian ibex (*Capra sibirica*) is common throughout the park between 3,200 and 4,500 m. Males of ibex carry large horns (length 110 – 130) which have high attraction for trophy hunters as well as Marco Polo sheep (*Ovis ammon polii*) see below (see Annex C2).

Siberian ibex male. Photo by camera trape from FFI and Panthera Found, Zorkul reserve, Pamir 2011.

Endemics

From the above list of mammals *Microtus juldaschi* and *Lepus tolai pamirensis, Ovis ammon polii* are endemic species or subspecies, respectively.

Pamir vole (*Microtus juldaschi*) is abundant and occurs throughout TNP in meadows of floodplains and subalpine and alpine regions.

Tolai hare (*Lepus tolai pamirensis*) occurs throughout TNP and inhabits sparsely vegetated slopes.

Marco Polo sheep (*Ovis ammon polii*). Most probably the largest subspecies of wild sheep in the world with the most impressive spirally curved horns. Reaching 60 inches (152 cm) is not unusual, one trophy of 66 inches (168 cm) has been recorded. It is listed in the Red Book of Tajikistan and as subspecies of argali included in the Red List of IUCN (Near Threatened). The body length reaches 150 cm and weight of males is 200 kg or more. Its distribution is limited to the Pamirs; inside TNP at altitudes between 3,200 to 4,500 m. At least 5,000 animals are found inside the Park in Pshart spur, North Alichur, Muzkul, Zulumartsk, and the Zaalai ranges. The Park provides all critical habitats, all year round; this includes winter and summer grazing areas and lambing sites.

Rare species

Many mammal species living in the park are listed in the Red Book of Tajikistan: White-clawed subspecies of brown bear (*Ursus arctos isabellinus*), otter (*Lutra lutra*), Turkestan lynx (*Lynx lynx isabellina*). Marco Polo sheep (*Ovis ammon polii*) and snow leopard (*Panthera*

(Uncia) uncia) and Asiatic wild dog or dhole (*Cuon alpinus*) are listed as endangered by IUCN.

Otter (*Lutra lutra*) is widely distributed in Western Pamir, in Panj River and its tributaries which are rich in fish. Through Gunt, Bartang and Obikhingou rivers' and their tributes the otter gets into TNP. It is rare, precise data are missing.

Turkestan lynx *(Lynx lynx isabellina*). It is observed throughout TNP, population numbers are not available.

Snow leopard (*Panthera (Uncia) uncia*). Occurs at high altitudes between 1,500 and 4,500 m, it preys mainly on ibex and Marco Polo sheep, but also on livestock, in particular in winter. The total number in Pamirs is unknown, conservative estimates are about 200 individuals, of which about 120 exist in TNP.

Snow leopard. Photo by Abdulnazarov A.

Asiatic wild dog (*Cuon alpinus*) may as well occur in the Pamirs and observations have been reported several times. It is possible that Asiatic wild dogs in the past occasionally migrated into the Eastern Pamir. However, so far scientific evidence about the past or current presence of the species is missing.

Archaeological site in the near Karakul Lake Karaat Stone setting- 5000 years old. (Core Zone). Photo by Jungius H.

2. b. History and Development

History of geological development

The rising of the Pamir plateau, including TNP, took place in the Pleistocene and proceeds till now. During the Palaeogene (Lower Tertiary) the whole plateau was under water. The sea gradually grew shallow and during the Oligocene the land appeared. In Miocene the territory of the Pamirs as a whole represented a rolling country side. On the top of the Zaalay and Akademiya Nauk Ranges remains of an island type Oligocene relief has been discovered. These might be the remains of islands in the sea which covered the Pamirs in the Palaeogene. Red-brown colorized Miocene sediments indirectly point to hot climate. Change of coloration to grey, in Pliocene, indicates a cold climatic period.

At the end of Lower Pleistocene the raising of territory proceeded and the first powerful folding up of the Pamirs began.

In the Middle Pleistocene the recession of glaciers started, leading to a significant change of the landscape. Glacial moraines created dames, leading to creation of numerous lakes. Formation of these lakes in TNP is the most typical feature of the interglacial epoch in the Pamirs. The Karakul Lake occupied an area, at least twice the present size. Simultaneously with the recession of glaciers forests started to penetrate deep into the Pamirs, dominated by cedar and pine. In Upper Pleistocene (approximately 30,000 years ago) the period of the last glacial period of the Pamirs began, which ended only 12,000 years ago, giving the park its present shape.

Historical Settlements

Remains of different historical settlements, dating back to the 11th century have been discovered, often associated with exploration and extraction of minerals. In some places, remains include entire villages with large public facilities, buildings, roads, and even baths. These are remains of mining settlements in Bazar-Dara, Zurchersek, Ak-Jilga and Sasyk. In particular, silver was mined in the 11th century. The most famous historical mining site in Pamirs is the old mine in Bazar-Dara.

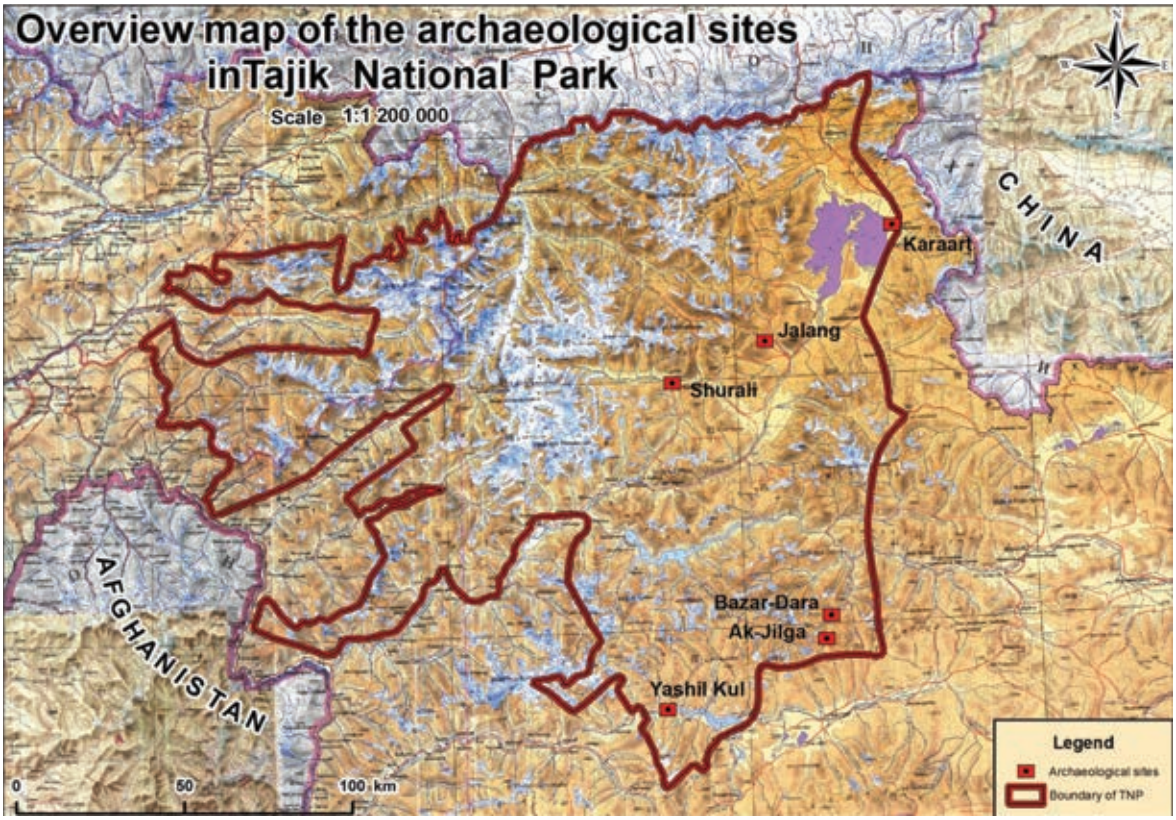
According to archaeologists (Ranov V., Veber C., 2005) TNP includes the following archaeological sites, listed in the table below.

Summary of Archaeological Sites in the TNP territory

Site	Theme	Date
Karaart	Geoglyphs, kurgans	Iron Age, 8th-3rd century BC
Shurali	Geoglyphs, kurgans	Iron Age, 8th-3rd century BC
Jalang	Petroglyphs	Middle Ages, 11th century AD
Bazar-Dara	Mining town	Middle Ages, 11th century AD
Ak-Jilga	Petroglyphs	Bronze Age to Middle Ages 2000 BC to 1000 AD, 18th century AD
Yashilkul	Kurgans and megaliths	Iron Age, 8th-3rd century BC

Petroglyph on rock. (Core Zone). Photo by Abdulnazarov A.

Geoglyph kurgans in Shurali site. (Core Zone). Photo by Abdulnazarov A.



Overview map of the archaeological site in TNP.

History of economic development

Man settled in the Pamirs shortly after the decrease of the glaciers in the last stage of glaciations, in 5-6 millenniums BC. People lived in Barchadev, Rukhch, Pasor, Bopasor, and Ghudara in summer, attracted by the abundance of wildlife during the Neolithic and Bronze Age. In winter, hunters descended to the warm valleys of Kashgar. Later, nomadic tribes settled gradually in the region, their descendants live here today. The main occupation of local people since ancient times is livestock breeding (pastoralism) and subsistence agriculture based on irrigation. Five small settlements (Barchadev, Rukhch, Pasor, Bopasor, and Ghudara) are situated in the "Zone for Limited Economic Use", located upstream of Bartang river. There are no other settlements inside the Park.

History of protection

Nature protection began in the Pamirs during the Soviet period. The Tajik National Park (TNP), with total area 1.6 million hectares, was established according to the Decision of the Government of the Republic of Tajikistan No. 267 of July, 20, 1992. In 2001 its area was increased to 2.6 million hectares by the Order of the Government of the Republic of Tajikistan No. 253.

With the revision of the management plan for TNP in 2011, the following zones were established: Core Zone; Traditional Use Zone; Limited economic use Zone; Recreation Zone.

The establishment of Tajik National Park in the Pamirs has the following goals:

- Conservation of outstanding and special natural areas and ecological processes and biodiversity with particular attention to rare and endangered species;
- Conservation of cultural and historical monuments;
- Education and research;
- Development and regulation of tourism;
- Sustainable use of natural resources in specific zones; this might include trophy hunting. A detailed study will determine the best site and regulations under which hunting might be permitted, with the purpose to provide income for management and protection of the park. IUCN and WWF recommendations on trophy hunting will be followed; this will only be allowed under the following conditions:
    - Science based plans for harvest, habitat management and monitoring.
    - An adequate legal framework will be established.
    - A substantial part of the revenues generated by trophy hunting are transferred to the park.
    - Money will be spent on habitat management and protection, population monitoring, education, research and support for local communities.

Somoni Peak from Korjenevskay Peak. (Core Zone). Photo by Kasirov K.

3. JUSTIFICATION FOR INSCRIPTION

3. a. Criteria under which inscription is proposed (and justification for inscription under these criteria)

(vii) Contains superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance.

The National Park covers a stunning high mountain environment including a system of grandiose east-west running mountain chains, separated from each other by 3,000 m deep valleys. High mountains with peaks covered by enormous glaciers above 7,000 m, high mountain plateaus and locked basin with lakes are the most typical features of the park.

Outstanding mountain ranges are Vanj and Yazgulom reaching 5,000 to 6,000 m, the picturesque Sangvor valley, the Academy of Sciences and Zaalai mountain ranges with the highest peaks of the Pamir; Somoni (7.495 m) and Istiqlol (formerly Lenin, 7,134 m). The huge Fedchenko glacier which is the longest and one of the biggest glaciers in the world outside the polar region, covering 1,000 sq km, hot mineral springs, meteorite craters, and one of the biggest caves of Central Asia, at an altitude of 4,100 m.

Fedchenko glacier. (Core Zone). Photo by Ivan Jdanov from www.turclubmau.ru

The park includes two large lakes, which are in many respects unique in the world (see also below viii)

Karakul Lake, the largest lake in the Pamirs, situated at 3,914 m in a basin surrounded by

snow and glacier covered mountain chains. The lake is situated in a big hollow which is interpreted as a 25 million old meteorite impact crater. The lake is the highest large mountain lake in the world, except those in Tibet and Lake Titicaca.
Sarez Lake was formed in 1911 by a land slide, which created the Uzoi Dam, with 567 m, the highest dam on earth, both natural and manmade. 2 cubic km of rock were dislodged from the slopes of the Murghab river valley, dammed the river and created the lake.

(viii) Outstanding examples representing major stages of earth's history, including the record of life, significant on-going geological processes in the development of landforms, or significant geomorphic or physiographic features.

The nominated site includes the most outstanding features of the Pamirs. Huge mountain ranges linked to the highest mountain systems of Central Asia and the world: Hindukush to the south, Karakorum and Himalayas to the south-east, Kunlun to the east, Pamiro-Alai to the north and Parapamiz to the west.
The territory is characterized by large differences of altitudes and heavily dissected terrain shaped by glaciers during the late Pleistocene. All forms of glacier morphology are found here.

Two glacier mills - part of a system of 5 mills - in the Vanj valley near the base of the RSC glacier glacier tongue, part of the Fetschenko Massive in Park. Photo by Hartmut Jungius.

Glaciers of Pamir are important natural resources on world scale. The total glaciation area exceeds 8 thousands sq.km. More than 80% of all glaciers are located inside of the nominated territory. They store several hundreds cubic kilometers of pure fresh water which feed the river system of Amu Darya the backbone for the national economies of Tajikistan, Uzbekistan, Turkmenistan and Afganistan.

The largest glaciers of Central Asia are situated in Park; including “Fedchenko”, the longest and one of the biggest glaciers in the world outside the polar region. “Fedchenko” is also the largest middle-latitude valley type glacier in the world, with a length of 77 km, 2 to 3 km wide, covering an area of 1,000 sq km and a maximum thickness of the ice of 1,000 m. Fedchenko being situated on elevations from 2,900 m up to 6,200 m, seems to be one of the glaciers most resistant to global climate change. Impact of global warming caused the glacier tongue to retreat by 1 km since 1933 causing a loss of 2 km^3, which is 5 % of its volume, but this is relatively little compared to the melting glaciers in the European Alps and the Caucasus.

Further east Grum-Grzhimailo glacier (length 37 km and area of 143 sq km) is located. Garmo glacier, which lies between Peter the Great and Darvaz ranges, has a length of 30.4 km and area of over 114 sq km. All glaciers constitute an important source and reservoir of fresh water on which the wellbeing of large parts of Central Asian depend. It is estimated that the largest contributory of the Amu Darya, the Panj River, annually takes an average of 26 to 28 cubic kilometres of unpolluted drinking water from the Pamir. It is important to underline: The park is unique in Central Asia by acting as its main storage of fresh water. There is no such protected area in other Asian countries. TNP is the main water-tower of Central Asia.

The park includes the largest lakes of the Pamirs which are in many respects unique on a global scale. Karakul (364 sq km) is by surface the largest lake in the Pamirs. It is situated in an ancient meteorite crater (see vii) surrounded by swamps, wet meadows and bogs with a rich flora and fauna, including several endemic species. Flooding, melting of permafrost and buried ice sheets shape the landscape with small hillocks and a large variety of small creeks and water courses between 3.500 and 4,000 m. The rich plant cover is grazed by wild and domestic ungulates. These wetlands represent a critical breeding and feeding habitats for resident and migratory birds during summer such as Indian goose, Brown-headed gull, Tibetan and Himalaya Snow cock and several waders.

Glaciers of the park feed stream, wetlands and luxurious grassland inside the park and around the park. (Core Zone). Photo by Jungius H.

Cold High Mountain Desert in TNP, between 3,500 and 4,500 meters above sea level. Occupying about 11,500 sq km or 44%, it includes Udvardy's "Cold Winter Desert". The prevailing plants are: Teresken (*Eurotia ceratoides*), wormwoods (*Artemisia pamirica, A. korshinskyi*), ajania (*Ajania tibetica*), feather grasses (*Stipa glareosa*), oxytropis (*Oxytropis immersa, O. poncinsii*), and thorn cushion plant formations (*Acantholimon diaspensioides, A. pamiricum*). Aridity and a continental climate with stark seasonal temperature differences ranging from +32°C in summer to –48°C in winter, with permafrost, strong winds and intensive insolation is a typical feature of this environment. Such landscapes with gravel plains and stony sandy soil, with no or sparse vegetation, dominated by teresken and wormwoods, are widespread in the sub-alpine and alpine zones (at 4,000 – 5,000 m meters above sea level) in the Eastern part of the National Park. This habitat type of continental deserts with cold

winter is not well covered in WH sites. Adding the Tajik National Park to the World Natural Heritage list would overcome this deficit.

The proposed site includes one of the most outstanding, recently developed geomorphologic phenomena on earth. Lake Sarez (88 square km) appeared in 1911 as a result of an earthquake. It is by volume (17 km^3), the largest fresh water deposit in Tajikistan and Central Asia with a maximum, depth of 500 m. The lake is situated between Muzkul and North Alichur ranges in the core area of TNP. As a result of nine magnitudes earthquake during the night of 18 to 19 February 1911 a six billion ton landslide blocked the Murghab River. The lake flooded a large valley with several villages, one of which gave its name to lake. The current water level was reached in 1920.

The status of the lake remains very unstable. Geologists fear that a new large magnitude earth-quake might break loose 3 cubic km of rock which would crush into the lake creating an enormous wave which might cause the dam to break with disastrous consequences for the Murghab Valley below. One more landslide occurred already in 1968, which caused 2 m high waves in the lake, without damaging the dam.

Lake Sarez is the youngest large deep water lake on earth and therefore an irreplaceable natural laboratory where geological processes, significant geomorphic and physiographic features can be monitored and studied, as well as the evolution and dynamics of lacustrine ecosystems and communities.

Meteorite crater. (Core Zone). Hausibek photo from www.google.com

(x) Contain the most important and significant natural habitats for in-situ conservation of biological diversity, including those containing threatened species of outstanding universal value from the point of view of science or conservation.

The park includes two main habitat types under this criterion.

Continental Cold Winter Deserts: (about 11,500 sq km or 44% of TNP area). This extremely interesting and specific biome is underrepresented in the current WH List of UNESCO. "Tajik Park" is contributing in a major way to the conservation of this biome. These ecosystems exist from 2,800 up to 4,500 meters above sea level in the eastern part of National Park. The prevailing plants are: Teresken (*Eurotia ceratoides*), wormwoods (*Artemisia pamirica, A. korshinskyi*), ajania (*Ajania tibetica*), feather grasses (*Stipa glareosa*), oxytropis (*Oxytropis immersa, O. poncinsii*), and thorn cushion plant formations (*Acantholimon diaspensioides, A. pamiricum*). Aridity and a continental climate with stark seasonal temperature differences ranging from +32°C in summer to –48°C in winter, with permafrost, strong winds and intensive insolation are typical features of this environment. Such landscapes with gravel plains and stony sandy soil, with no or sparse vegetation, dominated by teresken and wormwoods, are widespread in the sub-alpine and alpine zones (at 4,000 – 5,000 m meters above sea level) in the Eastern part of the National Park. This habitat type of continental deserts with cold winter is not well covered in WH sites. Adding the Tajik National Park to the World Natural Heritage list would overcome this deficit.

Vavilov Centers: The park includes two world-scale important gene pools of wild relatives of cultivated plants (Vavilov Centers). The mountains of Badakhshan are renowned for a large number of varieties of wild forms of soft and club wheat and ranks first in number of botanic diversity of *Triticum* L. species, 151 out of 273. The Tavildara section of Park is known for its "Walnut-Fruit-Forests".

Local varieties of cereals in Plant Genetic Center in Dushanbe, Tajikistan. Photo by Z. Khalikulov.

A wild form of Sievers' apple *(Malus sieversii)* in fruiting in the Tavildara part of Park.Photo by Nazirov Kh.

Local form M-88 of cherry in Tavildara part of Park. Photo by Nazirov Kh.

Local form M-907 of cherry in Tavildara part of Park. Photo by Nazirov Kh.

At a time of world wide increasing pressure on wildlife, it should not be neglected that the park provides also a safe home for a large number of rare and endangered animals and plants.

The park includes more than 2,100 species of the high plants many of which are endemic, rare and disappearing such as: *Desmatodon altipes*, *Ostrowskia magnifica*, *Desideria pamirica*, *Oxytropis hedini*, *Pulsatilla kostyczewii*, *Acantholimon varivtzevae*, *Saxifraga pulvinaria*, *Bunium persicum*.

Two species of rare or endangered large mammals are protected in this vast wilderness area. The snow leopard (*Panthera* (*Uncia) uncia*), and a large and healthy population of Marco Polo Pamir argali (*Ovis ammon polii*). This is most probably the largest species of wild sheep in the world, with the most impressive spirally curved horns. Reaching 60 inches (152 cm) is not unusual, one trophy of 66 inches (168 cm) has been recorded. Its distribution is limited to the Pamir at altitudes between 3,200 to 4,500 m. At least 5,000 animals are found inside the Park in Pshart spur, North Alichur, Muzkol, Zulumartsk, and the Zaalai ranges. The population is stable or on a slight increase. The Park provides all critical habitats for the species, all year round; this includes winter and summer grazing areas and lambing sites.

3. b. Proposed Statement of Outstanding Universal Value

The nominated site includes the most outstanding landscapes and wilderness areas of the Pamir Mountains. This includes the Fedchenko and Medvejiy glaciers, Ismoili Somoni and Istiqlol Peaks, high mountain plateaus and high mountain lakes such as Sarez and Karakul.

The harsh high mountain environment of the Park and prevailing extreme environmental conditions and ongoing ecological process such as river dynamics and glacier movements as well as continuing geological process such as earthquakes and land slides, create an environment with extreme dynamics and changing features. The splendor of mountain snow summits and glaciers, open spaces of wide plateaus of East Pamir, the beauty of large and small high-mountainous lakes, the variety of canyon-like valleys of the Western Pamir, all this represents a high aesthetic, divine and recreational value.

Glaciers of the Pamirs are natural resources of world scale importance. The total glaciation area exceeds 8 thousands sq.km, 80% of this is located inside of the core zone of the Park. It is storage of several hundreds cubic kilometers of pure fresh water. Glaciers feed the river system of Amu Darya providing the most precious resource to the national economy of Tajikistan, Uzbekistan, Afghanistan and Turkmenistan. The glaciers of the Park provide

water for millions of people throughout the year and in particular for agriculture when this is most needed during hot summer months. The, glaciers of nominated property are a store house of fresh water and a "strategic" resource for the region.

The core zone of the park is a kind of "geological museum" with intensive geological and physical-geographical processes going on constantly and thus representing significant scientific interest for studying of the history of Earth's development. Sarez Lake is an outdoor laboratory for monitoring and studying ecological and geomorphologic processes under extreme conditions.

The Park incorporates two Vavilov Centers for wild relatives of cultivated plants includiing cereals (wheat, barley), legumes (chickpea, lentil), fruit trees and berries in the "Walnut-Fruit-Forests" system.

In summary the peculiarities of the nominated property, for determining its potential place in the List of UNESCO, are:

- TNP is one of the highest regions of our planet with heights up to 7,000 and 5,000 meters. "Tajik Park" may become the third (after Sagarmatha and Nanda-Devi Parks in Himalaya) high-mountain site to be included into the Natural World Heritage List.
- A large number of extremely high mountain peaks with Peak Somoni – the highest point in the Pamirs;
- A impressive number of high mountain glaciers, including Fedchenko Glacier – one of the largest mountainous-valley glaciers in the world;
- Sarez and Karakul Lakes – two of the most outstanding high-mountain lakes in the world with several special features.
- One of the world centers of mountainous glaciations, where glaciers and mountain lakes act as storages for high-quality fresh water on which millions of people depend. TNP is the "Water Tower" for large parts of Central Asia.
- Landscapes are characterized by their unique beauty. The main elements of these landscapes are classic forms of alpine relief, extremely large mountainous glaciers, small and big lakes and the combination of high-mountainous relief with vast high mountain plateaus.
- Significant parts of TNP are covered by cold continental winter deserts. This biome is underrepresented in the current List of UNESCO. "Tajik Park" contributes in a major way to the conservation of this biome.
- It includes two gene-pools for wild relatives of cultivated plants (Vavilov Centeres)

3.c Comparative analysis (including state of conservation of similar properties)

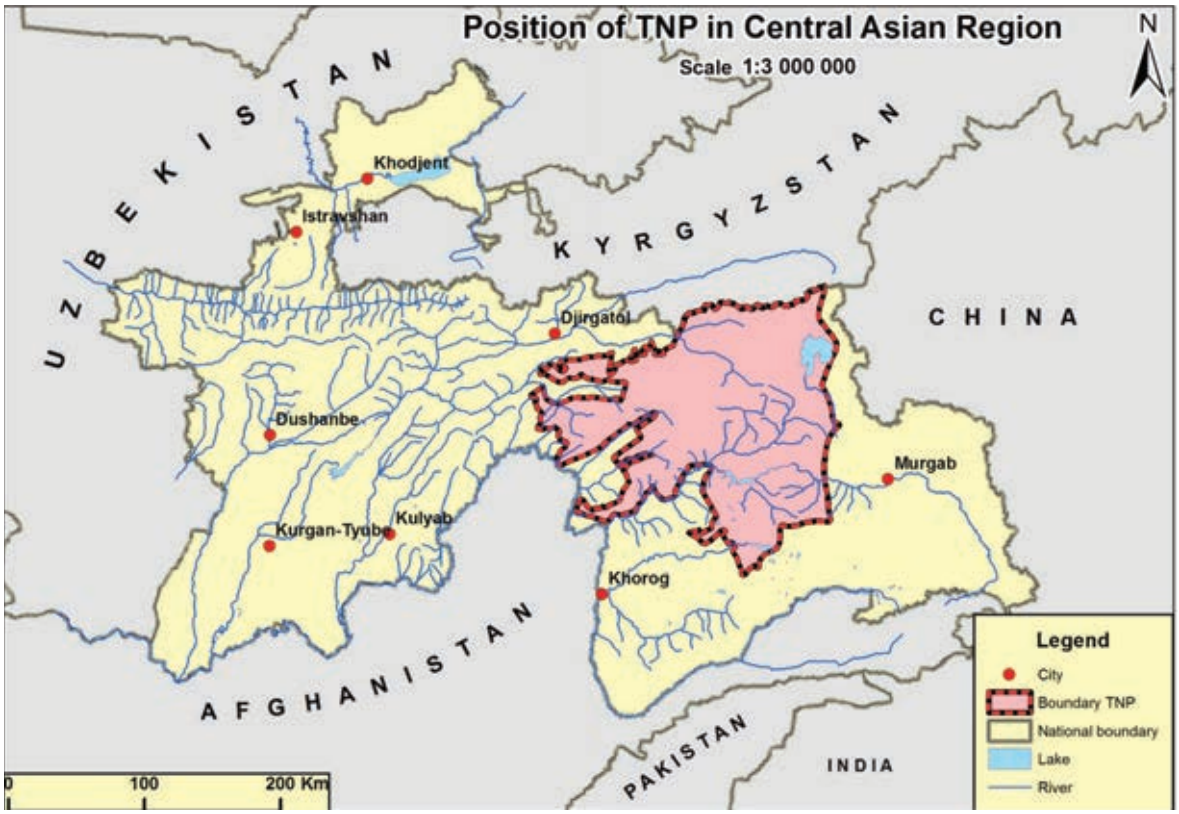
1. GEOGRAPHICAL ANALYSIS

1.1. Analysis under Udwardy scheme – state of the biotic realm

The Eastern Palaearctic region is one of the largest biotic realms, distinguished by M. Udvardy (1975). It covers the whole Siberia and the Far East of Russian Federation, Japan, Mongolia, China, Nepal and the north of India, Kazakhstan, Uzbekistan, Turkmenistan, Kyrgyzstan, Tajikistan, Afghanistan, Iraq, Iran, Saudi Arabia and a number of other countries. According to J. Thorsell (2003), the density of World Natural Heritage Sites per each million of square kilometers of territory is 0.47, while the analogous figures for significantly smaller Western Palaearctic region (European part of Russia, Western Europe, Mediterranean and Northern Africa) makes 1.6, which is 3 times more. This demonstrates that WNH sites are underrepresented in the Eastern Palaearctic region, despite its rich natural diversity. Only 15 WNH sites were registered up to now, this is a very small amount compared to the total number (162) around the world.

There are even less WNH sites under consideration and registered in the high mountain areas of the Eastern Palaearctic region of Central Asia and surrounding mountain regions including southern Siberia and northern India, despite the fact that this is a place of concentration of the highest mountain systems in the world: Such as Sayan, Altai, Tian Shan, Pamirs, Karakorum, Hindukush, Kunlun, Himalaya, and Tibet. These high-mountain areas, connected with upland and continental deserts, cover a huge territory, which extends over 3,000 km from north to south (from Lake Baikal to the Himalaya) and approximately likewise from west to east, (from the Iranian uplands to the Gobi desert). However, up to now there are only six WNH objects registered in this vast region: Lake Baikal, Ubsunur hollow, “Golden Mountains of Altai” – all in Russia; Nanda-Devi Park in India, Sagarmatha Park in Nepal, “Three Parallel Rivers” in China. This is extremely little for such a vast region with a highly diverse and rich nature. In a strict sense, all nominated objects are confined to surrounding regions of Central Asia and there is no such object registered in the heart of Central Asia. Central Asia must therefore be considered a large “blank spot” on the global map for World Natural Heritage Sites. This huge gap, between the 30th and 50th parallels, extends for about 2,000 km: Between the WNH object in southern Siberia (“Golden Mountains of Altai”) and an object in western Himalaya (Nanda-Devi Park). Only few other regions of the world can “compete” with Central Asia in relation to “blanc spot” in the NWH List: Northern Africa, Central and North-Eastern parts of North America, Western Asia and Arabia, Siberia and the Russian Far East.

Therefore, allocating WNH status to Tajik National Park would not only underline the global significance of this area; it would also be timely and enrich the global picture of WNH distribution by giving it a more uniform character. In addition to the low number of existing WNH sites in the Eastern Palaearctic region, TNP with 2,611,674 hectares would highlight the importance of this most outstanding high mountain area on a world scale and become one of the largest Natural Heritage Sites in this part of the world.



Map of the position Tajik National Park in the Central Asian Region.

1.2. Analysis under Udvardy scheme – biomes level

The nominated property is part of Udvardy's biogeographic province of the Pamir-Tian-Shan Highlands which are part of the Mixed Mountain Systems biome (Udvardy 1975). The Pamir-Tian-Shan Highlands, or other Central Asian mountain ranges, are not yet represented in a natural WH property; this includes also Cold Winter Deserts (Magin & Chape 2004). The same applies to Lake Systems. This gap could be filled by TNP.

1.2.A. Tajik National Park is characterized by an impressive high mountain landscape, which, at a first and superficial glance might lead to the conclusion that there are several properties with similar characteristics included into the current WH List; such as mountain ranges reaching 3,000 to 4,000 m or 7,000 to 8,000 m, with highly broken alpine landscape, presence of mountain glaciers and lakes, and similar geological formations (Mesozoic/ Cenozoic).

Below are some examples of such properties:

Europe:

- **Jungfrau-Aletsch-Bietschhorn,** Switzerland, Alps, peak height – 4,274 m (criteria vii viii ix).

Asia:

- **"Golden Mountains of Altai"**, Russia, peak height – 4,506 m (p. Belukha) (criteria x);
- **Sagarmatha National Park**, Nepal, Himalaya, peak height – 8,848 m (p. Mount Everest) (criterion vii);
- **Nanda Devi and Valley of Flowers National Parks**, India, Himalaya, peak height – 7,800 m (criteria vii, x);
- **Three Parallel Rivers of Yunnan Protected Areas,** China, eastern part of Tibet, peak height – 6,740 m (criterion vii viii ix x).

North America:

- **Parks and reserves of Alaska,** Canada-USA, peak height – 6 050 m (criteria vii ix x);
- **Waterton Glacier International Peace Park,** Canada-USA, rocky mountains, peak height – 3,190 m (criteria vii ix);
- **Canadian Rocky Mountain Parks**, peak height 3,954 m (criteria vii viii ix).

South America:

- **Huascarán National Park**, Peru, Andes, peak height – 6,768 m (criteria vii ix);
- **Los Glaciares National Park**, Argentina, peak height – 3,375 m (criteria vii ix).

Oceania:

- **Te Wahipounamu - South West New Zealand**, New Zealand, south alps, peak height – 3,764 m (criteria vii viii ix x).

However, Tajik National Park in the Pamir **would in no way duplicate** any of the objects mentioned above for the following reasons:

1. The high mountain regions of the Himalayas or Tibet and those located in other continents were formed under quite different climatic and geological conditions. Their fauna and flora is not only different, but also exposed to other environmental conditions.

2. The outstanding features of TNP are not duplicated by any other WNH site; this includes not only the high mountain landscape with the highest peaks of the Pamirs, the huge glacier fields, in particular Fedchenko, the "Water Tower of Central Asia", but also Karakul and Sarez Lakes with their special features and history, the meteorite craters and last not least

the 2 Vavilov centers. It is the combination of all this which makes TNP a very special place in the world, and a potential WNH site, which is not matched by any of the WHN sites near by e. g the Nanda Devi Park (approximately 1,000 km away to south-east) and Altai (approximately 1,500 km to north-east), or elsewhere.

1.2.B.

Cold Continental Deserts are underrepresented in the World Heritage List, although they cover vast areas in the very center of the Asian continent and other parts of the world. Adding Tajik National Park to the World Natural Heritage List would fill this gap.

Even in China, where this biome is widespread and where several WNH sites are situated, none includes cold mountainous deserts. Four out of eight sites are located in the East and South-East Subtropics of China: Wulingyuan, South China Karst, Mount Sanqingshan and China Danxia. There are 3 other sites in the mountains of Central China: Huanglong, Jiuzhaigou Valley and Sichuan Giant Panda Sanctuaries. Finally in the eastern part of the Himalaya (West China), and the Three Parallel Rivers of Yunnan Protected Areas.

The only exception, to some extent, is the high mountainous plateau Ukok (within the Russian object "Altai-Gold Mountains"). The landscape of this plateau between 2,000 to 3,000 meters above sea level, has some similarities with cold mountain deserts. However, the composition of the vegetation at the Ukok Plateau differs significantly from the vegetation of the Pamirs' Cold Continental Deserts, for instance by the lack of teresken (*Eurotia ceratoides*), which is the dominating plant in the vegetation of TNP's deserts.

It is therefore important to underline that Tajik National Park, includes a significant part of this biome which has developed under a dry continental climate with extraordinary cold winters, with dramatic changing daily and seasonally temperatures, with deep soil freezing, strong winds and intensive insolation. This biome is particularly common within the sub-alpine and alpine zones (between 4,000 to 5,000 m) on the vast flat territories in the Eastern part of the National Park.

2. COMPARISON WITH OTHER OBJECTS OF WNH

CRITERION VII

Contains unique natural objects of the exceptional beauty and aesthetic significance

The Pamirs are an exceptionally dramatic and picturesque mountain kingdom; it is among the world's highest mountains and known as the "Roof of the World". Formed by the junction

or knot of the Himalayas, Tian Shan, Karakoram, Kunlun, and Hindukush ranges, it is not matched by any other mountain range in the world. The exceptional values are described below.

1. TNP is a well preserved, remote and unspoiled wilderness. The quite opposite example is the Jungfrau-Altesch-Bietshorn property in the Swiss Alps, which is highly developed and under extreme tourist pressure. 700,000 people annually are being brought up into the mountains and on to the glacier at 3,500 m by a train, there is a huge rail way terminal with restaurants, shops, ice museum, and a dense network of alpine skiing tracks, even in summer.

2. Tajik National Park demonstrates a very rare combination of highly segregated high-mountain landscape (western part) with elevated plateaus at an elevation between 4,000 to 5,000 m (eastern part). There is some similarity with the Golden Mountains of Altai with the highest peak in whole Siberia – peak of Belukha (4,500 m) and the wild highland plateau of Ukok 2,000 to 3,000 m altitude in the Altai. The Tibetian plateau and mountain ranges could, to some extent be considered as closest analog to the Pamirs, however up to now there were no WNH objects registered.

CRITERION VIII

Represents Earth's major stages of development, significant geological processes of earth surface formation, and valuable geomorphologic and physical-geographic features of landscape

1. The Pamirs are one of the highest-elevated regions of the planet. The outstanding natural feature of the property are high mountains with ten glaciated peaks 5,000 to 6,000 m, three 7,000 m peaks like Peak Somoni (7,495 m), which is the highest peak on the whole territory of the former Soviet Union, and today – its is the highest mountain peak in CIS. Only two other WNH properties surpass the Pamirs in this sense – the National Parks of Sagarmatha (peak heights of 8,848 m) and Nanda Devi (peak heights of 7,800 m). At the same time, none of the highlands of Europe (Alps), Africa (Kilimanjaro), North and South America (Cordilleras and Andes), Australia (Great Watershed ridge), New Zealand (South Alps) and Antarctica reach this level.

Somewhat lower elevations are found in the WNH properties in the Andes (Huascarán National Park, peak height of 6,768 m – this is the highest mountain range in the whole tropical zone), and near the eastern frontiers of Tibet mountains (Three Parallel Rivers of Yunnan, peak height – 6,740 m).

Tajik NP Glacier mill in the Vanch valley near the base of the RSC glacier tongue, part of the Fedchenko Massive. Photo by Jungius H.

2. The Pamirs are one of the major centers of mountain glaciations in Eurasia and on the planet, where huge reserves of pure fresh water are concentrated in glaciers and deep mountain lakes. This is the "Water Tower of Central Asia". Some other WNH property may compete with Tajik National Park in sense of glaciation level but none can compete with its function in providing fresh water all year round for millions of people in the surrounding valleys and lowlands. A similar high glaciation is marked in parks and reserves of Alaska, Los Glaciares National Park, to some extend also at the Jungfrau-Aletsch-Bietschhorn and in one cluster of Golden Mountains of Altai (Katunskiy biosphere reserve). On the other hand, the Sagarmatha Park with the Mount Everest and a number of other highest peaks of the planet is covered only by 20-25% with ice and snows. This is very little, compared to TNP where glaciers such as Fedchenko, Grum-Grjimailo, RGS, Medveji cover more than 90% of surface of own land with snow and ice which makes this system more resilient to climate change.

The Park is unique for its large variety of glacial formations as well: it comprises different types of mountain glaciers (including so-called pulsating glaciers) and glacial forms of landscapes, i.e. it is a glaciology museum under open sky. One striking example is the deep glacier mills near the tongue of the RGS Glacier.

3. There are several natural phenomenon of global importance in TNP

Glaciers. The Fedschenko glacier is a notable natural phenomenon, the largest Pamir glacier and the longest glacier outside the polar regions (77 km long, covers 700 sq km, 1,000 m thick, volume 144 cubic km) seems to be more resilient to global warming than other glaciers included into NWH nominations. One exception is the 120 km long tidewater glacier Hubbard, in Glacier Park in Alaska which continues thickening and advancing, and pushing massive ice blocks ("calving") into the sea every day. All other glaciers in NWH sites do not match Fedchenko in length, volume or stability:

- Upsala glacier, 50 km long, in Los Glaciares Nationalpark (Andes),
- New Zealand South Alps where the glacier Tasman, 27 km is retreating 180 m/ year).
- In the Swiss Alps, the glacier Aletsch, 23 km, in the Jungfrau-Aletsch-Bietschhorn property, is also showing a major long-term retreat.
- Kgojumba glacier, 20 km long, in Sagarmatha Natioalpark (Himalaya) is also rapidly pulling back.
- There is a huge area of mountain glaciation in national parks of the Rocky Mountains of Canada, e.g the Columbia icefield, with the famous Atabaska glacier, 6 km long, covering 6 sq km. This is also, like the Swiss Aletsch region a highly developed tourist site with observation points, roads and winter sport.
- In Siberia, the Katunskiy ridge in Altai is the largest point of mountain glaciations in the region.
- Another interesting mountain glacier is the 8 km long Mingyongqia glacier located in "Three Parallel Rivers" – it is considered to be the most southern glacier in Northern hemisphere and remarkable for its steep grade: A 3000 m drop between its highest and lowest points.

In summary none of these match up with Fedchenko and the surrounding glaciated peaks of the park.

High-mountain lakes. Karakul and Sarez lakes – are among the highest elevated large water reserves of the planet. Lake Karakul at 3,914 m altitude, in a 25 million year old meteorite created, covers 364 sq km it is 236 m deep and surrounded by a spectacular scenic skyline of snow and glacier covered mountains up to 5,000 m.

Lake Sarez, created by a landslide in 1911, is situated at 3,263 m. It covers 80 sq km and is 505 m deep. Its history, ecological and geological dynamics are completely different from similar NWH sites such as Lakes Titicaca – 3,812 m, Poopo – 3,690, and Cucunor – 3,205 m.

Both Pamir lakes are true and unique natural phenomena at the global scale. Moreover, Karakul Lake is considered to be the highest mountain salty lake in the world, inhabited by a rich flora and fauna including several endemic species. The wetlands around the lake represent critical breeding and feeding habitats for resident and migratory birds.

Sarez Lake is one of the youngest lakes on earth. The lake's ecosystem is still in stage of formation and, therefore, represents unique opportunities as a polygon for scientific research. The Uzoi natural dam, caused by the landslide which blocked the flow of the Murghab river, is higher than any other natural or manmade dam in the world.

Another mountain lake in a WNH site having significant size and large stocks of fresh water is Lake Talezkoe in Altai. It is 325 m deep, 78 km long, up to 5 km wide and located on the height of 440 m. It is surrounded by forests and represents a completely different ecological and geological history.

Lake Arjentino WH site is the largest lake in Argentina located on the territory of Los Glaciares Park in Patagonia Andes; its is 160 km long, up to 20 km wide and 500 m deep. This huge lake is located much lower than Sarez and Karakul.

Finally, referring to two high-mountain WNH objects located in the Rocky Mountains of Canada and USA (the Waterton-Glacier Park of Canadian Rocky mountains), we realize that there are numerous glacial lakes of exceptional splendor; however most of them smaller and none of them meets the qualities, geological history and grandeur of the Pamir lakes in the TNP.

CRITERION X

Contains natural habitats most important and valuable for conservation of biodiversity in the region, including the areals of endangered species representing outstanding world asset from the scientific point of view and nature conservation

1. The nominated area includes a gene pool of global importance. According to academician N. Vavilov, Mountain Badakhshan is one of the world's centers for wild relatives of cultivated plants. This includes a large number of varieties of soft and club wheat and ranks first in number of botanic diversity of *Triticum* L. species, 151 out of 273. The diversity of endemic local varieties of wheat, compact club wheat, and its wild relatives is unique.
2. The Western Pamir, including the Badakhshan area of the Park, is renowned for wild relatives of cultivated plants. The Tavildara section of Park is another important gene-pool for wild fruit trees and berries, which are found in the "Walnut-Fruit-Forests" complex.
3. Most of the world's wildlife, but in particular our charismatic mega-fauna

such as the snow leopard (*Panthera (Uncia) uncia*) is under increasing pressure. Vast protected areas, such as TNP play therefore increasingly an important role for conservation by providing a safe place for these species. The world's snow leopard population is relatively small and decreasing, and split into several isolated populations. The Pamirs population is still fairly stable. TNP plays a major role to ensure this in the long term by providing protection for the species and conservation of its habitat and prey. Snow leopards inhabit also other WH sites: Altai, Ubsunur hollow, natioanal parks of Sagarmatha and Nanda Devi, however, all of these areas are much smaller than TNP, this implies that TNP makes a major contribution to this highly endangered species.

4. Pamir argali (*Ovis ammon polii*) or Marco Polo sheep is a subspecies of the argali sheep. This is probably the largest species of wild sheep in the world with the most impressive spirally curved horns. Reaching 60 inches (152 cm) is not unusual, one trophy of 66 inches (168 cm) has been recorded. Its distribution is limited to the Pamirs; inside TNP between 3,200 to 4,500 m. At least 5,000 animals are found inside the Park which provides all critical habitats for the species, all year round; including winter- and summer grazing areas and lambing sites. Marco Polo sheep are not found on the territories of other WNH objects (Altai and Himalaya).

SUMMARY

The peculiarities of "Tajik National Park (TNP)" distinguishing it from other high mountain Natural Heritage Sites and highly recommending it as a potential property for the UNESCO WH List is underlined by the following aspects:

1) The dominating scenic elements of the Pamir are represented in TNP. This includes spectacular snow and glacier covered mountain ranges, glaciated peaks up to more that 7,000m. Vast glacier tongues, dramatic, deeply caved valley by glaciers and rivers, high mountain lakes surrounded by dazzling snow-covered mountain chains, and high mountain plateaus.
2) TNP is one of the highly elevated regions of our planet, with peaks reaching 7.5 thousand meters. Among all other similar WNH objects only two (the parks of Sagarmatha and Nanda Devi in Himalaya) can be distinguished for even higher mountain peaks. "Tajik National Park" in this sense can become the third high-mountainous object of Natural Heritage in the world.
3) The Pamirs are one of the world centers of mountain glaciation, with huge reserves of pure fresh water locked up in glaciers and deep mountain lakes. There is hardly any

WNH site which can compete with TNP's enormous glaciers and their function as a "Water Tower" for the surrounding land.

4) The nominated area comprises several natural phenomenon of global significance, like peak Somoni – the highest point in the Pamirs, Fedchenko glacier – one of the largest mountain-valley glaciers in the world; Lakes Karakul situated in a 25 million old meteorite crater and Lake Sarez with the highest dam in the world, both lakes above 3 thousand meters, in a very special ecological and geological environment.
5) Significant areas in Pamirs are occupied by cold continental deserts. This biome is underrepresented in the UNESCO WH List. "Tajik National Park" would become the first property for the List representing this biome well.
6) TNP includes two centers for wild relatives of cultivated plants (Vavilov Centers), which are of global importance.
7) TNP provides an important habitat for endangerd mountain fauna and flora, in particular the Snow Leopard and the Marco Polo sheep.

Thus, the "Tajik National Park", despite some similarities with other high mountain NWH sites, should be considered a unique and very special property fully eligible for registration in the List of World Heritage of UNESCO.

This vast, well conserved wilderness area would qualify for being registered in the List of UNESCO under criteria vii and viii and to some extend according to criterion x, in view of its high geological, glaciological and biological value. All these factors distinguish "Tajik National Park" from other similar high mountain properties.

3.d Integrity and/or Authenticity

Integrity

Justification of integrity is provided in compliance with "Guidelines for implementation of the Convention".

Section 88:

(a) Tajik National Park represents a well integrated natural complex, where all ecological and geomorphologic processes for the functioning of high mountain ecosystems are undisturbed and closely linked to each other.

(b) TNP provides the space needed to ensure sustainable functioning of natural dynamics and provides all critical habitats all year round for its wildlife, such as snow leopard and Marco Polo sheep.

(c) The proposed property is consistent with the borders of the TNP. The Park's staff ensures professional management and protection, based on the laws and regulations of the Government of the Republic of Tajikistan. Most of the park is a remote wilderness area which is highly inaccessible and for most of the year under severe weather conditions, which adds to its safety and integrity.

Glacier in the Muzkol range. Photo by Yusufbekov Y.

Section 90:

The biophysical processes and peculiarities of most of the landscape are undamaged within the nominated area.

Section 92:

The nominated property is of outstanding global significance and comprises a wide range of the elements which underline its aesthetic characteristics like towering snow caped mountain ranges, picturesque valleys of mountain rivers, high mountain lakes, mountain ridges with high glaciated peaks and huge glaciers. All components of the landscape contribute to the tremendous aesthetic value of the property and are a result of natural processes which shape the areas since immemorial times.

Section 93:

The nominated area demonstrates the geological history of the last 25 million years and ongoing geological process associated with the uplifting of the Pamir Range.

The territory includes all key interrelated and interdependent elements of glaciation and glacier formed landscapes.

Section 94:

The area of the park, with a size of 2.2 million hectares, includes a large variety of different habitat types of the Eastern and Western Pamir. This helps to ensure conservation of the Park's biodiversity and aesthetic values and all ecological and geomorphologic process in the long-term.

Section 95:

Tajik NP is the most important area for the conservation of biological diversity in the Pamirs. According to academician N.Vavilov, Mountain Badakhshan and Tavildara region of TNP are globally important gene-pools for wild relatives of cultivated plants.

A wild range of species and among of them two species of mammals – the snow leopard (*Panthera (Uncia) uncia*) and the Marco Polo sheep (*Ovis ammon polii*) are protected by the park. They are recognized as globally threatened and included to the Red List of IUCN.

Karakul Lake. (Core Zone). Important breeding and feeding site for several bird species. Photo by Jungius H.

4. STATE OF CONSERVATION AND FACTORS AFFECTING THE PROPERTY

4.a Present state of conservation

Water, soil and air of the Tajik National Park, are not polluted and are in natural condition.

The area of Tajik National Park was divided into following zones (see map 1, Scale 1:1 200 000).

- Core Zone;
- Traditional Use Zone;
- Limited Economic Use Zone;
- Recreation Zone.

Core Zone

***Objective*:**

- Conservation of outstanding and special natural areas and ecological processes and biodiversity with particular attention to rare and endangered species, without any human interference, except controlled tourism and research.

Description and Values:

This zone covers 1,685,411 ha or 64.6% of the TNP area. It is an area of dazzling high mountain wilderness, characterised by several mountain peaks over 7,000 m, deep valleys, high plateaus and an outstanding assembly of enormous glaciers, including the glacier complex named after A. Fedchenko, which is one of the biggest in the world with length of 77 km and thickness of ice more than 1,000 m. This glacier together with others represents the water tower for Central Asia which nourishes the Amu Darya River system on which the wellbeing of 55 million people depends, by providing water for irrigation, industries and human consumption.

The Amu Darya River Basin covers parts of Tajikistan, Kyrgyzstan, Afghanistan, Uzbekistan and Turkmenistan. Several major cities, industrial complexes and agricultural regions depend on it such as Khorog, Kulyab, Kurghan-Tube in Tajikistan, Badakhshan, Faizabad, Mazorisharif in Afghanistan, Termez, Urgench, Karshi, Bukhara, Khiva, Nukus in Uzbekistan and Kerki, Mary, Turkmenabad (Chardzhou), Dashoguz in Turkmenistan.

The Amu Darya River is the largest river in Central Asia. Its length from the headwaters of the Pyanj River is 2,450 km, its watershed covers 309 thousand sq km. The Amu Darya River gets this name when Pyanj and Vakhsh River, which get most of their water from TNP region, meet in Tajikistan. Thus the TNP is the main area of formation of water flow of the Amu Darya River. Below table shows the total irrigated area in the Amu Darya River basin.

Irrigated area in the Amu Darya River Basin

Country	Irrigated area, thousand hectares			
	1960 year	1985 year	1990 year	1998 year
Kyrgyzstan	5,0	11,0	23,6	22,0
Tajikistan	210,0	450,0	474,2	469,0
Turkmenistan	435,0	1234,4	1329,3	1735,0
Uzbekistan	1625,0	2001,3	2280,2	2321,0
Total in Amu Darya River Basin	2275,0	3696,7	4107,3	4547,0

The annual average areas of agricultural land irrigated from the Amu Darya watershed in Uzbekistan, Turkmenistan, Tajikistan and Kyrgyzstan are 4.0 to 4.5 million hectares. Most of this water comes from the glaciers of TNP.

The Core Zone is characterized by undisturbed ecological and geomorphological processes, including a high diversity of glacial formation, glacier dynamics, landscapes and special features formed by glaciers (e.g. deep glacier miles carved into solid rock), fast running rivers and wide flood plains covered with gravel and rocks.

The area includes the largest high mountain lake in the Pamirs, Lake Karakul, at an altitude of 3,914 m above sea level with its special flora and fauna, including a large number of endemics.

The high mountain plateaus and valleys provide summer- and winter grazing areas for wild ungulates, Marco Polo sheep, and the Siberian ibex, as well as snow leopard, Tianshan brown bear, breeding sites for Indian goose, brown-headed gull, Tibetan and Himalaya snow cocks.

Other values of the core area are wild relatives of cultivated plants in the Badakhshan and Tavildara section of TNP.

Management:

Conservation and maintenance of biodiversity and ecological processes. The area is accessible for mountaineering, hiking and wildlife observation. There is no traditional use. Trails and a few basic camping sites for visitors will be permitted. Number, nature and extent will be strictly controlled. Possible sites and regulations for hunting tourism will be defined by a feasibility study.

Traditional Use Zone

***Objective*:**

- Maintain livelihoods for local people, by retaining traditional grazing rights, hay making and firewood collection, in selected areas;
- Tourism.

Description and Values:

This zone covers 127,665 ha or 4.9 % of the TNP area. This zone, includes, grassland for hay making and high mountain pastures where traditional rights for summer and winter grazing are being maintained for local people:

- Around Lake Karakul Lake, in particular in the north and east;
- East and west of Barchadev village;
- North of Vanj District, village of Poimazor;
- Tavildara valley.

This includes summer grazing areas for small livestock and yaks and some smaller areas for grazing yaks in winter. These zones are well defined and agreed with the local population. This measure includes keeping winter grazing areas such as wetlands (e.g. around Karakul Lake) free from summer grazing from May to September. This measure helps to provide important breeding and feeding grounds for a large variety of bird species, including migratory species, without putting any hardships on the local population.

Management:

Activities in this zone are limited to traditional grazing and hay making. Grazing pressure and interactions between wild ungulates, predators and livestock will be subject to monitoring, as well as status of rangeland. Livestock monitoring will be based on data to be established in 2012.

Adequate management measures will be taken in case of livestock pushing wild life into marginal habitats, or conflict between herders and predators and overgrazing. It is well understood by the local population that they will have to tolerate predation on livestock as a precondition for obtaining certain land-use rights inside a national park. Providing compensation, based on national legislation, is under consideration. In land-use maps this territory is shown as a traditional pasture.

Based on written agreements with relevant local communities, park staff will ensure that wetlands are kept free from livestock from May to September.

Trails and a few basic camping sites for visitors will be permitted. Number, nature and extent will be strictly controlled. Possible sites and regulations for hunting tourism will be defined by a feasibility study.

Limited Economic Use Zone

***Objective*:**

- Enhance protection and avert negative human influence on the core area, where it could be in contact with negative human developments.
- Help maintain the life support system for local people (seasonal grazing and firewood collection).
- Allow well managed and controlled activities which provide income for the park, such as hunting tourism.

Description and Values:

This zone covers 740,198 ha or 28.3 % of the TNP area, it is established along and around fragile sites of the core area. Limited development is permitted, as long as this is not detrimental to the values of the Park. A Limited Economic Use Zone is unnecessary in the northern and western parts of the park, where the park boundary runs along high mountain ranges and glaciers between 4,000 and 6,000 m. These are areas without any human interference and outside any future economic development such as hydro power stations or mining. The Limited Economic Use Zones are established in the following sites:

- **Yashilkul Lake**:

Land use includes:

Water flow from the lake is regulated by a small dam (10 to 15 m). Water is stored in summer and released in winter to feed the hydropower station in Khorog. The surroundings of the lake are permanently inhabited by about 400 people who live on livestock and agriculture. A thermal spring is being used by visitors from the region; the lake is inhabited by an introduced trout species, which is being used commercially.

Management:

Existing land use will be monitored and permitted to continue, expansion will not be allowed.

- **Karakul Lake**:

Land use includes:
Trophy hunting for Ibex and Marco Polo sheep is under consideration for an area to the west and another one to the south of Lake Karakul. The main purpose of trophy hunting is to provide regular income for the park and to a limited extent also for the local population and the social economic development of their community in the relevant area.

Management:
A detailed study will determine the best site and regulations under which hunting will be permitted. IUCN and WWF recommendations on trophy hunting will be followed. See Annex 11. Trophy hunting will only be allowed under the following conditions:

- Science based planes for harvest, habitat management and monitoring;
- An adequate legal framework;
- A substantial part of the revenues generated by trophy hunting are transferred to the park. Money will be spent on habitat management and protection, population monitoring, education, research and support for local communities.

- **West and east of the motor highway** leading to the state border with Kyrgyzstan and China along the Eastern border of the Park:

Land use:
The area is influenced by traffic (mainly heavy trucks) to and from Kyrgyzstan.

Management:
Stopping, parking and camping along the road allowed.

Recreation Zone

***Objective*:**

- Relieve pressure on the wilderness area by providing access and facilities for recreational use to sites of public interest.

Description and Values:
This zone covers 58,400 ha or 2.2% of the TNP area. This zone allows recreation and tourism as well as placement of supporting facilities. It includes sites of interest to mountaineers and the territory around Karakul and Yashilkul. The relevant map in Annex 10 showing existing

road networks and settlements. Main sites for alpinism include Moskvina Plateau with the peaks Ismoili Somoni (7,495 m), E. Korzhenevskaya (7,105 m), Revolutsiya (6,974 m), and Istiqlol (7,134 m).

***Management*:**

The main recreational activities in this zone are mountaineering, hiking, cave exploration, and health treatment in thermal, cold water, and carbon dioxide springs.

People engaged in mountaineering, hiking and cave exploration will be permitted to stay in well defined camping sites. Campers will have to bring their own food and fuel, cutting of firewood is not permitted. Visitors must not leave garbage behind. A guest house for mountaineers exists on Moskvina Plateau; it is managed by a tourist company. Bed and Breakfast facilities are offered by local people around Yashilkul Lake. A zone for intensive tourism services will be established at a later stage, depending on the results of tourism and recreation planning in TNP.

4.b Factors affecting the property

(i) Development Pressures (e.g., encroachment, adaptation, agriculture, mining)

Man settled in the Pamir shortly after the decrease of the glaciers in the last stage of glaciations, in 5-6 millenniums BC. People lived in Barchadev, Rukhch, Pasor, Bopasor, and Ghudara in summer, attracted by the abundance of wildlife during the Neolithic and Bronze Age. In winter, hunters descended to the warm valleys of Kashgar. Later, nomadic tribes settled gradually in the region, their descendants live here today. The main occupation of local people since ancient times is cattle breeding and self-supporting agriculture based on irrigation.

Five small settlements (Barchadev, Rukhch, Pasor, Bopasor, and Ghudara) are situated in the “Zone for Limited Economic Use”, located upstream of Bartang river. There are no other settlements inside the Park.

The territory of TNP is legally classified as conservation area. This implies that any activity that contradicts its conservation purpose is prohibited. The area is remote; most of its territory is covered by high mountain habitats which are difficult to access. Land use is limited to small scale subsistence agriculture (potato and wheat), traditional grazing (mainly in summer), hay making and collection of firewood in a few small locations along the Park’s borders. Excessive cutting of teresken (*Eurotia ceratoides*) and other vegetation for use as fuel and animal fodder is a problem in some areas, where villages border the park. This applies also to illegal hunting, including ibex and Marco Polo sheep in the Karakul region and in the upper Bartang in the Ghudara-Aktash area. Although this is limited to a few small areas without

known negative impact on the population of both species at this stage, measures have to be taken to stop these illegal activities.

Pasture ecosystems. (Traditional Use Zone). Photo by Butorin A.

Mountaineering is the main form of land-use around the major peaks of the park; major recreational activities are limited to Lake Yashikul in the south.

There is no pressure from other land developments, mining or roads. Hydropower is only generated from Lake Yashilkul which serves as a semi-natural water reservoir for a power station outside the park. This has impacts on the dynamics of the water level, which may affect the suitability of spawning areas for the ichthyofauna.

Direct human impact on the area and its main features is therefore extremely small. Indirect impact on the parks landscape, in particular its glaciers, caused by global warming, is beyond the park's control.

The park management is taking this situation into account when setting its management priorities, these are:

- Monitoring wildlife populations;
- Monitoring land-use in areas assigned to local people for agriculture, grazing, hay making, collection of plants and firewood;

- Facilitating environmental monitoring, in particular impact of global warming on glaciers;
- Anti-poaching;
- Guiding and directing tourism, including alpinism;
- Education and awareness raising among the local population, decision makers, teachers, school children and visitors;
- Providing guidelines for local community on collection of medical plants and fruits, monitoring and controlling their implementation;
- Developing recommendations for trophy hunting in specifically selected sites of TNP, e.g. for the establishment of community based wildlife management. Monitoring and control of its implementation.

(ii) Environmental pressures (e.g., pollution, climate change, desertification)

Change in climate (warming) leads to thawing of glaciers on the territory of the park. Glaciologists of the State Enterprise of Hydrometeorology of the Committee of Environment Protection under Government of Tajikistan carry out the constant monitoring of condition of glaciers.

(iii) Natural disasters and risk preparedness (earthquakes, floods, fires, etc.)

Floods and mudflows happen annually, especially during spring-and-summer period, these natural events which shape the landscape and dynamics of the Park.

One of the most serious problems on the territory of Tajik National Park are earthquakes which might cause the breach of the Uzoi dam of Sarez Lake. The status of the dam and the surrounding territory is monitored. The population which might be effected by a breach of the dam is trained in security measures.

(iv) Visitor/tourism pressures

At this stage the number of annual visits to the Park is insignificant and strictly controlled by the Directorate of the Park. Influence of visitors on natural properties of the Park is very small and limited to the peaks visited for mountaineering, e.g. garbage from Moskvin's glade (alpinism base near to Korzhenevskaya and Somoni peaks), left by alpinists for many years.

At the present time the park is visited by about 1,200 persons per a year (basically alpinists and mountain tourists). It is planned to increase the number of visitors and tourists up to 3,000 people per year.

Visitors returning from RSC glacier. Photo by Jungius H.

(v) Number of inhabitants within the property and the Limited Economic Use Zone

Estimated population located within:

- The upper reaches of the river Bartang are inhabited by approximately 2,000 people living here permanently in the traditional use zone.
- Limited Economic Use Zone: On the border of this zone (outside the Park) the following settlements called jamoats (rural councils) are located: Karakul and Alichur of Murghab region; Vankala of Shughnan Region; Yazgulom of Vanj Region. The total amount of people living along the border of the Limited Economic Use Zone is about 14 thousand.

Yaks grazing near to Yashilkul Lake. (Limited economic use zone). Yusufbekov Y.

5. PROTECTION AND MANAGEMENT OF THE PROPERTY

5.a Ownership

The territory of Tajik National Park is owned by the state.

5.b Protective designation

Tajik National Park is a protected area under national legislation. Its legal status is determined by the following laws:

Natural Protected Areas Law of the Republic of Tajikistan No. 329 of December, 13 1996 (Annex B3);

The Decision of the Government of Tajikistan No. 267 of July, 20 1992 "About creation of the Tadjik national park". (Annex B4).

The order on State Directorate of Natural Protected Areas No. 147 of November, 9, 2005 "About allocation of reserved zone of the TNP".

The control of the area and implantation of legislation is the responsibility of the State Enterprise for Natural Protected Areas.

5.c Means of implementing protective measures.

Measures for protection of TNP are specified by the Natural Protected Area Law of the Republic of Tajikistan N 329 of December, 13 1996 (as. 2, 20, 21, 22).

The following conservation measures are applied:

- Legislative: (establishment of security, protective and other regimes, establishment of rules of wildlife management). Law enforcement by rangers and police, regular patrolling, wildlife monitoring, based on a program established by specialists.
- Territorial planning (the general, special and detailed): TNP is divided into specific zones whith specific management regimes, refer to management plan and map 1.

Economic: Modest funding for the park is provided by the government. For details refer to management plan and the "Annual Work Plan for 2012" below.

- Scientific: This includes various monitoring and research activities such as: Establishing base line data from monitoring of wildlife populations, impact on natural resources in the traditional and economic use zones, feasibility study on trophy hunting and implementation of recommendations.
- Management activities: For details refer to management plan and the zoning concept above.

Annual Work Plan for 2012

Activities and objectives	Actions	Time limits	Executor	Indicators	Financial expenses, thousand somoni	Sources of financing	
						A. State budget	B. Donors
Objective 1	**Effective law enforcement and wildlife management activities established and maintained**						
Activity 1	Strengthen ranger network by increasing staff and supplying park staff with transport facilities (vehicles, and motorbikes), binoculars, and cameras.	2012	State Agency of Natural Protected Areas (SANPA) and TNP Directorate	1 vehicle 4 motorbikes provided, 2 binoculars and 2 cameras purchased	88,5	48,5	40
Activities 2	Purchase uniforms for TNP staff	2012	Chief of Finance department of SANPA Rakhimov V.	20 rangers have uniforms	25	13	12
Activities 3	Ensure funding for construction of the administrative buildings	2012	Chief of Finance department of SANPA Rakhimov V.	Continuation of construction	28,6	28,6	0
Activities 4	Operational costs (stationeries, household equipment, repair of vehicles, electricity, telephone, internet, water supply, etc.)	2012	Chief of Finance department of SANPA Rakhimov V.	Equipment in place	25	10	15
Activities 5	Acquisition of vehicles and boats for development of tourism, such as tents, and transport equipment.	2012	Division on Tourism and International Relations of SANPA	Availability of vehicles, motor boats, tents and other equipments.	40	10	30
Activity 6	Carry out training seminars for rangers and other conservation staff	2012	SANPA and TNP Directorate	Two training courses for up to 20 staff	10	5*	5

Activity 7	Establish and support network of volunteer rangers	2012	SANPA and TNP Directorate	Voluntary ranger network operational in all district (6) 2012/13	3	3**	0
Activity 8	Strengthen cooperation between ranger network and other law enforcement bodies	2012	SANPA and TNP Directorate, regional and district authorities	Joint patrols, cooperation on legal issues, information exchange established.	2	2**	0
Activity 9	Regular patrols of key wildlife habitats and the traditional use zone by rangers.	2012	TNP Directorate Solijonov Sh., Davlatov N., Mamarasulov M.	Reduction of poaching by 10 % based on 2011 data.	30	4	26
Activity 10	Establish boundary demarcation; manufacturing and installation of information panels in places frequently visited by local people and tourists.	2012	TNP Directorate Solijonov Sh., Davlatov N., Mamarasulov M.	Presence of installed panels, at least 10 % of relevant borders marked.	35	5*	30
Activity 11	Promote conservation of Indian goose and Tibetan snowcock by enhancing protection of their habitats.	2012	TNP Directorate Solijonov Sh., Davlatov N., Mamarasulov M.	Monitoring programme established	30	5*	25
Activity 12	Improve habitat for argali, ibex and snow leopard by limiting or banning cattle grazing and limiting herder access to critical habitats, e.g. breeding and lambing sites.	2012	SANPA and TNP staff	Baseline data will be established and used as monitoring tool for the following years.	20	2	18
Activity 13	Initiate feasibility study on trophy hunting for limited economic use zone.	2012	External experts and SANPA and TNP staff	Report on possible sites for trophy hunting (Lake Karakul, Marjanay valley and Southern Alichur Range, Muzkul *zakaznik*	30	5*	25

Objective 2	**Infrastructure for environmentally friendly tourism established**						
Activity 1	Develop and advertise hiking trails.	2012	SANPA and TNP Directorate	At least 2 hiking trails established Maps and information booklet distributed	20	4	16
Activity 2	Establish park owned tourist guesthouse with all necessary equipment for accommodation, kitchen and transport such as vehicles boats and tents.	2012	SANPA and TNP Directorate	Search for potential donor	5	5*	0
Activity 3	Production of promotional booklets, maps with tourist destinations, natural, historical, and cultural attractions, etc.	2012	SANPA and TNP Directorate	Availability of booklets.	10	4	6
Activity 4	Promote cooperation with “De Pamiri Handicraft” and the “Yak House” in Murghab to assist local people in villages inside and around the park in the production of tourist souvenirs.	2012	SANPA and TNP Directorate	Cooperation with these 2 NGO established in 2012 and working by 2013	30	0	30
Activity 5	Train local people as tour guides.	2012	SANPA and TNP Directorate	Up to 10 people trained	5	2**	3
Activity 6	Establish camping sites, with all necessary facilities including information panels with information on the park and the relevant site.	2012	SANPA and TNP Directorate	2 sites established	20	0	20
Objective 3	**Wildlife and habitat monitoring and research system established**						
Activity 1	Implement and monitor trophy hunting according to recommendations from feasibility study and legal regulations.	2012	SANPA and TNP Directorate	Guidelines and Report	5	2**	3

Protection and management of the property

Activity 2	Preparation of simple and practical methodology for monitoring of key indicator species of flora and fauna.	2012	SANPA, TNP Directorate, Academy of Science	Availability of methodology.	2	2	0
Activity 3	Training for TNP staff on monitoring species, diversity of flora and fauna and natural resources.	2012	SANPA, TNP Directorate, Academy of Science	1 seminar and 1 training, 20 staff trained.	30	0	30
Activity 4	Wildlife surveys in autumn and analysis habitat status.	2012	TNP staff and hired specialist	Survey report	12	2	10
Activity 5	Carrying capacity established for Marco Polo sheep and Ibex in key habitats.	2012	SANPA and TNP Directorate	Key habitats and their carrying capacity identified.	6	4	2
Activity 6	Bird nesting sites around Lake Karakul and Lake Sarez identified and restriction of land use in these areas established.	2012	SANPA, TNP Directorate, Academy of Science	Nesting sites for wetland birds identified and free from disturbance (livestock and people).	12	2	10
Activity 7	Monitor livestock numbers and impact in traditional grazing areas.	2012	SANPA, TNP Directorate, Academy of Science	Monitoring report.	10	3**	7
Activity 8	Promote survey (satellite imagery) on status of the main glaciers in TNP and establishment of long term Environmental monitoring (weather, glaciers) programme.	2012	SANPA TNP Directorate State Agency of Hydrometeorology, and Academy of Science	Report. Establishment of Monitoring programme under way	10	4	6
Activity 9	Collect, analyze and record major annual events and developments in the park	2012	TNP Directorate Solijonov Sh., Davlatov N., Mamarasulov M.	Annual report on major events.	5	5**	0

Objective 4	Support for TNP conservation raised in the population living in the TNP area, by a broad public education and awareness programme and specific rural development activities.						
Activity 1	Elaboration of 3-year Awareness and Education Program with clear milestones to reach different target groups.	2012	SANPA TNP Directorate with support from Ministry of Education	Elaboration of strategy under way, to be completed by 2013	10	0	10
Activity 2	Periodic publications in mass media	2012	SANPA TNP Directorate with support from State Committee of TV and Radio	Regular articles in Mass media.	5	5***	0
Activity 3	Organize an exhibition about nature of the Pamirs and the Pamir-Alay.	2012	SANPA TNP Directorate with support from Committee for Environment Protection	1 exhibition organized.	15	5**	10
Activity 4	Organize an annual “March for TNP” with students, schoolchildren, representatives of the local society, decision maker and mass media.	2012	TNP Directorate, University, schools and Mass media	One event organised.	10	5 **	5
Activity 5	Explore possibilities for supporting energy efficiency and providing alternative energy resources to local population around the park and assist in following up recommendations.	2012	TNP Directorate with local authorities	Identify possible funder for investigation and implementation.	20	0	20

Activity 6	Identify, and allocate pasture and hayfields for use by local populations in the TNP economic use zone and traditional use zone to promote cooperation and support for TNP goals in local communities around TNP. Make agreement with local communities on livestock numbers.	2012	TNP Directorate with local authorities	Pastures and hay fields identified and allocated to the local people. Livestock numbers agreed	5	3*	2
Objective 5	**Monitoring of management effectiveness**						
Activity 1	Annual Review of the Management Plan with assessment of achievements, failures and constraints and recommendations for improvements.	2012	TNP Directorate Solijonov Sh., Davlatov N., Mamarasulov M.	Review of indicators.	3	3**	0
Activity 2	Monitor annual work plan implementation	2012	SANPA and TNP Directorate	Evaluation report	6	6**	0
Activity 3	Ensure salary for staff	2012	Chief of Finance department of SANPA Rakhimov V.	Finance report	249,743	249,743	0
				Subtotal I: State Budget for TNP		**387,843**	
				*Subtotal II: Budget from TNP Eco tourism		**28**	
				**Subtotal III: Support Budget from CEP		**36**	
				***Subtotal IV: State Budget direct from State Committee of TV and Radio		**5**	
				TOTAL:	**872,843**	**456,843**	**416**

Head of State Agency of the Natural Protected Areas N. Saidov

5.d Existing plans related to municipality and region in which the proposed property is located (e.g., regional or local plan, conservation plan, tourism development plan)

The legal basis for operating TNP are laid down in the Decision of the Government of the Republic of Tajikistan No. 267 of July, 20, 1992 «On establishment of the Tajik National Park» and the Decision of the Government of Republic Tajikistan of 6/11/2001 of No. 253 «On allocation of the lands for the Tajik National Park», which determines its borders, area, including areas of the park, the differentiated regime of its protection and the purposes of the park (Annex B4, B5).

Management and development of TNP is carried out according to the Decision of the Government of the Republic of Tajikistan «On Approval of Regulations of Tajik National Park» No. 277 of July, 3, 2002 (Annex B6), and separate decisions of the Government of the Republic (Annex B7-B9).

According to the Land Management Law any activity on the territory of TNP is based on approval of documents for territorial planning. The following plans and programs are developed:

- Management Plan approved for 2012-2016,
- Plan for forest management;
- Plan for reconstruction of the road Rushan-Barchadev-Uzoi;
- Program on safety of the population in area of Sarez Lake (the valley of Bartang River);
- Program on teresken plant restoration in the southern part of the Park.

5.e Property management plan or other management system

The management plan for TNP, covering the period 2012-2016, is approved by the Chairman of the Committee for Environmental Protection and implemented by the National Park Service (Annex B12)

Management of Tajik National Park is conform with “The Establishment on Tajik National Park” ratified by the Ministry Cabinet Section No.267 of July 20, 1992 and subsequent Decision of the Government of the Republic of Tajikistan No. 277 of July 3 of 2002 and also on the basis of Provision on the State Institution of Protected Natural Area of “Tajik National Park”, the State Committee for Environmental Protection of the Republic of Tajikistan established by the Decision of the Government of the Republic of Tajikistan of No. 70, March 1, 2004.

5.f Sources and levels of finance

TNP is funded from the state budget. The available budget for 2012 is 456,843 tajik somoni (95,175 USD) from State Budget, from TNP Eco tourism, from Committee of Environment Protection and from State Committee of TV and Radio. This budget is extremely low and only covering the basic needs of the park. It is sufficient to pay salaries for all staff, but totally insufficient to upgrade protection and management of this huge area according to international standards. A major source for additional income of 416 thousand tajik somoni or 86,700 USD is required for 2012. Efforts are under way to raise these funds trough trophy hunting (in the economic use zone) from ecological tourism and aid agencies.

Budget for Tajik National Park Activities in 2012

Funding source	**Sources of financing in thousand tajik somoni**		**Total financial expenses, in thousand tajik somoni**
	A. State budget	**B. Donors**	
State Budget for TNP including (salary for staff, funding for services, for biotechnical activities and for capital construction)	387,843	0,00	387,843
Budget from TNP Eco tourism	28	0,00	28
Support Budget from Committee of Environment Protection	36	0,00	36
State Budget direct from State Committee of TV and Radio	5	0,00	5
Required found from Donors	0,00	416	416
TOTAL:	**456,843**	**416**	**872,843**

5.g Sources of expertise and training in conservation and management techniques

43 staff member of Tajik National Park have higher and secondary education, 1 Candidate of Sciences.

In 2006, staff member participated in the following training events: “Sustainable Land Use in High-mountains of Pamirs and Pamiro-Alai” (UNEP/GEF), “Pamiro-Alai Trans-boundary Protected Areas” (PATPA) and “Natural Protected Area and Management of Hissar Mountain Biodiversity” (UNDP/GEF).

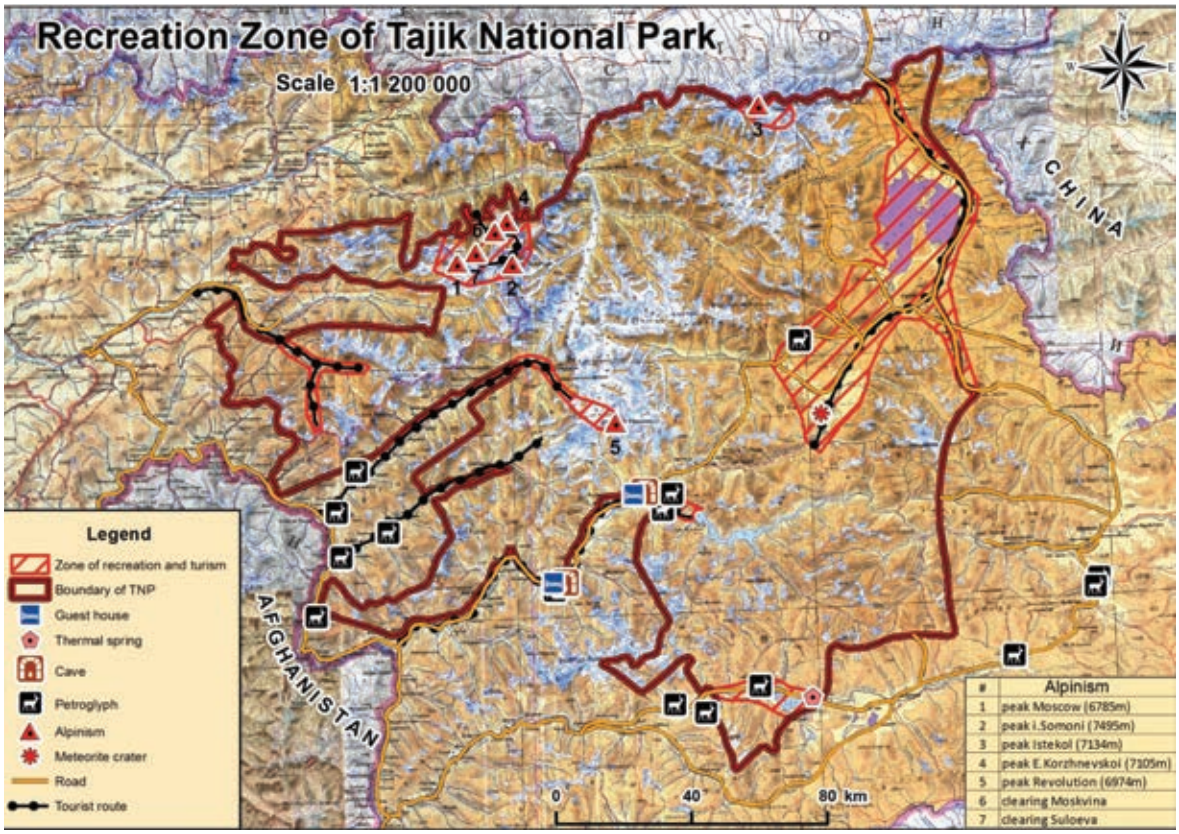
Between 2007 – 2008, workshops and seminars in: Bishkek (Kyrgyzstan), Borovoe

(Kazakhstan), Katmandu (Nepal), International Academy on Nature Conservation (Island Vilm, Germany), Sevin Park (France), University of Montana State (USA).
The "Hissar Mountain Biodiversity" (UNDP/GEF) Project and Fauna Flora International training program on Management of Natural Protected Areas provided training for more than 20 staff on biodiversity conservation, development of management plans for protected areas and finance management in protected areas.

5.h Visitor facilities and statistics

Moskvin Alpinism Base Camp at foot of Ismoili Somoni Peak. (Core Zone). Photo by Kasirov K.

Several tourist companies are working on the territory of Tajik National Park. In 2008-2011, alpinism tours to Ismoili Somoni Peak and Evgeni Korzhevskay Peak were organized for 169 alpinists. During the same period about 1,200-1,500 tourists and alpinists visit the park. In future, it is planned to increase the number of visitors to 3 000 people per year. The zone reserved for recreation and tourism is indicated in the map below.



Recreation Zone of TNP.

5.i Policies and programs related to the presentation and promotion of the property.

According to the Decisions of the Government of the Republic of Tajikistan the following programs has been approved:

- The State program on Protected Area development for 2005-2015;
- The State program of Development of Tourism in Tajikistan for 2004-2009;
- The State program of Ecological Education of the Population of the Republic of Tajikistan up to 2009 and on prospect till 2019.
- State support of development of ecological tourism, mountain-sport tourism and alpinism in the framework of the program “Water for Life”, 2005-2015.

5.j Staffing levels (professional, technical, maintenance)

Staff Numbers in 2011

According to tasks	Actual	
	Total	Including staff with higher education
Total number of TNP staff		
54	54	15
Management staff		
3	3	3
Chief of TNP district subdivisions		
3	3	3
Number of main specialists		
6	6	6
Number of leading specialists		
6	6	6
Number of rangers		
19	19	2
Number of accounting and planning staff		
3	3	3
Number of service staff		
14	14	1

Although most of the park is difficult to reach and in large parts inaccessible, it is obvious that 54 staff is insufficient to manage and control this vast territory. Staff increase is foreseen and part of the next 5 year plan. For details refer to Management Plan.

The Infrastructure of Tajik National Park

The park is divided into 6 districts: Tavildara, Jirgatol, Vanj, Rushan, Shugnan, Murghab. Each district is headed by a district ranger ("Chief of Branch"). Vanj, Rushan, Shugnan and Murghab belong to Gorno-Badakhshan Autonomous Region (GBAO). The district chiefs report therefore to the park director, based in Khorog. The director reports to the Head of State Agency for Nature Protected Areas in Dushanbe. Tavildara and Jirgatol belong to other Districts and report to the Head of Nature Protected Areas in Dushanbe. The ranger's posts throughout the Park areas presented in below Administrative map.

Each district has 4 to 6 rangers, one 4 wheel drive car, 1-2 binoculars, and uniforms for rangers. Computers are only available in 4 offices. All offices have mobile telephones for communication between each other and with head quarters (see details in below table). Patrols by rangers are on foot, often in cooperation with guards from district and regional Departments of Environment Protection in GBAO. None of the rangers is armed. This will

change next year, as a new law will be approved by the end of 2011, permitting rangers to carry arms.

Ranger Posts in TNP.

It is evident, that the control of the Park can hardly be ensured with these modest resources. Additional income is required to fulfill the fundamental requirements for a well managed park such as: Strengthening the ranger network, training, equipment, management infrastructure, monitoring, education and information, tourism facilities and more (see ANNEXES B11). One opportunity would be trophy hunting, under scientifically based and socially acceptable management. A feasibility study, based on experience from other national parks, will be undertaken to outline rules and regulations for implementing this, see ANNEX B12. Another option would be to apply for support from aid agencies. For details see ANNEXES B11.

Items	Quantity	Condition
Main office	1	Main office is in Dushanbe in the building of State Agency of Natural Protected Areas
Regional office in Khorog city of GBAO	1	At present in Khorog city, located in a rented building which belongs to Forest Department of GBAO. The Government of GBAO allocated 0.03 ha land for building a new TNP Regional Office in Khorog city. 120,000 somonis has been allocated in the 2011 Budget for State Agency of Natural Protected Areas for starting the construction of the TNP office in Khorog city.
District Office in Murghab district	1	In stage of construction
District Office in Jirgatol district	1	Rented
District Office in Tavildara district	1	In stage of construction
Motor vehicle: GAZ – 66	1	Working
Car: GAZ 31-02	1	Working
Car: Niva 3212214	1	Working
Car: UAZ 31-519	3	Working
Horse	2	Working
Telephone for office	1	Working
Mobile telephones	40	Working
Uniform	70 % of staff	
Firearms and small arms	0	To be supplied in 2012
Binoculars	2	Working
Computers	4	Working
Digital photo camera (Panasonic)	1	Working
Digital video camera	1	Working
Navigational aid GPS	1	Working

Tajik National Park team during monitoring of bird nesting sites in the surrounding of Karakul lake. (Core Zone). Photo by Sabzaaliev Sh.

6. MONITORING

6.a Key indicators for measuring state of conservation

The details for a wildlife and habitat monitoring system are presented in the Management Plan Annex B11 for the period 2012-2016.

6.b Administrative arrangements for monitoring property

Monitoring is carried out by the State Agency of Protected Areas "Tajik National Park" in cooperation with:

- Academy of Sciences of the Republic of Tajikistan;
- Tajik National University;
- Tajik Pedagogical University;
- Tajik Research Institute of Forestry;
- The Pamirs Biological Institute;
- The Pamirs State University.

The authority responsible for carrying out of monitoring:

Tajik National Park, Director: Mr. Shodi Solijonov

Address: 96/4, Karamshoev Street, Khorog city, Republic of Tajikistan

Telephone: +992 35220 9123; E-mail: tajikpark@yahoo.com

6.c Results of previous reporting exercises

The first areal and terrestrial survey of Marco Polo sheep and snow leopard was carried out in the Pamir in 1991. The total population of Marco Polo sheep was estimated 10,800 and for snow leopard 200. In December 2009 a survey of Marco Polo sheep was carried out in the Eastern Pamirs. The total number of observed Marco Polo sheep was 23,711, out of these almost five thousand animals inside the TNP, in the area around Lake Karakul. Estimates for 2011 are given below.

Another survey was carried out in 2002 and published in the report on "Status of Populations of Rare Species and Game Animals" by State Agency of Natural Protected Areas.

Annual wildlife surveys are carried out by the Park staff. The results for 2011 are given below.

Number of wild animals in Tajik National Park
on the date 01.01.2011

№	Animals	Number
	Pamir Argali Marco Polo	5,400
	Siberian ibex	4,190
	Snow leopard	120
	Lynx	63
	Bear	64
	Wolf	164
	Wild hog	420
	Fox	202
	Badger	89
	Hedgehog	76
	Red marmot	25,500
	Hare	4,487
	Himalayan snowcock	1,371
	Tibetan snowcock	160
	Pallas' sand grouse	140
	Doves	1,150
	Stony partridge	1,935
	Indian (mountain) goose	275
	Ducks	3,140
	Predatory birds	173
	Gull	400

TN Park staff discusses with Karakul Jamoat community about wildlife conservation issues in the surrounding wetlands of Karakul lake. Photo by Sabzaaliev Sh.

7. DOCUMENTATION

7.a Photographs, slides, image inventory and authorization table and other audiovisual materials

IMAGE INVENTORY AND PHOTOGRAPH AND AUDIOVISUAL AUTHORIZATION FORM

Id. No	Format (slide/ print/ video)	Caption	Date of Photo (month/year)	Photographer/ Director of the video
1	Print	Moskvin Glacier	10.08.2004	Kasirov K.
2	Print	Karakul Lake (3914 m). (Core Zone).	09.07.2011	Jungius H.
3	Print	Soil gamma of Murgab mountains	22.05.2011	Saidov N.
4	Print	Bartang Valley	2005	Abdulnazarov A.
5	Print	Source of Kokuybel River	20.10.2005	Butorin A.
6	Print	Cold mountain desert on a 4000 m high plateau	08.07.2011	Saidov N.
7	Print	Karakul Lake Structure. (Core Zone). NASA Earth Observatory. From Wikipedia.org	28.09.2001	Image was taken by the Landsat 7 satellite on September 28,2001
8	Print	Uzoi dam of Sarez Lake. (Core Zone)	1995	Hausibek photo from www.google.com
9	Print	Sarez Lake (Core Zone)	2005	Yusufbekov Y.
10	Print	Tajik NP Massive black ice of the RSC glacier tongue at 2.500 m, part of the Fetschenko Massive	07.07.2011	Jungius H.
11	Print	Grum-Grzhimailo glacier. (Core Zone).		Photo from www. turclubmau.ru
12	Print	Teresken	26.08.2003	Abdulnazarov A.
13	Print	Primula	10.07.2006	Abdulnazarov A.
14	Print	Tanning Persicaria	2004	Abdulnazarov A.
15	Print	Ferula plants association in Banjob river basin in TNP	19.05.2011	Saidov N.
16	Print	Herd of Marco Polo sheep rams	28.11.2004	Dragesco E.
17	Print	Himalayan snow cock	02.08.2011	Photo by camera trap from, FFI and Panthera Found
18	Print	Siberian ibex male	23.09.2011	Photo by camera trap from, FFI and Panthera Found
19	Print	Snow leopard	2004	Abdulnazarov A.
20	Print	Archaeological site near Karakul Lake Karaat Stone setting- 5000 years old	09.07.2011	Jungius H.
21	Print	Petroglyph on rock. (Core Zone).	29.07.2007	Abdulnazarov A.

22	Print	Geoglyph kurgans in Shurali site. (Core Zone).	29.07.2007	Abdulnazarov A.
23	Print	Somoni Peak (vision from Korjenevskay Peak)	23.11.2004	Kasirov K.
24	Print	Fedchenko glacier. (Core Zone).		Ivan Jdanov. Photo from www. turclubmau.ru
25	Print	Two glacier mills - part of a system of 5 mills - in the Vanj valley near the base of the RSC glacier tongue, part of the Fetschenko Massive.	07.07.2011	Jungius H.
26	Print	Glaciers from the park feed stream, wetlands and luxurious grassland inside the park and around the park. (Core Zone)	07.07.2011	Jungius H.
27	Print	Meteorite crater. (Core Zone).	1995	Hausibek photo from www.google.com
28	Print	Local varieties of cereals from the Plant Genetic Center in Dushanbe, Tajikistan.	2011	Khalikulov Z.
29	Print	A wild form of Sievers' apple *(Malus sieversii)*, fruiting in the Tavildara part of the Park.	2008	Nazirov Kh.
30	Print	Local form (M-88) of cherry in Tavildara part of the Park	2008	Nazirov Kh.
31	Print	Local form (M-907) of cherry in Tavildara part of the Park.	2008	Nazirov Kh.
32	Print	Tajik NP Glacier mill in the Vanj valley near the base of the RSC glacier tongue, part of the Fetschenko Massive.	07.07.2011	Jungius H.
33	Print	Glacier in the Muzkul range	2005	Yusufbekov Y.
34	Print	Karakul Lake. (Core Zone). Important breeding and feeding site for several bird species.	09.07.2011	Jungius H.
35	Print	Pasture ecosystems. (Traditional Use Zone).	18.10.2005	Butorin A.
36	Print	Visitors returning from RSC glacier	07.07.2011	Jungius H.
37	Print	Yaks grazing near to Yashilkul Lake. (Limited economic use zone).	21.05.2011	Yusufbekov Y.
38	Print	Moskvin Alpinism Base Camp at the foot of Ismoili Somoni Peak	10.08.2004	Kasirov K.

39	Print	Tajik National Park team monitoring of bird nesting sites in the surrounding of Karakul lake	23.05.2011	Sabzaaliev Sh.
40	Print	TN Park staff discusses with Karakul Jamoat community about wildlife conservation issues in the surrounding wetlands of Karakul Lake	22.05.2011	Sabzaaliev Sh.
41	Print	Director of Tajik NP and ranger on the road to Kyrgys border passing Karakul lake. Land to the left of the road is part of Economic Use Zone.	09.07.2011	Jungius H.

7.b Texts relating to protective designation, copies of property management plans or documented management systems and extracts of other plans relevant to the property

Documentation included to the Appendix B.

- B1. Nature Protection Law of the Republic of Tajikistan No. 905 of 27.12.1993.
- B2. Quotation from the Law of the Republic of Tajikistan "About conservation and use of fauna", No. 989 of July, 20, 1994. Sections I, IX, X, XI, XVIII.
- B3. Quotation from the Natural Protected Areas Law of the Republic of Tajikistan N 329 of December, 13 1996, Sections I, III, XI, XII;
- B4. The decision of the Government of the Republic of Tajikistan No. 267 of July, 20 1992 "About establishment of the Tajik national park".
- B5. The Decision of the Government of the Republic of Tajikistan of 6/11/2001 No. 253 "About allocation of lands of the Tajik National Park";
- B6. The Decision of the Government of the Republic of Tajikistan "About the approval of Regulation of the Tajik National Park" No. 277 of July, 3, 2002.
- B7. The order of State Directorate of Protected Areas TNP No. 47 of November, 9, 2005 "About allocation of reserved zone of TNP".
- B8. The Decision of the Government of the Republic of Tajikistan "About the State program of PA development for 2005-2015" No. 79 of March, 4 2005.
- B9. The Decision of the Government of the Republic of Tajikistan "About the State program of development of tourism in Tajikistan for 2004-2009: No. 582 of December, 29, 2003.
- B10. The Decision of the Government of the Republic of Tajikistan "About the State program of ecological education of the population of the Republic of Tajikistan up to

2000 and on prospect till 2010" No. 93 of 2/23/1996.
- B11. Management Plan of Tajik National Park for the period 2012-2016.
- B12. Considerations on Possible Trophy Hunting in the Economic Use Zone of Tajik National Park.

7.c Form and date of most recent records or inventory of property

- Report "Conditions of populations of rare and hunting species of animals" 2002.
- The National report on high-mountainous wetlands and other water resources, 2003.
- Report on transboundary projects UNEP/GEF "Sustainable land management in high Pamir and Pamir-Alai mountains", 2005.
- Bulletin of the Tajik National Park, August, 2003.
- Report "Conditions of populations of Pamir Argali Marco Polo and brown bear in Tajikistan", 1991.
- Bulletin of the Tajik National Park, May, 2005
- Tajikistan National Report on Environment Statement, 2011.

7.d Address where inventory, records and archives are held

Direction of State Agency of Natural Protected Areas:
Address: 62, Druzhba Narodov Street, Dushanbe city, Republic of Tajikistan
Telephone: +992 372 22-14-67 (work); Fax: +992 372 22-07-97
E-mail: nsaidov70@yahoo.com

Regional Directorate of Tajik National Park in GBAO Pamirs (regional office):
Address: 96/4, Karamshoev Street, Khorog city, GBAO, Republic of Tajikistan
Telephone: +992 35220 9123. E-mail: tajikpark@yahoo.com

7.e Bibliography

About 20 most significant works and publications about TNP included to Appendix E

Director of Tajik NP and ranger on the road to Kyrgys border passing Kara Kul Lake. Land to the left of the road is part of Economic Use Zone. Photo by Jungius H.

8. CONTACT INFORMATION OF RESPONSIBLE AUTHORITIES'

8.a Preparer (data on the beginning of 2010)

According to order of Chairman of CEP from April 29, 2011 under number 46 the working group of national experts was established. The list of member of national experts included:

1. Dr. Nurali Saidov – Head of State Agency of Natural Protected Areas – Head of National Expert Group. Address: 62, Druzhba Narodov Street, Dushanbe, Tajikistan. Telephone: +992 37 222-14-67 (work); Fax: +992 37 222-07-97; E-mail: nsaidov70@yahoo.com
2. Mr. Yusufbek Yusufbekov - Deputy of Head of State Agency of Natural Protected Areas – deputy of Head of national experts. Address: 62 Drujba Narodov str., Dushanbe, Tajikistan, Telephone: +992 37 222-08-52; E-Mail: yusufbek48@mail.ru
3. Dr. Adulnazar Abdulnazarov – Head of department of forestry of Gorno Badakhshan Autonomous Oblast (GBAO) – member of working group. Address: 27 Lenin str., Khorog, GBAO, Republic of Tajikistan, Telephone: +992 93 5018459, E-mail: abdu_70@mail.ru
4. Mr. Shodibek Qurbonov – Expert of Department of Forestry and Natural Protected Areas of Committee for Environment Protection under Government of the Republic of Tajikistan - member of working group. Address: 5 Shamsi str., Dushanbe, Tajikistan, Telephone: +992 90 445 37 04.
5. Mr. Ustyan Ivan Petrovich – Chief of department of nature reserve and parks of State Agency of Natural Protected Areas- member of working group. Address: 62 Drujba Narodov str., Dushanbe, Tajikistan, Telephone: +992 37 222-08-52.
6. Mr. Shodi Solijonov – Director of regional office of Tajik National Park in GBAO - member of working group. Address: 96/4, Karamshoev Street, Khorog city, GBAO, Republic of Tajikistan, Telephone: +992 35220 9123. E-mail: tajikpark@yahoo.com
7. Dr. Rustam Murodov – Senior research worker of Institute of zoology and parasitology of Academy of Science of Tajikistan - member of working group; Address: 734025, P.Box 70, Dushanbe, Tajikistan, Telephone: +992 447 4453031; +992 372 35-07-40, E-mail: rustam@rs.tj
8. Mr. Alisher Agzamov – Attaché of Tajik National committee of UNESCO - member of working group.

9. Mr. Ubaidullo Akramov – Deputy of Head of State Agency of Natural Protected Areas – Expert on Education. Address: 62 Drujba Narodov str., Dushanbe, Tajikistan, Telephone: +992 37 222-09-62; E-mail: ubaid_ubaid@mail.ru

10. Dr. Shvartz A.B. - GIS consultant; Tel.: (+992 37) 223-06-53; E-mail: ashvartz@yahoo.com

11. Ms. Gafurova Irina Akhmedova- Cartographer engineer, Chief Administration for Geodesy and Mapping (Tajikaerokosmogeodezija), UI Abaja 41/1, 734033, Dushanbe, Tel: +7 3772 31 24 23.

With Assistant of International consultant:

Dr. Hartmut Jungius
Member IUCN World Commission on Protected Areas and Senior Advisor to WWF International;
Ch. De la Delaissee 13; 1270 Trelex, Switzerland; Tel.: +41 22 369 4909;
E-mail: hjungius@sunrise.ch

Dr. Alexey Butorin
Position: Director of Natural Heritage Protection Fund
Address: Viborgskaya str, 8-3, Moscow 125212 Russia
Telephone: 7 (499) 150 92 93
Fax: 7 (499) 150 92 93. E-mail: info@nhpfundl.ru

8.b Official Local Institution/Agency

Management of Tajik National Park carried out by the Directorate of park which is found under jurisdiction of State Agency of Natural Protected Areas:

Head of State Agency of Natural Protected Areas: – Dr. Nurali Saidov
Address: 62, Druzhba Narodov Street, Dushanbe city, Republic of Tajikistan
Telephone: +992 372 22-14-67 (work); Fax: +992 372 22-07-97
E-mail: nsaidov70@yahoo.com

Head of Tajik National Park Administration - Mr. Shodi Solijonov.
Address: 96/4, Karamshoev Street, Horog city, Republic of Tajikistan
Telephone: +992 35220 9123. E-mail: tajikpark@yahoo.com

8.c Other Local Institutions

The Regional Environmental Center for Central Asia, Tajik Branch,
Director - Malika Babadjanova
Address: 734025, 2 Bokhtar str. 14, Dushanbe, Republic of Tajikistan
Tel.: +992 37 221 55 88, E-mail: babadjanmalik@yahoo.com

Center on support and development of protected areas (IUCN) – Director – Blagoveschenskaya Svetlana
Address: PO Box 138 Dushanbe 734025 Tajikistan
Tel: +992 37 2250569; Fax: +992372 250673
E-mail: eco_tajik@rambler.ru

8.d Official Web address

Contact name of person responsible for development of website of TNP:
Shamsov Abdulhamid, E-mail: tajikpark@yahoo.com

Committee for Environment Protection under Government of the Republic of Tajikistan

Chairman **T. SALIMOV**

9. SIGNATURE ON BEHALF OF THE STATE PARTY

ACKNOWLEDGEMENTS

We express our profound gratitude to Dr. Tillman Jaeger, IUCN, World Heritage Project Management Officer for his constructive support for bringing the Nomination Document into proper shape and for his technical advice. Words of appreciation also go also to Stefan Michel, Wildlife Management Expert of CIM/GIZ for his very thorough review of the document, in particular the scientific information.

Support and guidance by Dr. Karamatullo Olimov, Chairman of National Commission for UNESCO of the Republic of Tajikistan, Mr. Murod Komilov, and Ms. Shahlo Abdurahimova, Secretary Generals of National Commission for UNESCO of the Republic of Tajikistan throughout the entire process of preparation of the document are highly appreciated.

Valuable suggestions and encouragement from Dr. Talbak Salimov, Chairman of the Committee for Environment Protection under the Government of the Republic of Tajikistan, during the preparation and submission process of the Nomination Document to UNESCO enabled us to accomplish this task successfully.

ANNEXES A
MAPS

A1. Map 1. Map of the nominated property, showing boundaries, core zone, zone for limited economic use, traditional use zone and recreation zone. Scale 1:1 200 000.

A2. Map 2. Map of Tajik National Park view.

A3. Map 3. The main glaciers in the territory of TNP. Scale 1:1 200 000.

A4. Map 4. Distribution of Wild Relatives of Cereals and Leguminous Plants in the Vanj and Bartang Valleys. Scale 1:500 000.

A5. Map 5. Distribution of Walnut-Fruit Forest in the Tavildara Valley of TNP. Scale 1:400 000.

A6. Map 6. Overview map of the archaeological site in TNP. Scale 1:1 200 000.

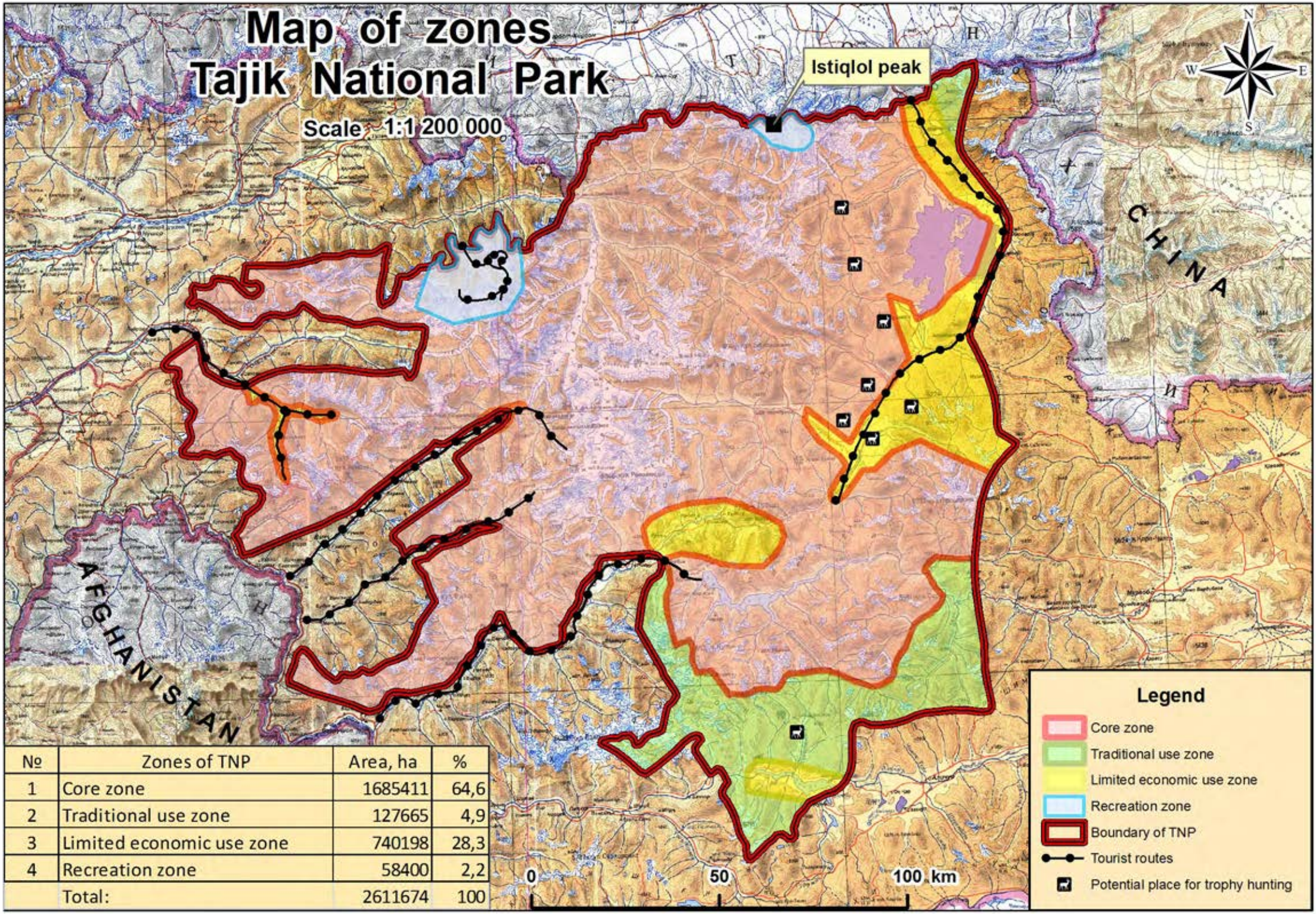
A7. Map 7. Position of TNP in Central Asian Region. Scale 1:3 000 000.

A8. Map 8. Recreation Zone of TNP. Scale 1:1 200 000.

A9. Map 9. Ranger posts in TNP Areas. Scale 1:1 100 000.

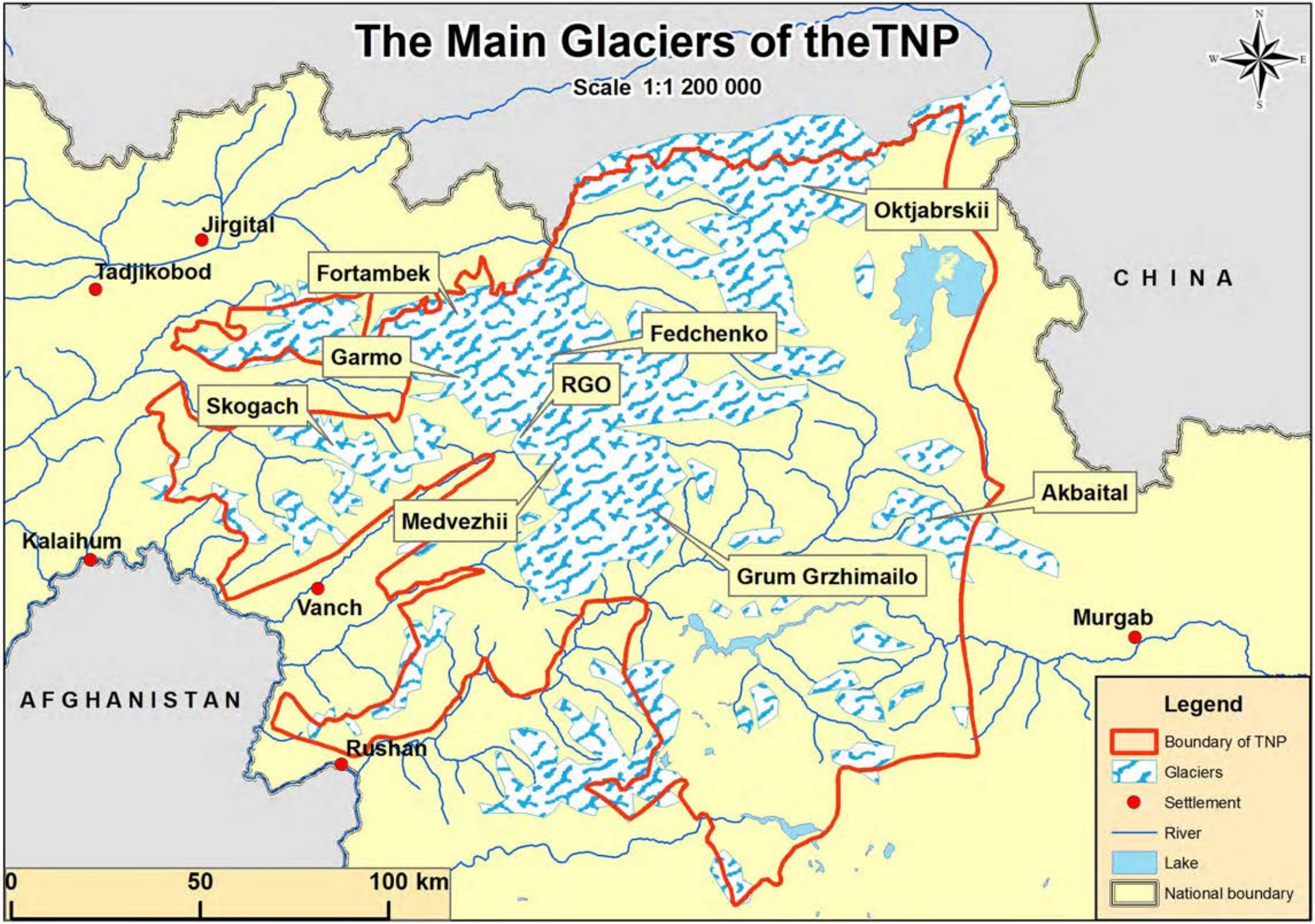
Map of zones Tajik National Park

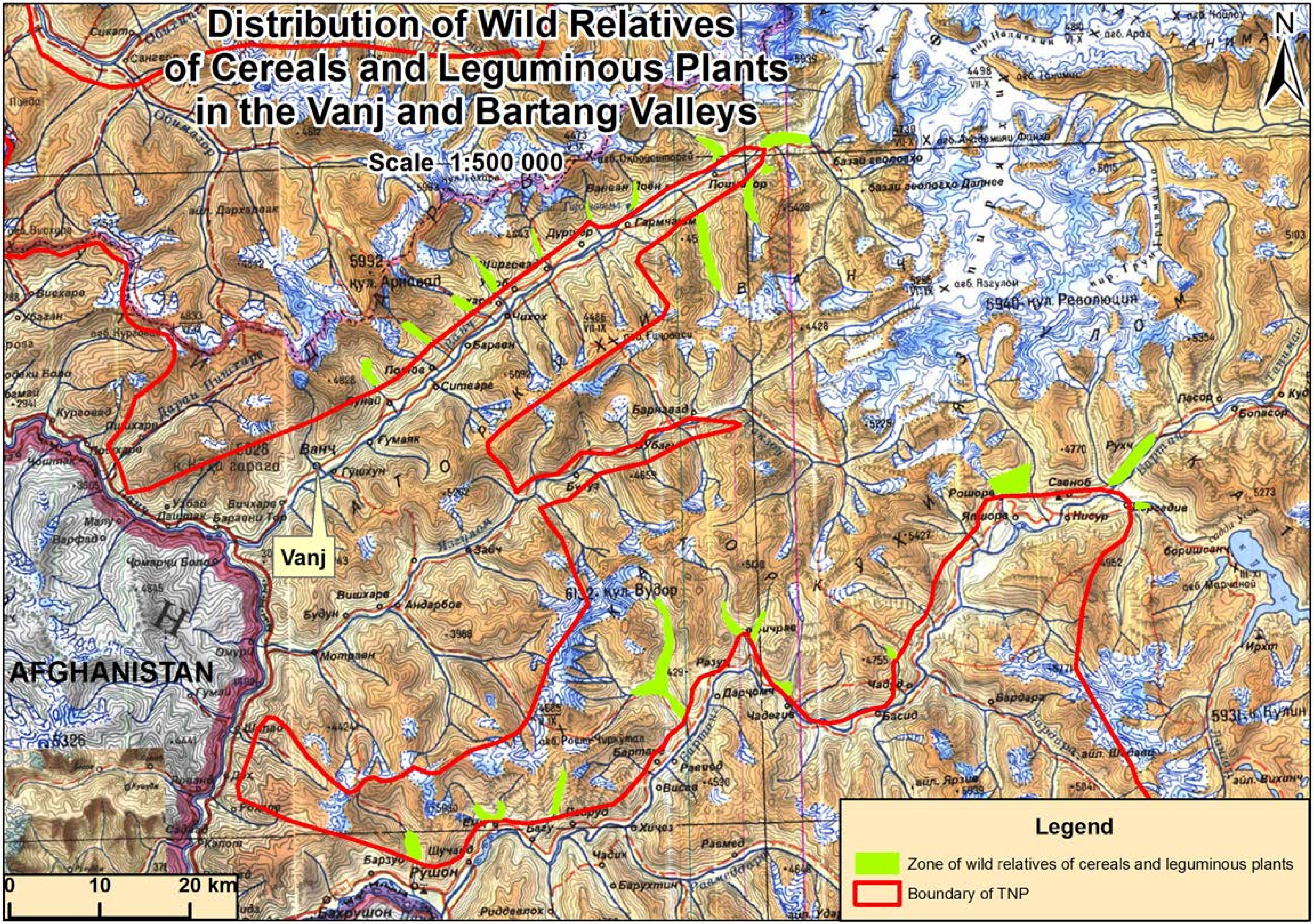
Scale 1:1 200 000

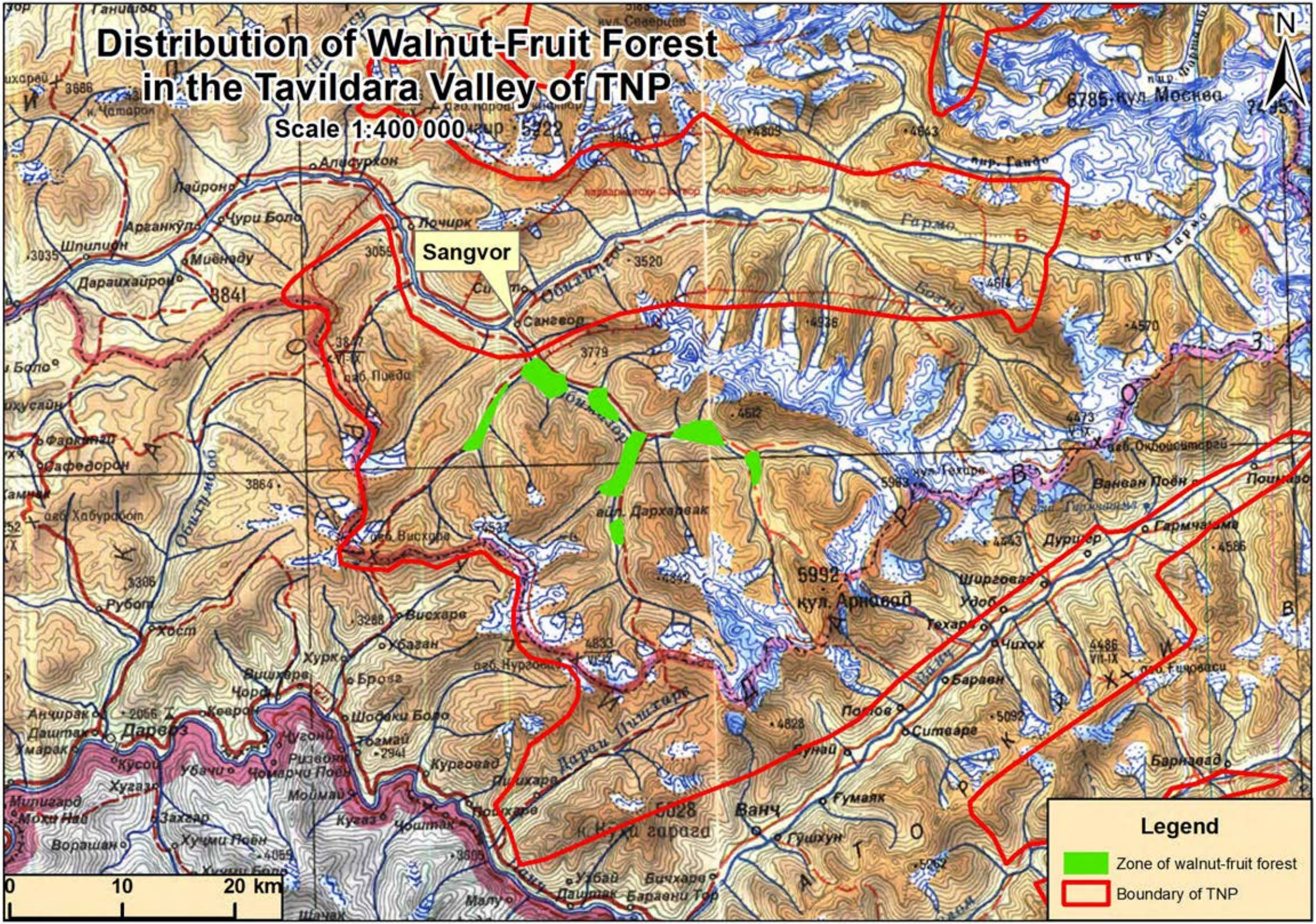


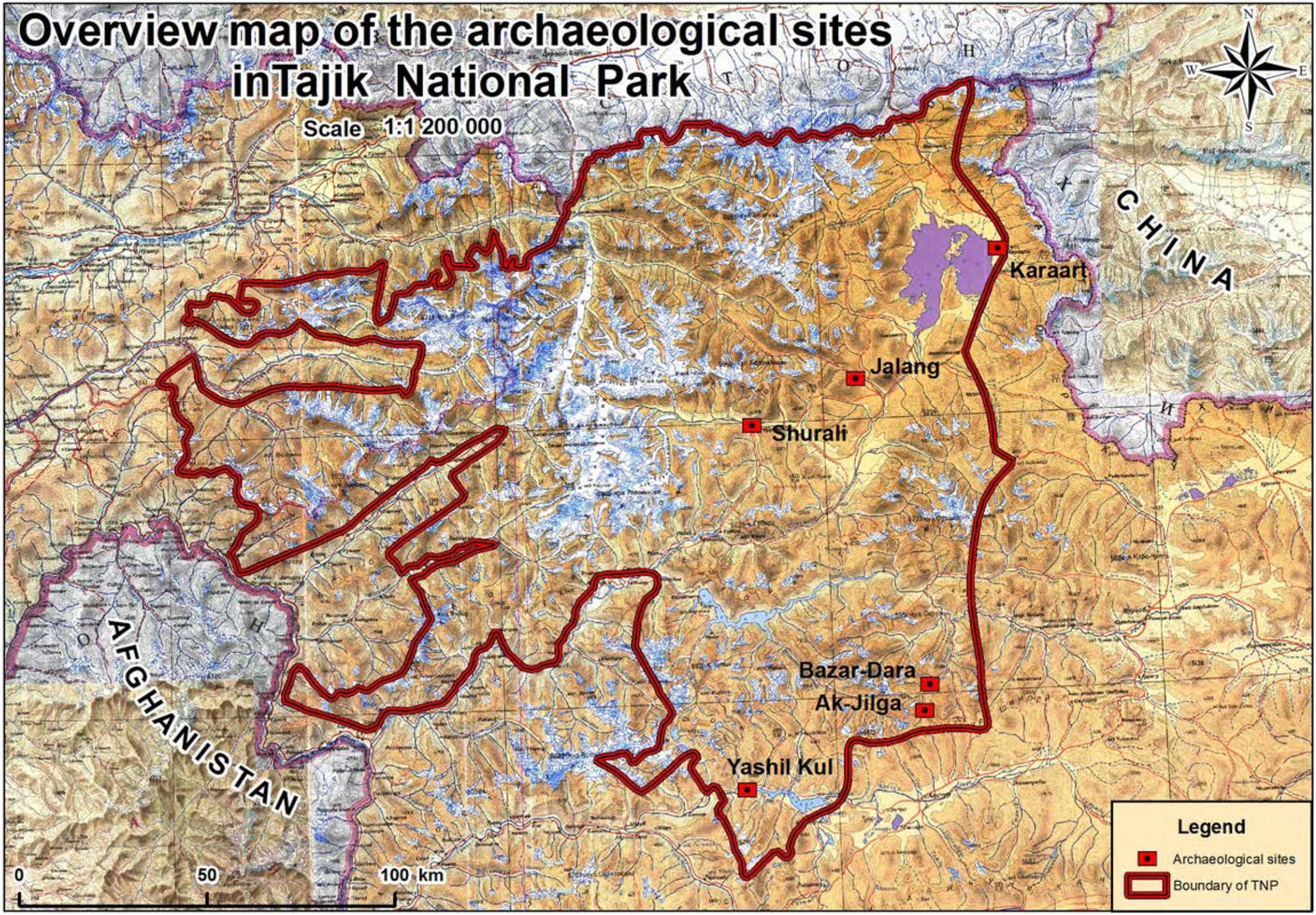
№	Zones of TNP	Area, ha	%
1	Core zone	1685411	64,6
2	Traditional use zone	127665	4,9
3	Limited economic use zone	740198	28,3
4	Recreation zone	58400	2,2
	Total:	2611674	100


N
U Z B E K I S T A N
Khodzhent
Istaravshan
KYRGYZSTAN
Peak Istiqlol
Pendzhikent
Sugd Oblast
CHINA
Karakul Lake
r.Muksu
Rasht
Peak I.Som oni
Area of direct submission
Dushanbe
r.Pyanj
r.Vanch
Gorno-Badakhshanskaya
Autonomus Oblast
Murgab
r.Murgab
r.Vaksh
r.Bartang
Kurgan-Tube
Kulyab
Sarez Lake
Yashilkul Lake
r.Gunt
Khatlon Oblast
Khorog
AFGHANISTAN
PAKISTAN
I N D I A
0
100
200 Km
Legend
TNP boundary
Oblast boundary
National boundary
Lake
River

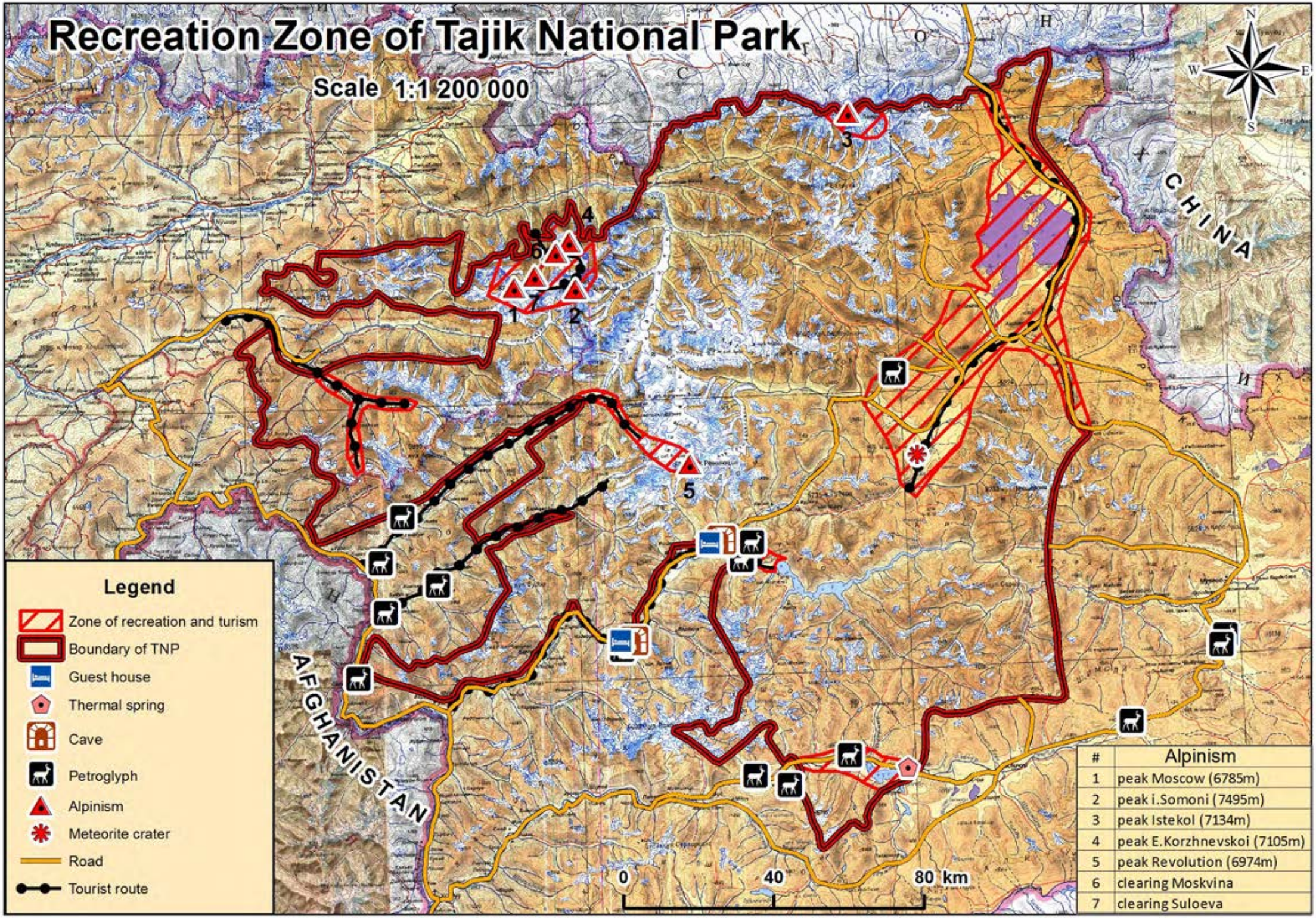

The Main Glaciers of theTNP
Scale 1:1 200 000
N
W
E
S
Jirgital
Tadjikobod
Fortambek
Oktjabrskii
CHINA
Fedchenko
Garmo
RGO
Skogach
Akbaital
Medvezhii
Kalaihum
Grum Grzhimailo
Vanch
Murgab
AFGHANISTAN
Rushan
Legend
Boundary of TNP
Glaciers
Settlement
River
Lake
National boundary
0
50
100 km


Distribution of Wild Relatives
of Cereals and Leguminous Plants
in the Vanj and Bartang Valleys
Scale 1:500 000
N
Vanj
AFGHANISTAN
0 10 20 km
Legend
Zone of wild relatives of cereals and leguminous plants
Boundary of TNP


Distribution of Walnut-Fruit Forest
in the Tavildara Valley of TNP
Scale 1:400 000
N
Sangvor
Legend
Zone of walnut-fruit forest
Boundary of TNP
0
10
20 km


Overview map of the archaeological sites
inTajik National Park
Scale 1:1 200 000
N
W
E
S
CHINA
Karaart
Jalang
Shurali
AFGHANISTAN
Bazar-Dara
Ak-Jilga
Yashil Kul
0
50
100 km
Legend
Archaeological sites
Boundary of TNP


Position of TNP in Central Asian Region
Scale 1:3 000 000
N
UZBEKISTAN
KYRGYZSTAN
CHINA
AFGHANISTAN
PAKISTAN
INDIA
Khodjent
Istravshan
Djirgatol
Dushanbe
Murgab
Kulyab
Kurgan-Tyube
Khorog
0
100
200 Km
Legend
City
Boundary TNP
National boundary
Lake
River


Recreation Zone of Tajik National Park
Scale 1:1 200 000
N
W
E
S
CHINA
AFGHANISTAN
Legend
Zone of recreation and turism
Boundary of TNP
Guest house
Thermal spring
Cave
Petroglyph
Alpinism
Meteorite crater
Road
Tourist route
0
40
80 km
Alpinism
1 peak Moscow (6785m)
2 peak i.Somoni (7495m)
3 peak Istekol (7134m)
4 peak E.Korzhnevskoi (7105m)
5 peak Revolution (6974m)
6 clearing Moskvina
7 clearing Suloeva


Administrative map
of theTajik National Park
Scale 1:1 100 000
KYRGYZSTAN
CHINA
AFGHANISTAN
N
Djirgital district
Tavildara district
Darvaz
distrrict
Vanch district
Rushan district
Shugnan district
Murgab district
0
50
100 Km
Legend
Boundary TNP
Ranger post
National boundary
Lake
River

ANNEXES B
RELATED LEGISLATIVE ACTS

B1. Nature Protection Law of the Republic of Tajikistan N 905 of 27.12.1993.

B2. Quotation from the Law of the Republic of Tajikistan "About conservation and use of fauna", N 989 of July, 20, 1994. Sections I, IX, X, XI, XVIII.

B3. Quotation from the Natural Protected Areas Law of the Republic of Tajikistan N 329 of December, 13 1996, Sections I, III, XI, XII;

B4. The decision of the Government of the Republic of Tajikistan N267 of July, 20 1992 "About establishment of the Tajik national park".

B5. The Decision of the Government of the Republic of Tajikistan of 6/11/2001 N 253 "About allocation of lands of the Tajik National Park";

B6. The Decision of the Government of the Republic of Tajikistan "About the approval of Regulation of the Tajik National Park" N 277 of July, 3, 2002.

B7. The order of State Directorate of Protected Areas TNP N 47 of November, 9, 2005 "About allocation of reserved zone of TNP".

B8. The Decision of the Government of the Republic of Tajikistan "About the State program of PA development for 2005-2015" N 79 of March, 4 2005.

B9. The Decision of the Government of the Republic of Tajikistan "About the State program of development of tourism in Tajikistan for 2004-2009: N582 of December, 29, 2003.

B10. The Decision of the Government of the Republic of Tajikistan "About the State program of ecological education of the population of the Republic of Tajikistan up to 2000 and on prospect till 2010" N93 of 2/23/1996.

B11. Management Plan of Tajik National Park for the period 2012 – 2016.

B12. Considerations on Possible Trophy Hunting in the Economic Use Zone of Tajik National Park.

ANNEX B1

THE LAW OF REPUBLIC OF TAJIKISTAN

ON NATURE PROTECTION

(in edition of Law of February, 1, 1996 No. 223, May, 10 2002 No. 30, December, 2, 2002 No.75, July, 15, 2004 No. 58, August 02, 2011, No. 760)

In Republic of Tajikistan the wildlife management, rational use and reproduction of its resources, improvement of natural environment are a nation-wide task, business of all people, the moral duty of each citizen.

The policy of Republic of Tajikistan in the field of protection of the natural environment is directed on maintenance of a priority of ecological interests of republic with the account of scientifically proved combination of economic development and other activity with the careful relation to the nature, its riches, rational use of natural resources and guaranteed protection of human rights for environment healthy and favorable for a life. The Republic of Tajikistan proceeds from necessity of wide and effective international cooperation with a view of preservation of the nature of the Earth and an establishment of general and full ecological safety of the world community.

The present Law in a complex with organizational, legal, economic and educational measures is called to promote formation and strengthening of the ecological law and order, protection of the natural environment in interests of the present and the future of generations and to maintenance of ecological safety in territory of Republic of Tajikistan.

CHAPTER 1. GENERAL REGULATIONS

Asset 1. Tasks of the legislation of Republic of Tajikistan about nature protection

Tasks of nature protective legislations are regulation of relations in sphere of interaction of a society and the nature the purpose of preservation of natural riches and habitat of the person, rational use and reproduction of natural resources, prevention of ecologically harmful influence of economic and other activity, improvement of quality of the natural environment, strengthening of legality and the law and order in the specified sphere of relations in interests of the present and the future generations of people.

Asset 2. The basic concepts used in the Law

In the present Law the following concepts are used:

Environment - an inhabitancy of the person, biosphere (an inhabitancy of an alive organism) serving as a condition, means and a place of human life and other alive organisms: includes the nature as system of a habitat which is transformed as a result of activity of the person;

Conservation of the environment - system of the state and public measures directed on maintenance of harmonious interaction of a society and the nature on the basis of preservation and reproduction of natural resources, their rational use of, improvements of quality of the human environment;

The natural resources - natural sources of the nature consumed by the person (land, water, forest resources, minerals, mineral raw material, radioactive materials, animal and flora, their components and other natural welfares);

Harm to an environment - negative changes in a condition of the environment, caused by activity of the man, as a result of pollution of environment, an exhaustion of natural resources, damage, destruction of ecological systems of the nature, creating real threat to health and human life, flora and fauna, material assets;

Protective zones (in environment) - a diversity of protected zones, the part of space protected according to rules, established by the law for protection of reserved zones, national natural parks, state zoological parks, state dendrology parks by restriction of use of the nature with the purpose of protection of reserved objects;

Sanitary Protective Zones - the territories, intended for maintenance of required hygienic norms of the contents of polluting substances in ground layer of an atmosphere, reduction of negative influence of electric transmission facilities to population;

The red book - set of data on rare, disappearing or threatened species of flora and fauna confirmed in the order established by the law, with the purpose of introduction of their special protection regime and the subsequent reproduction (the International Red book, the Red book of the Republic of Tajikistan);

Limit use of natural resources (in the field of environment conservation) - limiting amount of withdrawal, consumption of natural resources, emissions of harmful substances to an environment. It is established with a view of wildlife management, rational use of its resources, the prevention of harmful influences to it;

Normalization of quality of an environment - establishment of system of parameters of quality of environment;

Maximum permissible norms of harmful influences on environment - parameters of maximum permissible norms of influence of economic and other activity on condition of the environment, providing preservation of the environment, rational use of natural resources, ecological safety of a society and health of human;

Specifications of quality of environment - parameters describing criterion of qualitative condition of an environment: specifications of maximum permissible concentration (maximum concentration limit) of harmful substances, maximum permissible levels (MPL) of radiating influence, noise levels, vibration of magnetic fields, maximum permissible norms of the chemical substances (MPNC) used in rural, forestry, maximum permissible norms of loading of anthropogenous activity on environment;

Pollution of the environment - receipt in an environment of potentially dangerous chemical and biological substances, radioactive materials, waste products of manufacture, and influence on environment of noise, vibrations of magnetic fields and other harmful physical influences;

Ozone layer - an atmospheric layer at height of 7-8 km on poles, 17-18 km on equator above surface of planet with the increased concentration of molecules of the ozone, absorbing pernicious for alive organisms ultra-violet radiation from space;

Waste products - any substances, materials and subjects which are formed during human activity and not suitable for further uses in places of their formation or detection and of which their proprietor is going to get rid by use or recycling;

Emission, dump of harmful substances – output in an environment (in atmospheric air, in water objects, land) polluting substances from any source of pollution;

State dendrology park - group of the plantings being scientific, cultural and a historical value, natural species of garden and park flora;

Ecological expertise - official definition of conformity of planned and carried out economic and other activity according to ecological requirements and definition of an admissibility of realization of object of ecological expertise with a view of the prevention of possible adverse influences of this activity natural and social environment, social, economic and other consequences of realization of object of ecological expertise (in edition of Law of 10.05.2002 N30, in edition of Law of 15.07.2004 N58).

Asset 3. The legislation of Republic of Tajikistan on wildlife management

The legislation of Republic of Tajikistan on nature protection is based on the Constitution of Republic of Tajikistan and consist of the present Law, other laws of Republic of Tajikistan, legislative acts of Republic of Tajikistan and the international legal acts ratified by Republic of Tajikistan (in edition of Law of 2.2002 N 75)

Asset 4. Main principles of protection of natural environment

At realization of the economic, administrative and other activity rendering negative influence on condition of environment, the Majlis of People's Deputies, other state agencies, enterprises, establishments, organizations, and citizens of Republic of Tajikistan, foreign legal persons and citizens, persons without citizenship are obliged to be guided by the following main principles: (in edition of Law of 1.02.1996, No223)

Priority of protection of life and health of the human, maintenance of favorable ecological conditions for life, work and rest of the population;

Paragraphs 2 and 3 are excluded (in edition of the Law of 2.12.2002 N75)

Observance of requirements of nature protection legislations, inevitability of approach of the responsibility established by the law for their infringements;

Publicity in work and close communication with public organizations and the population in the decision nature protective problems;

The international cooperation in the field of environment conservation.
Natural protected territories and objects (in edition of Law of 2.12.2002 N75)

Asset 5. Objects of protection of natural environment

To protection from pollution, damage, exhaustion, destructions and irrational use are subject:

Biosphere, natural ecological systems and their components;

Climate, ozone layer of the Earth;

Land, its bowels, superficial and underground waters, atmospheric air, fauna;

Forests, pastures and other vegetation in all their specific diversity, typical and rare landscapes.

To protected natural territories and objects concern:

The state natural reserves, state natural parks, state zoological parks, state dendrology and botanical gardens, state zakazniks, ecological and ethnographic zones, natural zones of rest, resort, and animals and the plants included to the International Red book, the Red book of Republic of Tajikistan, and a place of their habitat (in edition of Law of 10.05.02 N30)

Special resort and recreational zones, zones of formation of underground waters (river valleys, debris cone, foothill shelves), rare geological detection and mineralogical formations, paleontologic objects and other sites of bowels representing are subject to protection

Special scientific, cultural and other value, coastal strips and water-security zones of water objects, security (buffer) zones of protected natural territories, fisheries, protective strips of forests and other zones in the order determined by the legislation of Republic of Tajikistan, the international agreements.

Asset 6. The state ecological programs

The state ecological program of Republic of Tajikistan, the state regional, inter-regional and local ecological programs providing measures on protection of the natural environment are developed for the organization of purposeful and effective activity on maintenance of favorable quality of the natural environment, rational use and reproduction of natural resources, improvement of the natural environment surrounding the person on long-term prospect.

The order of development of the state ecological programs is defined by the Government of Republic of Tajikistan (in edition Law of 1.02.1996, No. 223)

Asset 7. The competence of the Government of Republic of Tajikistan in the field of protection of the natural environment (in edition of Law of 1.02.1996, No. 223)

Into the competence of the Government of Republic of Tajikistan in the field of protection of the natural environment includes: (in edition of Law of 1.02.1996, No. 223)

Maintenance of protection of the natural environment and rational use of natural resources in interests of the present and the future generations;

Paragraphs 2 and 3 are excluded (in edition of Law of 2.12.2002 N75)

Planning of republican actions in the field of protection of the natural environment, the statement of republican complex, target programs, financing and infrastructure maintenance of nature protection actions;

Co-ordination nature protective activity of the ministries, state committees, departments, enterprises, organizations, irrespective of their characteristics and ownership;

Establishment of specifications and collection of a payment for using natural resources, emissions and dumps of harmful substances, burial place of waste products, other harmful influences on natural environment;

Establishment of order of development of ecological specifications, limits of use of natural resources, emissions, dumps of polluting substances in natural environment, placings of waste products;

Excluded (in edition of Law of 12.12.1997, No. 498).

Decision-making on the termination of activity of infringement by them of nature protective legislations of Enterprises, establishments and organizations, irrespective of ownership;

The organization of system of ecological education of the population;

Paragraphs 10 and 11 are excluded (in edition of Law of 2.12.2002 N75).

The government of Republic of Tajikistan can carry out other powers in the field of wildlife management according to the present Law and others legislative certificates (in edition of Law of 2.12.2002 N75)

Asset 8. The competence special authorized state authorities in the field of nature protection (in edition of Law of 2.12.2002 N75)

To the competence special authorized state agencies in the field of nature protection concern: (in edition of Law of 2.12.2002 N75)

Complex management in the field of protection of the natural environment in Republic of Tajikistan, carrying out uniform scientific policies in questions of protection of the natural environment and use of natural resources, coordination of activity of the ministries, departments, Enterprises, establishments and organizations in this area;

The state control over use and protection of the grounds, bowels, superficial and underground waters, atmospheric air, forests and other flora, fauna, natural resources of Republic of Tajikistan, and also over observance of norms of ecological safety;

The organization of monitoring of the natural environment, creation and maintenance of work of public service of supervision over the natural environment;

The statement of ecological specifications, rules, participation in development of standards on regulation of use of natural resources and protection of the natural environment from pollution and other harmful influences;

Realization of the state ecological expertise;

Reception free-of-charge from the ministries, departments, Enterprises, establishments and organizations of the ecological information;

Provision with the ecological information of the population;

Issuing of sanctions for burial (warehousing) industrial, communal-general and other waste products, emissions, dumps of polluting substances in natural environment, on use of natural resources according to the legislation of Republic of Tajikistan ;

Restriction or abeyance of activity of Enterprises and other objects irrespective of ownership carried out with infringement of nature protective legislations, licenses for use of natural resources, in case of excess of limits of emissions and dumps of polluting substances;

Presentation of claims about compensation of the harm caused as a result of infringement of nature protective legislation;

Development of the state, inter-governmental and regional ecological programs;

Drawing up of reports and disposal of legal proceeding about administrative offences in the field of protection of the natural environment and use of natural resources;

Participation in the organization of system of general, continuous ecological education;

Coordination of work of other authorized state bodies in the field of protection of the natural environment;

Management natural reserve business;

The account and estimation of natural resources, the organization of conducting republican natural resource cadastres;

Realization of the international cooperation in the field of protection of the natural environment, studying, generalization and distribution of the international experience, maintenance of implementation of obligations of Republic of Tajikistan according to the international agreements in the field of protection of the natural environment.

Decisions specially the authorized state body in the field of wildlife management on the questions related to their competence, are obligatory for all legal persons and citizens and can be appealed against in the judicial order (in edition of Law of 2.12.2002 N75)

Asset 9. The competence local Majlises in the field of regulation of relations in sphere of protection of the natural environment (in edition of Law of 1.02.1996, No. 223)

To conducting of local Majlises in the field of regulation of relations in sphere of protection of the natural environment are subject:

(in edition of Law of 1.02.1996, No. 223)

Definition of the basic directions of protection of the natural environment of subordinated territories and the statement of ecological programs;

The account and estimation of a condition of natural resources, the account of ecologically harmful objects, conducting nature protection the cadastral documentation;

Planning of protection of the natural environment, financing and infrastructural maintenance of nature protection programs;

Coordination of nature protection activity of controls, Enterprises, establishments, organizations, assistance to voluntary cooperation of means for implementation of actions on protection of the natural environment;

Coordination of activity of ecological services, Enterprises, organizations, establishments, irrespective of patterns of ownership and submission; (in edition of Law of 2.12.2002 N75)

The state control over protection of the natural environment, decision-making on restriction, stay, the termination of activity of objects, irrespective of ownership and subordination, in case of infringement of the nature protection legislation by them;

The organization of gathering and recuperation of industrial and household waste products;

Participation in the organization of a reserved affair;

Propagation of wildlife management, ecological education and education;

Consideration of other questions of protection of the natural environment, attributed by the legislation of Republic of Tajikistan to the competence local Majlis People's Deputies (in edition of Law of 1.02.1996, No. 223, in edition of Law of 2.12.2002 N75)

CHAPTER 2. THE RIGHT OF CITIZENS ON THE HEALTHY AND FAVORABLE NATURAL ENVIRONMENT

Asset 10. The right of citizens on natural environment favorable for a life

Each citizen of Republic of Tajikistan has the right to residing in favorable for his health and life to the.

This right is provided by:

Observance of ecological requirements at placing of productive forces, enterprises, constructions and other objects influencing on natural environment, planning of industrial complexes, development of the industry, agriculture, power, transport and other branches of a national economy.

Using of natural environment with it detriment is not allowed.

Asset 11. The right of citizens on health protection from adverse influence of the natural environment

Each citizen of Republic of Tajikistan has the right to health protection from the adverse influences of the natural environment caused by economic or other activity, failures, accidents, acts of nature.

This right is provided by:

Planning and normalization of quality of the natural environment, measures on prevention of ecologically harmful activity and improvement of the natural environment, the prevention and liquidation of consequences of failures, accidents, acts of nature;

Compensation in the judicial or administrative order of the damage caused to health of citizens as a result of pollution of the natural environment and other harmful influences on it, including consequences of failures and accidents;

State and public control over a condition of the natural environment and observance of nature protective legislations, bringing to account of the persons guilty of infringement of requirements of ecological safety of the population.

Asset 12. The right of citizens for the ecological information

Citizens of Republic of Tajikistan have the right to reception duly, full and a trustworthy information about a condition of atmospheric air, waters, soil, bowels, woods, fauna (including fish stocks), radiating conditions in republic.

This right is provided with the periodic publication specially authorized state bodies of Republic of Tajikistan of data on a condition of the natural environment (an atmosphere, waters of ground, bowels, radiating conditions), woods, fauna, including fish stocks in corresponding territories and tendencies of its change.

At sharp deterioration of the natural environment, the person menacing to health, enforcement authorities on places (Hukumats) and specially authorized state bodies of Republic of Tajikistan in the field of protection of the natural environment immediately inform the population on the reasons of deterioration of ecological conditions and ways of the prevention of harm (in edition of Law of 1.02.1996, No. 223)

Asset 13. The right of citizens on participation in making of ecologically significant decisions and the control over their implementation

Citizens of Republic of Tajikistan have the right for participation and the control over development, making and realization of the decisions related to influence on natural environment.

This right is provided with promulgation, public discussion of projects of ecologically important decisions, carrying out of public ecological expertises of projects, duty of special authorities to take into account proposals of citizens, use of various forms of participation of the population in protection of the natural environment.

CHAPTER 3. THE ECONOMIC MECHANISM OF PROTECTION OF THE NATURAL ENVIRONMENT

Asset 14. Tasks of the economic mechanism of protection of the natural environment

The economic mechanism of protection of the natural environment has the task development material and moral incentive of activity of the ministries and departments, Enterprises, establishments, organizations, irrespective of ownership and subordination, their workers, citizens in development, planning and implementation of measures of ecological safety,

rational use and reproduction of natural resources.

The economic mechanism of protection of the natural environment provides:

Planning and financing nature protective actions;

Establishment of limits of use of nature protection resources, emissions and dumps of polluting substances in natural environment and placings of waste products;

Collection of a payment for using natural resources, dumps and emissions of polluting substances, placing of waste products, other kinds of harmful influence;

Material encouragement of collectives and workers of state, cooperative and other organizations, enterprises and also citizens;

The tax and credit privileges given to state, cooperative, public and other enterprises, establishments and organizations, including nature protective, irrespective of ownership and subordination, and also to citizens, at introduction low-wasted and non waste technologies and manufactures, use of recycled resources, realization of other activity giving nature protection effect;

The incentive prices and extra charges for non-polluting production;

Compensation when due hereunder the harm caused to the natural environment and health of the person;

Assignment on Enterprises, establishment, organizations and citizens of duties on restoration of the broken favorable condition of the natural environment;

Full or partial deprivation of officials and other workers of the premiums which are given out by it by results of the basic industrial activity, in case of infringement of requirements of the legislation by them about wildlife management, defaults of actions on wildlife management;

Collecting when due hereunder monetary indemnifications for the damage caused as result of damage or destruction of natural objects;

Introduction of the special taxation of Enterprises, establishments, organizations for application of ecologically dangerous technologies and realization of other activity dangerous to the natural environment.

By the legislation of Republic of Tajikistan, decisions local MAjlis People's Deputies other kinds of provision of economic incentives of protection of the natural environment and the order of their realization (in edition of the Law of 2.12.2002 N75) can be established.

Provision of economic incentives of nature protection activity is carried out in the order determined by the legislation of Republic of Tajikistan, decisions local Majlises People's Deputies (in edition of Law of 1.02.1996, No. 223)

Asset 15. Registration and social economic estimation of natural resources

State nature protective authorities of Republic of Tajikistan, together with bodies of the state statistics, nature users, conduct the quantitative and qualitative account of natural resources and recycled raw material, carry out their social economic estimation.

Introduction of the state land, water, wood cadastres, state cadastres of bowels, the fauna, protected natural protected areas and objects is assigned to state nature protective authorities.

Asset 16. Excluded. (in edition of Law of 2.12.2002 N75)

Asset 17. Financing of nature protection measures.

Financing of nature protection measures is made from the following sources:

- Republican and local budgets;
- Republican and local funds of wildlife management;
- Voluntary payments of physical and legal persons (in edition of Law of 2.12.2002 N75)

Asset 18. Limits on wildlife management

Limits on nature protection are system of ecological restrictions on territories and represent volumes of limiting use (withdrawal) of natural resources, emissions and dumps of polluting substances in natural environment and compensation of waste products of manufacture for nature users for certain term.

Limits on nature protection for nature using establishments are determined by specially authorized state bodies of Republic of Tajikistan in the field of environment conservation, proceeding from necessity of stage-by-stage achievement of normative volumes of use (withdrawal) of natural resources, maximum permissible emissions and dumps of polluting substances for natural environment and normative volumes of placing of waste products of industry in view of ecological conditions in region.

Asset 19. Paying for uses of natural resources

Paying of wildlife management includes a payment for natural resources, for pollution of the natural environment and for other kinds of harmful influence.

The payment for natural resources (land, bowels, water, forest and other vegetation, fauna, recreational and other natural resources) is collected:

For the right of use of natural resources within the established limits;

For superlimit and irrational use of natural resources;

On reproduction and protection of natural resources.

The payment for pollution of the natural environment and other kinds of harmful influence is collected for:

Emissions, dumps of polluting substances, placing of waste products and other kinds of pollution within the established limits;

Emissions, dumps of polluting substances, placing of waste products and other kinds of pollution over the established limits.

The order of calculation and application of specifications of a payment for use of natural resources is defined by the Government of Republic of Tajikistan.

Specifications of payment for pollution of the natural environment and wildlife management are subject to indexation in process of change of the prices in Republic of Tajikistan.

Payment for use of natural resources does not release nature users from implementation of measures on protection of the natural environment and compensation of the harm caused by an ecological offence.

Asset 20. Funds of wildlife management

For the contingencies related to protection and improvement of the natural environment, restoration of losses in the natural environment and indemnification of the caused harm the republican and local funds of wildlife management are established (in edition of Law of 12.12.1997, No. 498).

The specified funds are formed due to deductions from payments for using natural resources, payments for emissions (dumps, placing) of harmful substances in natural environment, funds collected for infringements of the nature protection legislation, donations of the population and other sources.

The order of formation and use of funds of wildlife management is determined the Government of Republic of Tajikistan (in edition of Law of 1.02.1996, No.223).

Asset 21. Insurance funds of protection of the natural environment

Insurance funds of protection of the natural environment at the Government of Republic of Tajikistan are formed for a covering of contingencies on restoration of losses in the natural environment, compensation of the damage caused to health and property of citizens as result of acts of nature, failures and accidents (in edition of Law of 1.02.1996, No. 223)

The specified funds are created due to assignments of state, deductions of enterprises, establishments, organizations, irrespective of ownership and subordination.

The order of formation and expenditure of the specified funds is established by the Government of Republic of Tajikistan (in edition of Law of 1.02.1996, No.223).

Asset 22. Insurance of citizens against adverse influences of the natural environment

Citizens of Republic of Tajikistan, foreign citizens and persons without citizenship which living on territory of Republics of Tajikistan constant or temporarily, have the right to insurance of life, health, property against the adverse influences of the natural environment occuring as a result of economic or other activity (in edition of Law of 2.12.2002 No. 75). Conditions of insurance, the order of entering of insurance payments and payments of insurance compensation are determined by the legislation of Republic of Tajikistan.

CHAPTER 4. NORMALIZATION OF QUALITY OF THE NATURAL ENVIRONMENT

Asset 23. The basic requirements to normalization of quality of the natural environment

Ecological normalization of quality of the natural environment is made with the purpose of an establishment of scientifically proved maximum permissible norms of influence on the natural environment, guaranteeing ecological safety of the population, providing preservation of ability to live of biosphere, protection of atmospheric air, waters, the lands, flora and fauna, rational use and reproduction of natural resources in conditions of economic development.

In ecological specifications of quality of the natural environment requirements on guarantee of enterprises, establishments and organizations, irrespective of ownership and subordination effective decision of environmental problems by means of introduction of advanced achievements of a science and technics and, first of all, updating of working “know-how” by resource saving, law waste non waste ecologically safe technologies in combination to perfection of systems of clearing, and also the requirement of reduction of influence nature, continuous reduction and approximation the best global achievements specific resources consumption, emissions, dumps of harmful substances to natural environment, including post achievement of the established norms on unit of production.

At failure to meet requirements of norms of wildlife management by the decision specially the authorized state body in the field of wildlife management activity of Enterprises can be limited or suspended (in edition of Law of 2.12.2002 N75).

The quantitative and qualitative account of harmful influences on natural environment is carried out by the Ministry of Nature Protection of Republic of Tajikistan, State statistical agency of the Government of Republic of Tajikistan, enterprises, establishments and organizations, irrespective of ownership and subordination in the order established by the Government of Republic of Tajikistan (in edition of Law of 1.02.1996, No. 223)

Asset 24. Specifications of maximum permissible concentration of harmful substances

Specifications of maximum permissible concentration of harmful substances, pathogenic microorganisms and other harmful biological substances polluting atmospheric air, water, ground, are established for an estimation of condition of the natural environment in interests of protection health of the person, preservation of genetic fund of flora and fauna, a national economy.

With the account natural climatic and other conditions, and also special values of separate territories (reserves, zakazniks, national natural parks, resort and recreational zones) more strict specifications of maximum permissible concentration of harmful substances in objects of the natural environment are established.

Asset 25. Specifications of maximum permissible emissions and dumps of harmful substances

Specifications of maximum permissible emissions and dumps of harmful substances, including pathogenic microorganisms and other biological substances polluting atmospheric air, waters, ground, are established in view of their general receipt from all industrial objects given to inventory of emissions and dumps of harmful substances on each source of pollution, working specifications of maximum permissible concentration of harmful substances in the natural environment and its background pollution.

Asset 26. Specifications of maximum permissible noise levels, vibrations, magnetic fields and other harmful physical influences

Specifications of maximum permissible noise levels, vibrations, magnetic fields and other harmful physical influences are established at a level providing preservation of health and work capacity of people, protection vegetative and the fauna, natural environment favorable for a life.

The specified specifications and methods of their definition are developed and approved by special authorities of Republic of Tajikistan in the field of protection of the natural environment, sanitary inspection.

Asset 27. Specifications of a maximum permissible level of radiating influence

Specifications of a maximum permissible level of the safe contents of radioactive substances in the natural environment and food stuffs, maximum permissible level of a radiating irradiation of the population are established in the sizes guaranteeing health of the person and the future generations of people, preservation flora and the fauna, natural environment favorable for life.

The specified specifications and methods of their definition are developed and approved by special state authorities of Republic of Tajikistan in the field of environment conservation, sanitary inspection.

For the constant control over a level of radiation the population is provided with radiometric devices in the order determined by the Government of Republic of Tajikistan (in edition of Law of 2.12.2002 N75).

The part is excluded (in edition of the Law of 2.12.2002 N75)

Asset 28. Norms of application of fertilizers, pesticides and other chemical substances

Norms of application of mineral and organic fertilizers, means of protection of plants, growth factors and other chemical substances in rural, forests and other branches of a national economy should be established in the dozes providing observance of specifications of maximum permissible residual amounts of chemical substances in food stuffs, health protection of the person, its genetic fund, preservation flora and fauna.

Asset 29. Specifications of maximum permissible residual amounts of chemical substances and biologically harmful microorganisms in food stuffs

Specifications of maximum permissible residual amounts of harmful chemical substances and biologically harmful microorganisms in food stuffs are established by definition of the minimal allowable doze harmless to health of the person, by each kind of chemical substances and biologically harmful microorganisms and each kind of food stuffs. The specified specifications are developed and approved by state authorities of sanitary inspection of Republic of Tajikistan according to the information of state agrochemical services of Republic of Tajikistan and taking into account the international standards.

For the constant control over observance of these specifications the corresponding organizations and the population are provided with necessary means of the control.

Asset 30. Ecological standards

In standards on new technical equipment, technology, materials, substances and other production, capable to render harmful influence on the nature, health and genetic fund of the person, ecological requirements providing observance of specifications of maximum permissible influences on an environment during manufacture, storage, transportation, use (consumption) and removal, are established. The specified standards, methods of their definition and kinds of production for which they are developed, approved by special state authorities of Republic of Tajikistan in the field of protection of the natural environment, sanitary inspection.

Asset 31. Specifications of maximum permissible levels of loading on natural environment

At formation territorial industrial complexes, development of the industry and agriculture, construction and reconstruction of cities, other settlements the specifications of maximum permissible levels of loading on natural environment of region in view of its potential opportunities, necessities of rational use of territory of natural resources are established. Their main purpose is maintenance of optimum conditions of life of the population, prevention of destructions of natural ecological systems and approaches of irreversible changes in the natural environment.

Asset 32. Specifications of sanitary and protective norms

Specifications sanitary, protective, water-security zones are established for protection of reservoirs and other sources of water supply, resort zones, occupied places and other territories from pollution and other harmful influences.

The specified specifications are developed and approved by special state authorities of Republic of Tajikistan in the field of sanitary inspection, preservation of the environment together with other authorized state bodies.

CHAPTER 5. ECOLOGICAL EXPERTISE (in edition of Law of 15.07.04 N58)

Asset 33. Carrying out of ecological expertise

Ecological expertise of objects is carried out according to the Law of Republic of Tajikistan "About ecological expertise". (in edition of the Law of 15.07.2004 N58)

Asset 34. Excluded (in edition of Law of 15.07.2004 No. 58)

Asset 35. Excluded (in edition of Law of 15.07.2004 No. 58)

Asset 36. Excluded (in edition of Law of 15.07.2004 No. 58)

Asset 37. Excluded (in edition of Law of 15.07.2004 No. 58)

CHAPTER 6. ECOLOGICAL REQUIREMENTS AT PLACING, DESIGNING, CONSTRUCTION, RECONSTRUCTION, COMMISSIONING OF ENTERPRISES, CONSTRUCTIONS AND OTHER OBJECTS

Asset 38. The general ecological requirements at placing, designing, construction, reconstruction, commissioning of Enterprises, constructions and other objects

At placing, technical and economical substantiation of the project, designing, construction,

reconstruction, commissioning of enterprises, constructions and installations in the industry, rural, water, municipal economy, on transport, in power, at lining of transmission lines, communications, pipelines, channels and other objects rendering direct or indirect influence on condition of natural environment, requirements of ecological safety and public health care should be carried out, to be provided actions on wildlife management, rational use and reproduction of natural resources, improvement of the natural environment.

Infringement of the specified requirements entails stay or restriction before elimination of lacks or the full termination of activity on placing, designing, construction, reconstruction, to commissioning of ecologically harmful objects, irrespective of ownership and subordination, according to the instruction of specially authorized state agencies of Republic of Tajikistan in the field of protection of the natural environment, sanitary inspection.

Article 39. Development and realization of the projects essentially influencing natural environment

Development and realization of the large economic projects rendering essential influence on a condition of the natural environment, are made under the decision accepted by Majlis Oli of Republic of Tajikistan, on the basis of the conclusion of the state ecological expertise and results of national discussion or a referendum (in edition of Law of 1.02.1996 N223)

Development and realization of the economic projects connected to infringement or destruction of highly productive natural ecological systems and natural balance, by adverse changes of climate and ozone layer of the Earth, destruction of genetic funds of plants and animals, approach of other irreversible consequences for health of the person, natural environment is forbidden.

Asset 40. Ecological requirements at placing of Enterprises, constructions and other objects

At placing of Enterprises, constructions and other objects, irrespective of ownership and subordination, implementation of requirements on protection of the natural environment, rational use and reproduction of natural resources, the account of the nearest and remote ecological, genetic, economic, demographic, moral consequences of functioning of the specified objects should be provided at priority of health protection of the person and well-being of the population.

Definition of sites of Enterprises, constructions and other objects, irrespective of ownership and subordination, is made according to the current legislation and at presence of the positive conclusion of the state ecological expertise.

Asset 41. Ecological requirements to construction, reconstruction of Enterprises, constructions and other objects

Realization of spadework on districts, construction, reconstruction of objects, irrespective of patterns of ownership and subordination is forbidden, up to the statement of the project and removal of the ground area in nature. Change of the authorized project is not supposed to the detriment of requirements of ecological safety.

Implementation of the works stipulated in ecological section of the project, is made first of all.

At realization of civil work take measures on protection and rational use of natural resources, recultivation of grounds and restoration of other natural resources, accomplishment of territory and improvement of the natural environment.

Infringement of the requirements stated in presentAsset of the Law, entails stay of civil work before elimination of the marked lacks under the instruction of specially authorized state bodies of Republic of Tajikistan in the field of protection of the natural environment, sanitary inspection, supervision of safe conducting works in the industry and mountain supervision.

Asset 42. Ecological requirements at commissioning enterprises, constructions and other objects

Commissioning of Enterprises, constructions and other objects is made under condition of implementation in full the ecological requirements stipulated by the project, under certificates of the inspections created with participation of representatives of specially authorized bodies of Republic of Tajikistan in the field of protection of the natural environment, sanitary inspection.

Commissioning objects without the positive conclusion of the state ecological expertise, not provided by effective constructions and installations on clearing, neutralization and is forbidden to recycling of harmful waste products, emissions and dumps up to level of maximum permissible specifications, means of the control over pollution of the natural environment, without end of the projected works on wildlife management, ground recultivation, restoration of other natural resources, improvement of the natural environment.

Chairman and members of inspections bear the personal responsibility for infringement about acceptance of objects according to the legislation of Republic of Tajikistan.

CHAPTER 7. ECOLOGICAL REQUIREMENTS AT Exploitation OF ENTERPRISES, CONSTRUCTIONS, OTHER OBJECTS AND IMPLEMENTATION OF OTHER ACTIVITY

Asset 43. The general ecological requirements at exploitation of Enterprises, constructions and other objects

Enterprises, establishments, organizations, citizens are obliged to accept effectual measures on observance of a technological mode and implementation of requirements on wildlife management, rational use and reproduction of natural resources, improvement of the natural environment.

Enterprises, establishments, organizations provide observance of the established specifications of quality of the natural environment on the basis of effective work of clearing constructions, installations and means of the control, neutralization and recycling of waste products, transition to ecologically safe technologies and manufactures, carry out actions on protection and restoration of efficiency natural ecosystems, protection of the lands, soils, bowels, waters, atmospheric air, vegetative and fauna, to reproduction of natural resources.

Infringement of ecological requirements at exploitation of Enterprises, constructions and other objects entails restriction, termination of activity of Enterprises, establishments, organizations or shops, departments, branches, installations under decisions of specially authorized state bodies of Republic of Tajikistan in the field of protection of the natural environment, sanitary inspection, supervision of safe conducting works in the industry and mountain supervision with the simultaneous termination of financing of the forbidden activity by establishments of bank.

Profiling activity of ecologically harmful objects it is made as agreed with specially authorized state bodies in the field of protection of the natural environment, sanitary inspection and local Majlises of People's Deputies (in edition of Law of 1.02.1996, No. 223)

Asset 44. Ecological requirements in rural and forestry

Enterprises, establishments, organizations and the citizens conducting agriculture, are obliged to carry out a complex of measures on protection of soils, reservoirs, forests and other flora, fauna from harmful influence of forces majeure of the nature, negative consequences of application of technics, chemical and other substances and other factors worsening condition of protection of the natural environment and harming health of the person.

Cattle-breeding farms and complexes, enterprises processing agricultural and forestry production, should have necessary sanitary protection, water-security zones and the clearing constructions excluding pollution and defacement of the lands, superficial and underground waters, destruction and exhaustion of forests and pastures.

Default of the specified requirements, causing of harm to the natural environment and health of the person entails restriction, termination of ecologically harmful activity of agricultural and other objects under the decision of specially authorized state bodies of Republic of Tajikistan in the field of protection of the natural environment, sanitary inspection.

Asset 45. Ecological requirements at planning, designing, implementation of meliorative works

Enterprises, establishments, organizations and citizens at planning, designing, implementation of meliorative works, operation of meliorative systems should provide all necessary measures on observance of water balance, rational use and protection of the lands, forests and other vegetation, economical use of waters, their prevention from flooding, bogging, salinization, soil erosion, prevention of destructions spawning places, fattening places, winterings and migrations of fishes, other harmful influences on natural environment.

Non-observance of the specified requirements entails abeyance of implementation of works on designing, construction or operation of these systems before elimination of lacks or the termination of such works under the decision of specially authorized state bodies of Republic of Tajikistan in the field of protection of the natural environment of Republic of Tajikistan with the simultaneous termination of financing of works by establishments of banks.

Asset 46. Ecological requirements to energy objects

Placing, designing, construction, commissioning of Enterprises, installations and other energy objects, irrespective of ownership and subordination, is carried out according to requirements ofAssets 38-44 of the present Law.

Development of concepts of power supply is carried out in view of necessity of reduction of negative influence of ecological consequences and influence of power objects on the natural environment and health of the population.

At placing, designing, construction of hydroelectric power stations and other power objects real requirements for the electric power of republic and the given region, lay of land or placings of object, a measure on the maximal preservation of the lands, forests, deposits of minerals, settlements, nature sanctuaries, histories and cultures, to effective protection of fish stocks, duly use of wood, fertile soil layer, peat should be taken into account at clearing and flooding box of water basins, for prevention negative changes in the natural environment.

At placing, designing, construction, commissioning of energy power stations take measures on maintenance of full radiating safety of the natural environment and the population according to the international rules. Placing, designing, construction of atomic power stations and reactors in territories with the big concentration of the population, resort, recreational zones

and districts of sanitary protection, in seismic zones, near to large reservoirs of the republican value, traditional places of mass rest and treatment of the population is forbidden.

At designing and construction of thermal power stations it is necessary to provide equipment by their highly effective filters and other means for clearing harmful waste products, emissions and dumps, use of ecologically safe kinds of fuel.

Non-observance of the specified requirements entails abeyance of designing, construction, work of power objects before elimination of the marked lacks or the termination of their work under the decision of specially authorized state bodies of Republic of Tajikistan in the field of protection of the natural environment, sanitary inspection.

Article 47. Ecological requirements at designing, construction, reconstruction of cities and other settlements

Designing, construction, reconstruction of cities and other settlements should meet to requirements ofAssets 38-44 of the present Law and provide optimum ecological conditions of life, work and rest of population.

Construction new and increase in capacity of working economic objects, irrespective of ownership and subordination in zones where pollution exceeds the established specifications is forbidden.

At planning and building of cities and other settlements water supply, gardening, the water drain, the device of street coverings, neutralization, warehousing, ecologically safe sanitary clearing, removal and burial place of waste products, removal of storm drains and their clearing should be provided.

With view of protection of the natural environment around of large cities and industrial centres, large ecologically harmful objects the protective zones withdrawn from intensive economic use with the limited mode of wildlife management, mud protection and coast-protecting structure are created.

Asset 48. Ecological requirements at use of radioactive materials

Enterprises, establishments, organizations, citizens are obliged to observe rule of production, storage, transportation, use, recycling, removal and burial place of radioactive substances (sources of ionizing radiations, nuclear materials) to not suppose excess of maximum permissible norms of radiation, and in case of their excess immediately inform the bodies which are carrying out maintenance of radiating safety, on the increased levels of radiation dangerous to health of the person and the natural environment, to take measures on liquidation of the centers of infection.

Enterprises, establishments, organizations, citizens who are not providing observance of rules

of the manipulation with radioactive materials, under the decision of specially authorized bodies of Republic of Tajikistan in the field of supervision of safe conducting works in the industry and mountain supervision, preservation of the environment, sanitary inspection lose the right of use them, or their activity on use of such materials stops before elimination of lacks.

Import with a view of storage or burial places of radioactive taps and materials and other dangerous, harmful substances from other states is forbidden.

Article 49. Ecological requirements at use of chemical substances in a national economy

Enterprises, establishments, organizations and citizens are obliged to observe rules of manufacture, storage, transportation and application of the chemical substances used in an agriculture as means of protection of plants, growth factors, mineral fertilizers and in other branches of a national economy, to carry out the established specifications of their use and to take measures under the prevention of harmful consequences of their application for health of the person, the natural environment.

Ministry of Health of Republic of Tajikistan, together with the Ministry of Agriculture of Republic of Tajikistan, Ministry of Nature Protection of Republic of Tajikistan, periodically approves the list of the chemical preparations allowed for application in agriculture, establishes maximum permissible norms of the contents of residual chemical substances in food stuffs (in edition of Law of 1.02.1996, No. 223)

Application of the new chemical substances, able to render direct or indirect influence on health of people, is supposed only from the sanction of Ministry of Health of Republic of Tajikistan. Application of the toxic chemical preparations, not exposed to the disintegration, actively influencing on an organism of the person and natural environment is forbidden.

Rules of protection of the natural environment in interests of health protection of the person from ecologically harmful influence of the chemical substances used in national economy, approved and brought to the notice the population by specially state bodies of Republic of Tajikistan in the field of protection of the natural environment, sanitary inspection.

The infringement of the specified rules creating threat for health of the person by chemical pollution of the natural environment, entails prohibition of manufacture, storage, transportation, application of corresponding chemical preparations under the decision of specially authorized state bodies of Republic of Tajikistan in area sledge of tare supervision, protection of the natural environment, supervision of safe conducting works in the industry and mountain supervision.

Asset 50. Protection of the natural environment from harmful biological influence

At placing, designing, construction, commissioning and operation of Enterprises, constructions and other objects, irrespective of ownership and subordination, rendering biological influence on natural environment, specifications of maximum permissible concentration in the natural environment of microbes, fungus, viruses and others artificial made microorganisms and biological substances which approved by special state authorities of Republic of Tajikistan in the field of sanitary supervision.

Enterprises, establishments, organizations and citizens rendering or capable to render biological influence on natural environment, are obliged to provide ecologically harmless manufacture, creation, storage, the contents, transportation, use and removal of microorganisms and biological substances, to develop and carry out actions on accident precaution, prevention and liquidation of consequences of harmful biological influence on natural environment, health of the person and its genetic fund.

Supervision, account of sources and the control over a level of biological influence on natural environment are carried out by specially authorized state bodies of Republic of Tajikistan in the field of sanitary inspection.

Excess of the established specifications of maximum permissible levels of biological influence on natural environment, infringement about storage and uses of microorganisms and biological substances entails termination of activity of enterprises and other objects being sources of the given pollution, under the decision of the state bodies of sanitary inspection (in edition of the Law of 2.12.2002 N75)

Article 51. Protection of the natural environment from noise, vibrations, magnetic fields and other harmful physical influences

Local Majlises of People's Deputies, enterprise, establishment, organization, citizens are obliged to take necessary measures under the prevention and elimination of harmful industrial noise, vibration, negative influence of magnetic fields and other harmful physical influences on natural environment in industrial, public, residential buildings, in streets, in court yard, on the areas of cities and other settlements, in country zones of rest of the population, in places of a mass congestion and duplication of wild animals and birds (in edition of Law of 1.02.1996, No. 223).

Excess of specifications of maximum permissible levels of influence on health of the person and natural environment of industrial and transport noise, vibration, magnetic fields and other harmful physical influences is forbidden. The measures guaranteeing observance of the specified specifications, are developed at a lay-out and building of cities and other settlements, designing of construction and reconstruction of Enterprises, shops, technological lines,

creation and development new technics, at designing and operation of means of ground, underground, water and air transport.

Default of the specified specifications entails abeyance and termination of activity of enterprises, other sources of harmful influence of noise, vibration, magnetic fields and other harmful physical influences before elimination of the found out lacks according to decisions of specially authorized state bodies of Republic of Tajikistan in the field of sanitary inspection, protection of the natural environment, other interested state bodies (in edition of Law of 2.12.2002 N75)

Asset 52. Protection of the natural environment from industrial and household waste products

Local Majlises of People's Deputies, enterprise, establishment, organization, citizens are obliged to accept effectual measures on reduction of formation, neutralization, processing, recyclings, to warehousing or a burial place of industrial and household waste products, to observe working ecological, sanitary, hygienic and antiepedemical norms and rules (in edition of Law of 1.02.1996, No. 223)

Local Majlises of People's Deputies place of warehousing and are obliged to define the burial places of the waste products coordinated with specially authorized state bodies of Republic of Tajikistan in the field of protection of the natural environment, sanitary inspection, supervision of safe conducting works in the industry, mountain supervision and geology. Dump of industrial wastes and the crude sewer drains in general purpose reservoirs, mud channels and irrigation canals, underground water horizons, in territory of inhabited files, woods and agricultural lands (in edition of Law of 1.02.1996, No. 223) is forbidden

Neutralization of toxic waste products on special installations, and also their burial place on ranges is made from the sanction of specially authorized state bodies of Republic of Tajikistan in the field of protection of the natural environment, sanitary inspection given out as agreed with bodies and other interested state bodies. The burial place of toxic waste products, including waste products of the nuclear industry, in territory of the occupied places, near to cities and other settlements, in regions with high concentration of the population, in the rivers, lakes, in resort, recreational zones and other places where health hazard of the population and condition of the natural environment can be created is forbidden.

Sanctions to a burial place of radioactive waste products are given out by specially authorized state bodies of Republic of Tajikistan in the field of protection of the natural environment as agreed with bodies of sanitary inspection, supervision of safe conducting works in the industry and mountain supervision, geology, other interested state bodies.

Non-observance of the specified rules entails restriction or abeyance of activity of Enterprises

and other objects before elimination of infringements (in edition of Law of 2.12.2002 N75).

Asset 53. Protection of climate and an ozone layer of the Earth

Protection of the natural environment from ecologically dangerous change of climate and an ozone layer of the Earth is provided by:

The organization of supervision, account and the control over changes of a condition of a climate and ozone layer under influence of economic activities and other processes;

Establishment and observance of specifications of maximum permissible emissions of the harmful substances influencing condition of climate and ozone layer of the Earth;

Prohibition of production and use in national economy, in life of the chemical substances destroying an ozone layer;

Development of the long-term ecologically proved programs of development of the power, emissions providing reduction carbon dioxide and others radioactive gases;

Application of measures of responsibility for infringement of the specified requirements.

According to the international agreements of ministry and department, enterprise, establishment, the organization, irrespective of ownership and subordination, and also citizens are obliged to reduce and in the subsequent completely to stop manufacture and use of chemical substances, harmful working on a condition of an ozone layer of the Earth.

The list of chemical substances and waste products of manufacture, harmful influencing on a condition of an ozone layer of the Earth, approved by specially authorized state bodies of Republic of Tajikistan in the field of preservation of the environment and it is informed through mass media (in edition of Law of 2.12.2002 N75)

The paragraph is excluded (in edition of the Law of 2.12.02 N75)

Infringement of the established order of manufacture or use of chemical substances, harmful an ozone layer influencing condition and climate, entails stay of activity of Enterprises, establishments, organizations or separate sites, shops, units, technological processes, the equipment according to the decision of specially authorized state bodies of Republic of Tajikistan in the field of protection of the natural environment, sanitary inspection (in edition of Law of 2.12.02 N75)

CHAPTER 8. EXTREME ECOLOGICAL SITUATIONS

Asset 54. Zones of an extreme ecological situation

Zones of an extreme ecological situation sites of territory, water and air space where as a result of economic and other activity, destructive influence of forces majeure of the nature or

failure having a place or accidents occur steady negative changes in the natural environment, people menacing to health, a condition of natural ecological systems, genetic funds of plants and animals appear.

Zones of an extreme ecological situation appear and cancelled by the decision of the Government of Republic of Tajikistan on representation of specially authorized state bodies of Republic of Tajikistan in the field of preservation of the environment on the basis of the conclusion of the state ecological expertise (in edition of Law of 1.02.1996, No. 223).

In a zone of an extreme ecological situation any activity is forbidden, harmful influencing on natural environment, work of Enterprises, establishments, organizations, shops, units, the equipment, rendering adverse influence on health of the person, its genetic fund stops, separate kinds of wildlife management are limited, operative measures on restoration and reproduction of natural resources are carried out.

Financing of actions on improvement of zones of an extreme ecological situation is made, first of all, due to the ministries and departments, Enterprises, establishments, organizations, on whose fault there was a failure or accident, and also target means of the state budget, funds of wildlife management.

Asset 55. Zones of ecological disaster

Zones of ecological disaster sites of territory where as a result of economic or other activity or destructive influence of forces majeure of the nature there were the steady and irreversible changes of the natural environment connected to infringement of natural balance, destruction of natural ecological systems, degradation of flora and fauna appear.

Zones of ecological disaster appear and cancelled in the same order, as zones of an extreme ecological situation.

In a zone of ecological disaster activity of economic objects, except for connected with service living on territory of a zone of the population stops, construction, reconstruction of economic objects is forbidden, all kinds of wildlife management are essentially limited, take operative measures on restoration and reproduction of natural resources and improvement of the natural environment.

Financing of improving actions in zones of ecological disaster is made in the order established byAsset 54 of the present Law.

Asset 56. The prevention of failures and liquidation of their harmful ecological consequences

At designing and operation of economic objects, irrespective of patterns of ownership and the subordination, connected to harmful influence on the natural environment, measures

on accident precaution and liquidations of their harmful ecological consequences are provided.

For effective reaction to the extreme ecological situations attracting harmful consequences for the natural environment, irrespective of patterns of ownership and the subordination, the specialized services the plans confirmed corresponding Majlises of People's Deputies and the Government of Republic of Tajikistan in which actions on mobilization of forces and means of ministries, departments, enterprises, establishments, organizations are provided are developed for the prevention and liquidation of consequences of local, regional and republican extreme ecological situations (in edition of Law of 1.02.1996, No. 223).

For investigation of the reasons of extreme ecological situations and liquidations of their consequences are created the governmental, extreme, special ecological commissions.

Asset 57. Duties of Enterprises on maintenance of readiness for liquidation of ecological consequences of failures

Enterprises, establishments and organizations, irrespective of patterns of ownership and the subordination, able in case of extreme ecological situations to harm the natural environment and health of people, are obliged:

To have a plan of action in extreme ecological situations;

To have and support in constant readiness the special service provided with means and material resources for liquidation of consequences of extreme ecological situations.

CHAPTER 9. NATURAL PROTECTED AREAS AND OBJECTS

Asset 58. Natural-reserved fund of Republic of Tajikistan

The state natural reserves, including biospheric reserves, natural zakazniks, national natural parks, nature sanctuaries, plants rare or threatened of disappearance and the animals related to species, included to the Red book of Republic of Tajikistan, make natural reserved fund of Republic of Tajikistan and are provided special with protection of the state in interests of the present and the future generations of people.

Natural reserved fund is in conducting and management of specially authorized state bodies of Republic of Tajikistan in the field of protection of the natural environment. The regime of natural reserved fund and its components is defined by the present Law and other statutory acts of Republic of Tajikistan.

Asset 59. State natural reserves

The state natural reserves the natural complexes especially protected by the law having nature protection, scientific, ecological value as standards of the natural environment, typical or rare

landscapes, places of preservation of genetic fund of plants and animals appear withdrawn for ever from economic use and not subject to withdrawal for any other purposes.

The state natural reserves are formed by the Government of Republic of Tajikistan on representation of specially authorized state bodies of Republic of Tajikistan with the purpose of protection of natural complexes, preservation and reproduction wild vegetative and fauna, studying of laws of the nature, the control over a condition at the native environment and its changes (in edition of Law of 1.02.1996, No. 223)

In territory of the state natural reserve the economic, recreational and other activity contradicting to the purposes reservation or harming the natural environment is forbidden. Research, regenerative, fire-prevention works should not contradict the purposes reservation.

For maintenance of a reserved mode around of territory of reserve security zones with prohibition in their limits of activity are created, harmful influencing on a reserved mode.

Observance of a mode of protection of reserves is provided with protection services of reserves.

Asset 60. Natural zakazniks

Natural zakaznik the natural complex established for preservation or reproduction of one specie of natural resources according to limited and coordinated use of other kinds of natural resources appears.

Natural zakazniks are formed on representations of specially authorized state bodies of Republic of Tajikistan in the field of protection of the natural environment by the Government of Republic of Tajikistan with the purpose of preservation or reproduction of natural resources, protection of natural landscapes, recreational territories, nature sanctuaries, maintenance of ecological equilibrium (in edition of Law of 1.02.1996, No. 223)

In territory natural zakaznik economic, recreational and other activity if it contradicts the purposes of the organization of zakaznik or harms the natural environment is forbidden.

Enterprises, establishments, organizations in which territory zakazniks are created, are obliged to take measures on observance of the mode of protection established for them.

By decisions of administration agricultural, forestry, hunting and fishery enterprises, establishments and organizations can be created on the lands allocated for them interfarm zakazniks with the purpose of rationalization of wildlife management and preservation of valuable natural objects.

Asset 61. Protection of rare, threatened or disappearance plants and animals

For protection of rare, threatened or disappearance plants and animals the Red book of Republic of Tajikistan is established.

Plants and the animals concerning to species, included to the Red books, everywhere are subject to withdrawal from economic and other use. The activity conducting to reduction of number of these plants and animals, worsening an inhabitancy is forbidden.

Enterprises, establishments, organizations, other land users in which territory there are plants and the animals concerning to species, included to the Red book, are obliged to take measures on protection and reproduction of these species of plants and animals.

The order of conducting the Red book of Republic of Tajikistan is defined by the Government of Republic of Tajikistan (in edition of Law of 1.02.1996, No. 223)

Asset 62. Wildlife management resort and recreational zones

Resort and recreational protected areas and the sites of water space possessing natural medical properties, mineral sources, the climatic and other conditions favorable for treatment and preventive maintenance of diseases admit as zones.

With the purpose of preservation of natural properties and medical means of resort and recreational zones, their protection from damage, pollution and a premature exhaustion are established districts of sanitary protection within the limits of which the work is forbidden, polluting ground, water sources, air, harming, to woods and negatively influencing on medical properties and sanitary condition of especially protected territory.

The order of the establishment of resort and recreational zones, regime of their protection are defined by the Government of Republic of Tajikistan (in edition of Law of 1.02.1996, No. 223)

Asset 63. Wildlife management of recreational zones

Protected areas or the sites of the water space intended for organized or mass rest and tourism of the population admit as recreational zones.

Recreational zones establishes under decisions of the Government of Republic of Tajikistan, chairmen of GBAO, areas, cities and areas accepted as agreed with the interested land users, water-users, forest users, state bodies in the field of protection of the natural environment (in edition of Law of 1.02.1996, No. 223)

In territory of recreational zones the economic and other activity interfering use of the given zones on their direct purpose is forbidden.

Use of recreational zones can be made for the organized rest and tourism of the population according to the contracts concluded by users of natural resources of the given territories.

The mode of use and protection of territories of recreational zones is established by Council of Ministers of Republic of Tajikistan, executive committees of local Majlises of People's Deputies.

CHAPTER 10. THE CONTROL OVER PROTECTION OF THE NATURAL ENVIRONMENT

Asset 64. Tasks of the control over protection of the natural environment

The control over protection of the natural environment has the task of supervision over its condition and changes under influence of economic and other activity, check of implementation of plans and actions on wildlife management, rational use of natural resources, improvement of the natural environment, observance of requirements of nature protective legislations and specifications of quality of the natural environment.

The monitoring system in the field of protection of the natural environment will consist of nation-wide service of supervision over a condition of the natural environment, state, departmental, industrial, public control.

Asset 65. Nation-wide service of supervision over condition of the natural environment

The nation-wide service of supervision over a condition of the natural environment is organized with the purpose of supervision over physical, chemical, biological processes, over a level of pollution of atmospheric air, soils, water objects, consequences of its influence on flora and fauna and maintenance of the interested organizations and the population by the current and emergency information on changes in the natural environment, preventions and forecasts of its condition.

Asset 66. The state control over protection of the natural environment

The state control over wildlife management is carried out specially by the authorized state bodies in the field of wildlife management, sanitary inspection, supervision of safe conducting works in the industry and mountain supervision (in edition of Law of 2.12.2002 N75)

Official authorities of the state control over conservation of the environment according to their powers have the right when due hereunder:

To visit enterprises, establishments, organizations, irrespective of ownership and subordination, and objects belonging to them, to get acquainted with documents, analyses, other materials necessary for implementation of the direct official duties;

To check work of clearing constructions and other neutralizing devices, means of their control, observance of specifications of quality of the natural environment, nature protection legislation, implementation of plans and actions on wildlife management;

To demand elimination of the revealed lacks, to give within the limits of the given rights obligatory instructions or the conclusions on placing, designing, construction, commissioning, reconstruction and operation of objects;

To involve guilty persons in the administrative responsibility, to direct materials about their attraction to disciplinary, administrative or the criminal liability to show claims in court or economic court about compensation of the harm caused to the natural environment or health of the person by infringements of the nature protection legislation; (in edition of Law of 2.12.2002 N75)

To make of the decision on restriction, abeyance of activity of Enterprises, constructions, other objects, to harming natural environment and health of the person. The specified decisions are obligatory for implementation by all ministries and departments, enterprises, establishments, organizations, officials and citizens. On the basis of these decisions of establishment of banks stop financing the forbidden activity up to cancellation of the decision on its interdiction bodies of the state control over protection of the natural environment (in edition of Law of 2.12.2002 N75)

Asset 67. Departmental and production inspection in the field of natural environment conservation

The departmental control over protection of the natural environment is carried out by the ministries and departments, production inspection by Enterprises and organizations and puts the task of check of implementation of plans and actions on nature protection both rational use and reproduction of natural resources, improvement of the natural environment, observance of specifications of quality of the natural environment, implementation of requirements of nature protective legislations and instructions of specially authorized state bodies of Republic of Tajikistan in the field of protection of the natural environment, sanitary inspection.

The order of the organization and activity departmental and production inspection is adjusted by acts of the ministries, departments, enterprises and organizations on the basis of the current legislation.

Asset 68. The public ecological control

The public ecological control is carried out by public associations, labour collectives and has the task of check of implementation of requirements of nature protective legislations the ministries and departments, Enterprises, establishments, organizations, irrespective of ownership and subordination, officials and citizens (in edition of Law of 10.05.2002 N30).

The procedure of the public ecological control is adjusted by the current legislation of Republic of Tajikistan.

CHAPTER 11. PARTICIPATION OF THE POPULATION IN NATURAL ENVIRONMENT CONSERVATION

Asset 69. Forms of participation of the population in protection of the natural environment

The population takes part in protection of the natural environment and reproduction of natural resources by means of:

- Preventions and elimination of infringements of nature protective legislations;
- Voluntary means in funds of wildlife management, and also through public associations and mass media; (in edition of Law of 2.12.2002 No.75)
- References with letters and statements in corresponding bodies and to officials, participations in referenda, assemblies, meetings, demonstrations; (in edition of Law of 2.12.2002 N75)
- Organizations and carrying out of ecological expertise;
- The requirement from corresponding bodies of representation duly, full and a trustworthy information about condition of the natural environment and measures on its protection (in edition of the Law of 2.12.2002 N75)

Asset 70. Authorities of the public ecological organizations

The public ecological organizations and associations carry out the activity according to their charters, positions, current legislation, cooperate with other nature protection organizations on the basis of the present Law.

Article 71. Rights and duties of citizens in protection of the natural environment

Citizens of Republic of Tajikistan have the right to take part in wildlife management, the personal work to save up and increase natural resources;

To create public associations on nature protection, funds and other public associations in the field of protection of the natural environment, to be members of such organizations and funds; (in edition of Law of 10.05.2002 No.30)

To take part in discussion of projects of the legislative and other acts which are taken out for national discussion (referendum), to address with letters, complaints, statements on questions of protection environment;

To request from corresponding bodies of granting duly, full and trustworthy information about a condition of the natural environment and measures on its protection;

To make offers on a cancellation of decisions on placing, designing, construction, reconstruction, operation of ecologically harmful objects, restriction, abeyance, the termination of activity

of enterprises and other objects, irrespective of ownership and subordination, rendering negative influence on natural environment and health of the person;

To show in court claims to enterprises, establishments, organizations and citizens about compensation of the harm caused to their health and property as a result of adverse influence on natural environment.

Citizens of Republic of Tajikistan are obliged to protect the nature, to protect its riches and to observe requirements of nature protective legislations.

Citizens of Republic of Tajikistan carry out the rights and duties in the field of protection of the natural environment according to the current legislation.

Asset 72. Guarantees of the rights of public organizations and citizens in the field of protection of the natural environment

The state guarantees to citizens, public ecological organizations, other public associations which are carrying out ecological functions, realization of the rights given to them in the field of protection of the natural environment according to the current legislation of Republic of Tajikistan.

The persons interfering implementation by the public ecological organizations, other public associations and citizens of their rights and the duties following from the present Law, are done responsible according to the current legislation.

CHAPTER 12. ECOLOGICAL EDUCATION, UPBRINGING, SCIENTIFIC RESEARCHES

Asset 73. Generality, integrated approach and a continuity of ecological education and upbringing

With a view of increase of ecological culture of a society and vocational training of experts the system of general, complex, continuous and accessible ecological education and upbringing, covering all process of preschool, school education and upbringing, vocational training of experts in average and higher educational institutions, increases of their qualification with use is established thus of mass media and wide propagation of the nature protection legislation (in edition of Law of 2.12.2002 N75)

Asset 74. Compulsion of teaching of ecological knowledge in educational institutions

For mastering by minimum of the ecological knowledge necessary in formation of ecological culture of citizens, in all middle and higher educational institutions, colleges of Republic of Tajikistan, irrespective of their structure, obligatory teaching bases of ecological knowledge and cultures of wildlife management is provided.

According to structure in average special and higher educational institutions teaching special rates on protection of the natural environment and rational wildlife management is provided.

Article 75. Professional ecological preparation of executives and experts

Heads of the ministries and departments, enterprises, establishments, officials and the experts related to activity, rendering harmful influence on natural environment and health of the person, are obliged to have necessary ecological preparation which is taken into account at purpose for post, certifications and certifications of workers.

The persons, who are not having the specified preparation, are not supposed to implementation of the work demanding corresponding ecological knowledge. The ministry of nature protection of Republic of Tajikistan provides ecological retraining and improvement of professional skill of the officials named in the present Asset (in edition of Law of 1.02.1996, No. 223)

Asset 76. Propagation of ecological knowledge

With a view of education of the careful attitude to the nature, rational use of its riches wide propagation of ecological knowledge and cultures, and also of nature protective legislations is carried out.

Propagation ecological and ecolegislative knowledge and culture, is carried out by the state bodies, trade unions of Republic of Tajikistan and public associations, mass media.

Asset 77. Scientific researches in the field of ecology

The academy of sciences of Republic of Tajikistan, the state bodies on a science and technics, protection of the natural environment, upbringing, ministries and departments, develop scientific institutes, higher educational institutions and approve complex programs and plans of scientific researches in the field of wildlife management, rational use and reproduction of natural resources, improvement of the natural environment and create necessary conditions for effective ecological researches and introductions of the received results.

CHAPTER 13. FINAL PROVISIONS

Asset 78. The order of the resolution of disputes in the field of protection of the natural environment

Disputes in the field of protection of the natural environment are resolved in the order established by the legislation of Republic of Tajikistan.

Paragraphs 2 and 3 are excluded (in edition of Law of 2.12.2002 N75)

The disputes related to protection of the natural environment and use of natural resources,

between the state public organizations of Republic of Tajikistan and other states are solved in the order established by agreements between the states.

CHAPTER 14. THE RESPONSIBILITY FOR ECOLOGICAL OFFENCES

Asset 79. Excluded (in edition of Law of 2.12.2002 N 75)

Asset 80. Excluded (in edition of Law of 2.12.2002 N 75)

Asset 81. The responsibility for ecological offences

Persons guilty:

- In infringement of standards, norms and other specifications of quality of the natural environment;
- In nonrealization of the state ecological expertise and infringement of requirements of the state ecological expertise, in obviously false conclusion of the state ecological expertise and an incorrect estimation of influence of object on the natural environment;
- In infringement of ecological requirements at planning, technical and economical substantiation, designing, placing, construction, reconstruction, commissioning, operation of enterprises, constructions and other objects;
- In pollution of the natural environment and causing thereof harm to health of the person, vegetative and to fauna, national economy;
- In damage, destruction of natural objects, including nature sanctuaries, exhaustion and destruction of natural reserved complexes and natural ecological systems;
- In nonacceptance of measures on restoration of the natural environment and reproduction of natural resources;
- In default of instructions of the bodies which are carrying out the state control over protection of the natural environment;
- In infringement of requirements on neutralization, processing, recycling, to warehousing or a burial place of industrial and household waste products;
- In infringement of ecological requirements at use in a national economy and a burial place of radioactive materials, chemical substances;
- In excess of the established specifications of maximum permissible levels of biological influence on natural environment, infringement about storage and use of microorganisms and biological substances;
- In manufacture and use of chemical substances and waste products of manufacture, harmful influencing on an ozone layer of the Earth;
- In an expenditure of means republican, local funds of wildlife management on the purposes which have been not connected to nature protection activity;
- In refusal of a summer residence duly, full and a trustworthy information about a condition of atmospheric air, waters, soils, bowels, flora (including forests), fauna

(including fish stocks), radiating conditions;

– In development and realizations of the economic projects connected to infringement or destruction of natural balance of natural ecological systems, adverse changes of climate and an ozone layer of the Earth, destruction of genetic funds of plants and animals, approach of other irreversible consequences for the natural environment bear the responsibility according to the current legislation.

By the legislation of Republic of Tajikistan the responsibility and for other infringements of of nature protective legislations can be established.

The responsibility for the specified offences does not exclude the responsibility for infringements of the ground, water, wood legislation, the legislation on bowels, on protection of atmospheric air, vegetative and fauna.

Bringing to account does not exempt guilty persons from a duty of compensation of the damage caused by them.

CHAPTER 15. COMPENSATION OF THE DAMAGE CAUSED BY INFRINGEMENT OF NATURE PROTECTIVE LEGISLATION

Asset 82. A duty of compensation of the damage caused by infringement of nature protective legislation

Enterprises, establishments, organizations and the citizens who have harmed health and property of citizens, to a national economy and the nature pollution of the natural environment, damage, destruction, damage, irrational use of natural resources, destruction of natural ecological systems and other infringements of nature protective legislations, are obliged to compensate it according to the current legislation.

Asset 83. The order of compensation of the damage caused by infringement of nature protective legislation

Compensation of the damage caused to the natural environment by infringements of nature protective legislation, is made voluntary or under the decision of court or economic court according to the rates authorized when due hereunder and techniques of calculation of its size, and at their absence on actual expenses for restoration of the broken condition of the natural environment in view of the suffered losses, including the missed benefit (in edition of Law of 2.12.2002 N75)

Asset 84. Compensation of the harm caused by source of increased danger to the natural environment

Enterprises, establishments, organizations which activity is connected to the increased danger to the natural environment, are obliged to compensate the harm caused by them to health and

property of citizens, to national economy and the nature according toAsset 449 of the Civil code of Republic of Tajikistan.

Asset 85. Compensation of the damage caused to citizens by adverse influence of the natural environment

The damage caused to citizens as a result of adverse influence of the natural environment, caused by activity of enterprises, establishments, organizations or separate citizens, is subject to compensation in full in view of a degree of disability of the victim, expenses for treatment, recovery of health, care of the patient, other charges, and also the appointed pensions or the grant.

Compensation of harm is made on the basis of the decision of court under the claim of the victim, members of its family, the public prosecutor, the authorized state body, public organization (association) in interests of the victim.

The sum of money resources for the caused harm to health of citizens is collected from tortfeasor, and at impossibility of its collecting due to means of the state funds of wildlife management.

Compensation of damage to the citizens caused as a result of large failures and accidents, and also acts of nature, is made according to the current legislation.

Asset 86. A liability of officials and other workers guilty of causing of harm owing to infringement of the legislation on protection of the natural environment

Officials and other workers on which fault the enterprise, the establishment, the organization, irrespective of ownership and subordination, have carried charges on compensation of the harm caused to health and property of citizens, national economy and the nature, bear a liability according to the current legislation.

Asset 87. Claim requirements about the termination of ecologically harmful activity

Physical and legal persons have the right to address in court or in economic court, about the discontinuance of the ecologically harmful activity harming health, their property and the natural environment. (In edition of Law of 2.12.2002 N75)

CHAPTER 16. THE INTERNATIONAL COOPERATION IN THE FIELD OF NATURAL ENVIRONMENT CONSERVATION

Asset 88. Principles of the international cooperation in the field of protection of the natural environment

The Republic of Tajikistan proceeds in the policy in the field of protection of the natural environment from necessity of maintenance of general ecological safety and development

of the international nature protection cooperation for interests of the present and the future generations and is guided by the following principles:

Each person has the right to a life in optimum ecological conditions;

Each state has the right to use surrounding at the native environment and natural resources for the purposes of development and maintenance of needs of the citizens;

Ecological well-being of one state cannot be provided due to other states or without taking into account their interests;

The economic activities which are carried out in territory of the state, should not render damage to the natural environment both in limits, and outside its jurisdiction;

Any kinds of economic and other activity which ecological consequences are unpredictable are inadmissible;

The effective control at global, regional and national levels over condition and changes of the natural environment and natural resources on basis international recognized criteria and parameters should be established;

The free and unobstructed international exchange by scientific information on problems of the natural environment and the advanced environmentally safe technology should be provided;

All disputes connected to problems of the natural environment, should be resolved only by peace means;

Any influence on natural environment is inadmissible as way of conducting military operations or other application of force.

The Republic of Tajikistan abstains from tests of various kinds of the weapon of mass defeat if they damage to the natural environment both within borders and outside republic.

Asset 89. The analysis of influence on an environment and its tasks

The analysis of influence on an environment represents complex analysis of the planned economic and other activity influencing natural environment and conditions of a life of the population, and is carried out before decision-making on realization of this activity. The primary goals of the analysis of influence on an environment are development of effective ecological policy and ways of sustainable use and protection of natural resources, qualities of environment and health of people with consideration of all expedient alternatives, involving of the public in discussion of advantage and risks of planned activity.

The analysis of influence on an environment is a compulsory procedure for the physical and legal persons planning realization of kinds potentially dangerous to an environment of activity, and precedes the state ecological expertise.

The list of kinds of the activity falling under procedure of the analysis of influence on an environment and the order of it} carrying out, are defined by the Government of Republic of Tajikistan (in edition of Law of 2.12.02 N75)

Asset 90. Rights of the State inspectors on nature protection

State inspector on nature protection has the following rights:

Bearing of overalls and insignia;

Bearing, storage and application of fire-arms according to laws of Republic of Tajikistan ;

With the purpose of realization of the state control over wildlife management, free to visit enterprises, establishments, organizations and other objects, irrespective of their ownership and departmental subordination (in edition of Law of 2.12.2002 N75)

Chairman of the Supreme Soviet
Of the Republics of Tajikistan
E.Rakhmonov
December, 27, 1993, Dushanbe, No. 905

ANNEX B2

LAW
About protection and use of fauna

(in editions of Laws of the Republic of Tajikistan of February, 1, 1996 No. 223,
December, 12
1997 No. 488)

I. GENERAL PROVISIONS

Asset 1. Tasks of the legislation on protection and use of fauna

The legislation on protection and use of fauna consist of the present Law and acts issued on its base.

Tasks of the legislation on protection and use of fauna are regulation of public relations in the field of protection and uses of the wild animals living in a condition of natural freedom in territory of the Republic of Tajikistan, with a view of maintenance of favorable conditions of their habitat scientifically proved, rational use, protection and reproduction, increase of efficiency and regulation of number, preservation of biological diversity, integrity of natural communities of animals, satisfaction of needs of the population and national economy and natural resources of fauna, and also strengthening of legality in this area.

Relations in the field of use and protection of agricultural and other pets, wild animals contained in bondage or in semi-free conditions for economic, cultural, scientific, aesthetic and other purposes, and also other animals concerning to natural resources of republic, are adjusted by corresponding acts, and regarding use and protection of migrating animals is adjusted by the corresponding special legislation. The responsibility for infringement of rules under the keeping, use and protection of the specified animals is established by the legislation of the republic.

Asset 2. State ownership on fauna

The fauna in a natural condition is state ownership - the general property of all people of the Republic of Tajikistan.

Asset 3. The competence Gorno-Badakhshan autonomous region in regulation of relations on protection and use of fauna

To competence of Gorno-Badakhshan autonomous region in regulation of relations on protection and use of fauna are subject: the order fauna on territories of autonomous region and establishment its protection and use; development and statement of plans and realization

of actions on protection and rational use of fauna; realization of the state control over protection and use of fauna, and also the decision of other questions in the field of protection and uses of fauna if they are not related to the competence of Government of the Republic of Tajikistan.

Asset 4. Government management in the field of use and protection of fauna

The government management in the field of protection and uses of fauna is carried out by the Government of the Republic of Tajikistan, and special state authorities according to the legislation of republic, and regarding use and protection of migrating animals, and animals concerning to specie, included to the Red book of the Republic of Tajikistan and the International Red List, or protected according to the international contracts - specially authorized intergovernmental authorities. (the Law No. 223, of 01.02.96)

Asset 5. The competence of enforcement authorities on places (Hukumats) in the field of protection and use of fauna (the Law No. 223, of 01.02.96)

Enforcement authorities on places (Hukumats) in limits and order, established by the present Law and other acts in the territory participate in forecasting and provide development and carrying out of actions on protection, rational use and reproduction of fauna; supervise observance of rules of hunting and fishery, solve other questions in this area, coordinating them special state authorities on protection and regulation of use of fauna.

Asset 6. Special state authorities on protection and regulation of use of fauna.

Specially authorized state body on protection and regulation of use of fauna is the Ministry of Nature Protection of the Republic of Tajikistan.

Asset 7. Fund of fauna. Faunistic fund. Objects of fauna

The wild animals living in a condition of natural freedom on land, in water and in ground, it is constant or republics temporarily living in territory, make fund of fauna, and the list of species (subspecies) of populations of these animals make faunistic fund of republic.

The fund of fauna of republic will consist from ground mammal, birds, kowtowing (reptiles), amphibious (amphibians), fishes, Cyclostomata, acranial, erinaceous and others Deuterostomata, tentacle-shaped, molluscs, insects, multilegs, cancroid, worms, intestinal, fungies and other multicellular animals.

According to the present Law the following objects of fauna are subject to protection and rational use:

– Wild animals in natural condition of freedom and natural communities of animals in territory of republic;

- Eggs, embryos, parts and products of these animals;
- Manned jacks, holes, lair, ant hills and other habitats and constructions, animals in natural condition, nested colonies, wintering congestions, places of a moult and stops for rest and feedings of birds of passage, other places of constant or their seasonal congestion, "maternity hospitals" and other places of concentration of animals.

Asset 8. Planning of actions on protection and rational use of fauna

Tasks and actions on protection and rational use of fauna are provided in forecasts of functioning of economy. Projects of forecasts on protection and rational use of the fauna, developed by ministries, departments, state committees, enterprises, establishments and organizations, it is coordinated with specially authorized state authorities on protection and rational use of fauna in the order established by the legislation of the Republic of Tajikistan.

Actions on protection and use of fauna should be based on the data of monitoring, censuses and cadastre of objects of fauna carried out according to given legislation.

Asset 9. The basic requirements on protection and rational use of fauna.

Rational use of fauna should be provided with observance of the following requirements:

- Preservation of a biological diversity of animals in condition of natural freedom;
- Preservation of integrity of rare populations, threatened and disappearing, endemical, migrating and other valuable species of animals;
- Protection of an inhabitancy, conditions of duplication and by migration of animals and their natural communities;
- Scientifically, sutainable, complex, rational use of objects of fauna and stable reproduction of wild animals;
- Support and rational use of useful properties of ability to live of animals;
- Safe for the population, animal, flora and national economy using objects of fauna and regulation of distribution of number of animals in condition of natural freedom with a view of public health care and granting of damage to wildlife and national economy.

III. POSSESSION AND USING OBJECTS OF FAUNA

Asset 15. The order of using objects of fauna

Objects of fauna are in charge of local Majlises of People's Deputies. (the Law No. 223 of 01.02.96). They give the right on termless using objects of fauna to enterprises, establishments, organizations or citizens in the order established by the legislation.

Owners and users of the ground areas, corresponding hunting facilities and places of habitat of animals which are not being objects of hunting have the right of priority of possession and

using objects of fauna.

The right of termless possession of objects of fauna it can be given to establishments, enterprises, organizations only in case of allocation of lands and hunting facilities in the order established by the legislation.

Urgent and long-term users of objects of fauna (including on lease term basis) can be state, cooperative and public enterprises, establishments, organizations with participation of foreign legal persons, and also foreign states, international organizations, foreign legal persons and citizens.

In the cases stipulated by the legislation, urgent or long-term users of objects of fauna (including on lease term basis) can be other organizations and persons.

Landlord of objects of fauna are owners and users of these objects of fauna - accordingly Majlises of People's Deputies. (the Law No. 223, of 01.02.96). Agricultural, forestry and hunting enterprises can fix objects of fauna to separate workers and rent collectives by way of interfarm land management, forest management and hunting management.

Terms and conditions of rent of objects of fauna are determined under the agreement of parties and fixed in the contract.

Owners and users of objects of fauna have the right to give out corresponding sanctions (orders - tasks) to legal persons and citizens or to make contracts with them on urgent or long-term using objects of fauna.

Granting of objects of fauna in urgent or long-term using (except for rent) with delivery corresponding (orders - tasks) or making of contracts is carried out by the mentioned owners of these objects of fauna in the order established by the legislation of republic.

The right of possession or using of objects of fauna makes sure the certificates given when due hereunder on the right (respective) of possession or hunting, and also corresponding written sanctions (including licenses) on getting (shooting, catching, gathering) the specified objects of the fauna, given out when due hereunder by specially authorized state authorities. The list of species (groups of species) animal or other objects of fauna whose prey is authorized to be made without sanctions, orders - tasks or without contracts, is established by the Government of the Republic of Tajikistan. (Law No. 223, of 01.02.96)

Asset 16. Types of using of objects of fauna

At observance of the stipulated laws, requirements the following species using can be carried out by objects of fauna:

- Hunting;
- Fishery, including getting of water invertebrates;
- Getting the animals which are not concerning to objects of hunting and fishery and water invertebrates;

– Using objects of fauna in the research, cultural, educational, aesthetic, recreational, improving and nature protection purposes, use of animals with a view of reception of products of their vital functions and useful properties of vital functions of animals.

The legislation can be stipulated and other species of using by objects of fauna.

Asset 17. Terms of realization of using objects of fauna

Terms of realization of separate species of using objects of fauna are established by the legislation.

Asset 18. Payment for possession and using objects of fauna

Possession and using objects of fauna in Republics Tadjikistans is paid.

The order and specifications of payment and using objects of fauna are established by the Government of the Republic of Tajikistan. (Law No. 223, Of 01.02.96)

The tenant of objects of fauna pays rent which sizes are established under agreement of parties in the order and in the limits determined by the legislation.

Payments for possession and using objects of the fauna, acting in state and local funds of wildlife management, go first of all on protection and restoration of number of wild animals and environments of their habitat, on conducting their state cadastre and monitoring of fauna, Red book, reserved affair and increasing of efficiency hunting facilities (Law RT of 12.12.1997 No. 498).

Reserves, museums-reserves, national and zoological parks, zoological and botanical gardens, forestries, are exempted from payment for possession and use of objects of fauna and forestry hunting facilities, and also enterprises, organizations, collectives and citizens who have received in possession or using broken or unproductive hunting facilities, demanding for restoration of their efficiency of significant expenses of own means.

By the legislation can be stipulated and other kinds of privileges on collection of payment for possession and using objects of fauna.

IX. PROTECTION OF FAUNA. MEASURES OF PROTECTION OF FAUNA

Asset 39. Provision of protection of fauna

Protection of fauna is provided with way:

– Establishments of rules and norms on protection, rational use and reproduction of fauna;
– An establishment of interdictions and restrictions in using the fauna, stipulated by Asset 42 of the present Law;
– Protection from autocratic using and other infringements of the established order of using by fauna;

- Protection of an inhabitancy, conditions of reproduction and by migration of animals;
- Prevention of destruction of animals at realization of reproductions;
- Creations of reserves, zakazniks and other natural protected areas;
- Breeding in bondage of rare, disappearing and threatened species of animals;
- Restrictions of withdrawal of animals for zoological collections;
- Rendering assistance to animal in case of diseases, threat of their destruction at nature disasters and other reasons;
- The organizations of the scientific researches directed on a substantiation of measures on protection of fauna;
- Education of citizens in spirit of the humane relation to animals;
- Propagation of protection of fauna by mass media;
- Carrying out of other actions and establishments of other requirements on protection of fauna.

Asset 40. The material and moral encouragement stimulating realization of actions on protection of fauna

By the legislation measures of material and moral encouragement of enterprises, establishments, organizations and citizens, stimulating realization of actions on protection of fauna can be established.

Asset 41. Establishment of restriction and interdictions in using fauna

With a view of preservation and reproduction of separate species of animals use of them can be limited or completely is forbidden both in separate territory, and for the certain terms in the order established by the legislation.

X. PROTECTION OF INHABITANCY, CONDITIONS OF REPRODUCTION AND WAYS OF MIGRATION OF ANIMALS

Asset 42. Observance of requirements at realization of the activity influencing condition of fauna

Any activity influencing condition of fauna, inhabitancy, conditions of reproduction and ways of migration of animals should be carried out with observance of the requirements providing protection of fauna.

Asset 43. Protection of an inhabitancy of conditions of reproduction and ways of migration of animals

At placing designing and construction of settlements, enterprises and other objects, perfection

existing and introduction of new technological processes, introduction in economic circulation of the virgin lands, boggy territories, coastal territories, inundated and covered with bushes, land reclamation, realization of wood using, carrying out of prospecting works, extraction of minerals, definition of pasture lands and grassing of agricultural animals, development of tourist routes and the organizations of places of mass rest of the population should be provided and carried out actions on preservation of inhabitancy and conditions of reproduction of animals, and also to be provided inviolability of the sites representing special value as an inhabitancy of animals.

At placing, designing and construction of railway, highway, pipeline and other transport highways, transmission lines, communications and also channels, dams and other hydraulic engineering constructions should be developed and carried out the actions providing preservation of ways of migration of animals.

Asset 44. The coordination of sites of the construction influencing condition of fauna

Sites of enterprises, constructions specified in Asset 43 of the present Law and other objects, influencing on a condition of fauna, an inhabitancy, conditions of reproduction and ways of migration of animals, are coordinated with specially authorized state bodies according to the legislation of the Republic of Tajikistan.

Asset 45. Prevention of destruction of animals at realization of productions and operation of vehicles

Enterprises, establishments, organizations and citizens are obliged to take measures on prevention of destruction of animals at operation of vehicles. The burning out of dry vegetation, storage of materials, raw material and waste products of manufacture without realization of the established means on prevention of destruction of animals is forbidden.

Asset 46. Animal protection in reserves, zakazniks and other protected areas

Hunting, fishery, preying of various species of invertebrates, and also other kinds of using and other activity incompatible with the purpose of reserve in territory of reserves are forbidden.

In zakazniks and other protected areas it can be completely forbidden or realization of separate kinds of using by fauna and other activity, incompatible with the purpose of protection of fauna.

The order of protection and realization of using by fauna in reserves, zakazniks and in other protected areas is established by the legislation.

XI. PROTECTION OF RARE, THREATENED AND DISAPPEARING SPECIES OF ANIMALS

Asset 47. The red book of the Republic of Tajikistan

According to the present Law, species of animals threatened and disappearing will be worn out in the book of species of rare, threatened and disappearing animals - the Red book of the Republic of Tajikistan. The regulations about conducting the Red book of the Republic of Tajikistan affirm in the order determined by the Government of the Republic of Tajikistan. (Law No. 223 of 01.02.96)

Actions which can bring to destruction, reduction of number or infringement of inhabitancy of species of rare, threatened and disappearing animals, are not allowed.

Asset 48. Measures on preservation of rare, threatened and disappearing species of animals

With a view of preservation of rare, threatened and disappearing species of animals which reproduction in natural conditions is impossible, special state authorities on protection and regulation of use of fauna are obliged to take measures on creation of necessary conditions for breeding of these species.

Asset 49. The order of prey of rare, threatened and disappearing species of animals

Prey of migrating, rare, threatened and disappearing species of animals for breeding in specially created conditions and subsequent release to nature, and also in research and other purposes is supposed under the special sanction which is given out by special state authorities on protection and regulation of use of fauna.

XII. ZOOLOGICAL COLLECTIONS

Asset 50. Creation and updating of zoological collections

Creation and updating of zoological collections (alive collections, zoos, and others, and also as assembly of scarecrows, preparations and parts of animals) enterprises, establishments and organizations by withdrawal of animals from the natural environment specially for these purposes is supposed under the sanctions which are given out by special state authorities on protection and regulation of use of fauna.

Updating of the zoological collections which is taking place in a personal property of citizens and creation by citizens of new collections is forbidden, except for the collections consisting of hunting trophies, fishery and other species of using the fauna which is carried out with observance of established requirements.

Asset 51. The state account of zoological collections and duties of enterprises, establishments, organizations and citizens being owners of such collections

The zoological collections representing scientific, cultural, educational, teaching or aesthetic value are subject to the state account. Enterprises, establishments, organizations and citizens being owners of such collections, are obliged to observe rules of storage, account and use of collections of objects of fauna.

Asset 52. Rules of use and account of zoological collections

Rules of creation, updating, storage, use and account of zoological collections, rules of trade by zoological collections, and of transfer and export abroad of objects of collections and products of fauna affirm in the order established by the Government of the Republic of Tajikistan. (Law No. 223 of 01.02.96)

XIII. PROTECTION OF ANIMAL DURING APPLICATION OF MEANS OF PROTECTION OF PLANTS, STIMULATORS FOR THEIR GROWTH, MINERAL FERTILIZERS AND OTHER PREPARATIONS

Asset 53. Requirements of protection of fauna and inhabitancy of animals at application and transportation of means of protection of plants

At application of means of protection of plants, stimulators of their growth, mineral fertilizers and other preparations used in a national economy, requirements of protection of fauna and an inhabitancy of animals should be taken into account. Application of chemical means of protection and other preparations with a view of reduction of their harmful influence to fauna should be combined with realization of agrotechnical, selection, genetic, biological and other measures.

With a view of prevention of destruction of animals and deterioration of environment of their habitat collective farms, state farms, forestries and other enterprises, establishments and organizations are obliged to observe rules of transportation, storage and application of the specified preparations.

At creation of new preparations specifications of their maximum permissible concentration in environment, providing animal protection and environment of their habitat should be developed.

Asset 54. The coordination of rules of application of means of protection of plants, stimulators of their growth, mineral fertilizers and other preparations

Rules of application of means of protection of plants, stimulators of their growth, mineral fertilizers and other preparations used in a national economy, and also the list of the

specified preparations are subject to the coordination with specially authorized state authorities on protection and regulation of use of fauna.

XVIII. THE RESPONSIBILITY FOR INFRINGEMENT OF THE LEGISLATION ON PROTECTION AND USE OF FAUNA

Asset 68. Invalidity of the transactions breaking the right of a state ownership on fauna

Autocratic transfer of the right of use by objects of fauna, and also other transactions, in the direct or latent form breaking the right of a state ownership on fauna, are void.

Asset 69. The responsibility for infringement of the legislation on protection and use of fauna

The persons guilty of fulfilment specified in Asset 68 of the present Law of transactions, and also in:

- Illegal use of fauna;
- Infringement of rules of hunting, fishery and other kinds of using fauna;
- Infringement of rules of protection of inhabitancy and ways of migration of animals;
- Unauthorised, acclimatization and introduction of animals;
- Cruel treatment of animals;
- Infringement of rules of application of means of protection of plants, stimulators of their growth, mineral fertilizers and other preparations causing damage to fauna;
- Infringement of rules of transfer and export abroad objects of fauna and zoological collections;
- Fulfilment of actions which have resulted or can bring to destruction, reduction of number or infringement of inhabitancy of rare, threatened and disappearing animals, bear the responsibility according to the current legislation of the Republic of Tajikistan.

By the legislation of the Republic of Tajikistan the responsibility and for other infringements of the legislation on protection and use of fauna can be established.

Asset 70. Compensation of the harm caused by infringement by the legislation on protection and use of fauna

Enterprises, establishments, organizations and citizens are obliged to indemnify, caused by them infringement of the legislation on protection and use of fauna in sizes and in the order, established by the legislation of Republic Tajikistan. Officials and other workers on which fault of enterprise, establishments and organizations have incurred charges connected to

compensation of harm, bear liability in the order established by the law.

Illegally extracted animals and production produced from them are subject to withdrawal in the order established by the legislation of the Republic of Tajikistan.

At impossibility of withdrawal of illegally extracted animals and production produced from them their cost under the prices established by the legislation of the Republic of Tajikistan is collected.

ANNEX B3

THE NATURAL PROTECTED AREAS LAW OF THE REPUBLIC OF TAJIKISTAN

Nature protection of the Republic of Tajikistan is carried out by application of legislative, organizational - economic, technological and special measures, including the territorial forms of nature protection sold through system of natural protected areas. Growing anthropogenous influence on biosphere predetermines necessity of increase in a variety and the area of these territories and increases of their efficiency. Functioning of natural protected areas has a priority before economic and social and economic interests of a society.

SECTION I. GENERAL PROVISIONS

Asset 1. The legislation on natural protected areas

The relation in area of natural protected areas are adjusted by the Constitution of the Republic of Tajikistan, the present Law, laws on nature protection, on bowels, on protection of atmospheric air, on protection and use of fauna, forests, soil, water codes, and also statutory acts of the Government of the Republic of Tajikistan developed according to them and specially for representatives the state bodies, local authorities, the international and interstate contracts.

Asset 2. Definition and categories of natural protected areas

Natural protected areas are sites of the land and the water space, having especially ecological, nature protective, scientific, cultural, aesthetic, sanitary value, withdrawn in full or in part, constantly or temporarily from economic operation concerning which the Government of the Republic of Tajikistan establishes a mode special protection. Natural protected areas of the Republic of Tajikistan form the uniform functional system intended for preservation and studying of natural variety, maintenance of ecological equilibrium and realization of biospheric monitoring, and also the territories included in the authorized general circuit of development and placing of natural protected areas. Set of these territories makes natural-reserved fund of the Republic of Tajikistan which use is supposed only with observance of requirements of the present Law.

Natural protected areas can have the international, state, republican and local value. Reference natural protected territories to category of objects international, state, republican and local is made according to the legislation and decisions of the Government of the Republic of Tajikistan.

The following categories of natural protected areas are established:

- The state natural reserves, including biosphere;
- The state republican natural parks (national parks) and local natural parks(provincial parks);
- State republican and local zakazniks;
- The state republican and local nature sanctuaries;
- Eco-ethnographic zones;
- Dendrology parks and botanical gardens;
- Natural, resort and medical - improving zones;
- Natural recreational zones.

The legislation of the Republic of Tajikistan and decisions of the state bodies can provide and other categories of natural protected areas and also other territorial forms of protection of natural territories from adverse anthropogenous influences on adjoining to them sites can be created security zones with an adjustable and controllable mode of economic activities.
Natural protected areas are taken into account by development of forecasts, plans of measures, long-term plans of economic and social development, circuits of land management and regional lay-out.

Asset 3. A state ownership on natural protected areas

Natural protected areas are a state ownership and – general property of all people of the Republic of Tajikistan. Actions, in the direct or latent form breaking the right of a state ownership on natural protected areas, in republic are forbidden.

Asset 4. The competence of the Government of the Republic of Tajikistan in the field of protection and uses of natural protected areas

The competence of the Government of the Republic of Tajikistan in the field of protection and uses of natural protected areas includes:

- Maintenance of functioning of natural protected areas in interests of the present and the future of generations;
- Coordination of activity of the state bodies in the relation to natural protected areas;
- Decision-making on the organization and liquidation of state organizations on protection and use of natural protected areas.

The government of the Republic of Tajikistan can carry out and other duties according to the present Law.

Asset 5. The competence special state authorities of the Republic of Tajikistan in the field of protection and use of natural protected areas.

The competence of special state authorities of the Republic of Tajikistan in the field of protection and use natural protected territories includes:

- Management of natural protected areas in Republic Tadjikistan, carrying out of a uniform scientific and technical policy in this area;
- The organization of monitoring, creation and maintenance of work of public service of control over natural protected areas;
- Presentation of claims about compensation of the harm caused as result of infringement of nature protection legislation;
- Drawing up of reports and disposal of legal proceeding about administrative offences in the field of protection and use of natural protected areas.

Decisions of special state authorities of the Republic of Tajikistan in the field of protection and uses of natural protected areas on the questions related to their competence, are obligatory for all legal persons and citizens and can be appealed against in the judicial order.

Asset 6. The competence of local authorities in regulation of relations in the field of protection and uses of natural protected areas

Regulation of relations in the field of protection and uses of natural protected areas are subject to conducting local authorities:

- Definition of the basic directions on protection and use of natural protected areas and the statement of ecological programs;
- Coordination and the control of nature protection activity of local controls, assistance to voluntary cooperation of natural protected areas;
- Consideration of other questions of protection and use of natural protected areas.

Asset 7. Special state authorities on natural protected areas

Special state authorities in the field of protection and use of natural protected areas is the Ministry of nature protection of the Republic of Tajikistan and its local authorities.

Asset 8. Planning of actions on protection and use of natural protected areas

Actions on protection and use of natural protected areas are provided by way of economic and social development.

Planning of protection and use of natural protected areas is carried out with the account and

on the basis of scientifically proved combination of economic and ecological interests of society.

The current and long-term planning of measures on protection and use of natural protected areas is carried out by special programs, forecasts of economic and social development on the basis of the state ecological program and the general circuit of development and accommodation of productive forces, branches of a national economy with the account natural resource potential of republic and separate regions.

Sectoral planning in the field of nature protection and protection of natural protected areas is carried out by the ministries and departments, organizations and enterprises.

Asset 9. Material support and financing of actions on protection and use of natural protected areas

The government of the Republic of Tajikistan, local authorities, ministries and departments, enterprises, organizations, irrespective of their ownership and subordination, take necessary measures for material and technical maintenance of actions on protection and use of protected areas.

Financing of actions on protection and use of natural protected areas, except for reserves and zakazniks is made from:

- Republican and local funds of nature protection;
- Funds of enterprises, establishments, organizations, irrespective of their ownership, credits of banks;
- Voluntary payments of the population and other sources.

Financing of reserves and zakazniks is made from republican and local budgets, funds of enterprises, establishments and organizations using the given territories in the laboratory purposes, voluntary, collective and individual payments.

Asset 10. The government and the state control over the organization, use and protection of natural protected areas

Organization, use and protection of the state natural reserves, including biospheric, national and natural parks and zakazniks of republican value, is carried out by the Government of the Republic of Tajikistan and special state authorities.

The state control over planning, creation, protection and use of natural protected areas is carried out by special state authorities of nature protection, their local representatives, and also ministries, departments, organizations and enterprises.

Asset 11. The state cadastre of natural protected areas

The state cadastre of natural protected areas includes data on a legal status of these territories, their geographical position, a mode, nature users, quantitative characteristics of natural complex, ecological, scientific, educational and a cultural value.

The state cadastre of natural protected areas is conducted with a view of an estimation of a condition of nature-reserved fund of the Republic of Tajikistan, definition of prospects of development of a network of the given territories in the Republics of Tajikistan, definition of prospects of development of network of the given territories in the republic. Maintenance of their protection and carrying out of scientific researches, increase of a level of the state control over preservation of a genofund and observance of a corresponding mode, and also the account of role of these territories at planning social and economic development and placing of productive forces in region.

The state cadastre is conducted on the uniform system developed by special state authorities with participation of other interested departments, and assigned to departments in what submission there are natural protected areas. The order of conducting the state cadastre of natural protected areas is established by the Government of the Republic of Tajikistan.

Asset 12. Participation of the public in the organization, protection and use of natural protected areas

Trade unions, the organizations of youth, society of nature protection, scientific organizations and other public organizations, labour collectives, and also separate citizens take part and assist the state bodies and realization of actions on the organization, protection and use of natural protected areas according to the legislation of the Republic of Tajikistan.

SECTION III. THE STATE NATURAL PARKS

Asset 20. General provisions

The state natural parks are protected areas which territories (water area) include the natural complexes having special ecological, historical both aesthetic value and intended for use in the nature protection, recreational, educational, scientific and cultural purposes.

Territories of the state natural parks settle down on the lands allocated in possession or using, and also on the lands of other owners and users.

The following tasks are assigned to the state natural parks:

- Preservation of natural complexes of reference and unique sites and objects of the nature;
- Preservation of a cultural heritage (objects of ethnography, archeology, history, historical and cultural landscapes);

- . The organization of ecological education of the population;
- Development and introduction of scientific methods of nature protection;
- . Creation of conditions for sustainable tourism and natural rest. The state natural parks can have republican (national parks) and local value (provincial parks).

Asset 21. The order of formation of the state natural parks

The decision on formation of the state natural parks of republican value (national parks) and the statement of Regulations about of them made by the Government of the Republic of Tajikistan under the petition of special state authorities.

The decision on formation of local natural parks (provincial parks) is accepted by local authorities on the basis of the petition of special state authorities.

Reservation of territories for the organization of the state natural parks is carried out in the same order, as for the organization of the state natural reserves.

Asset 22. A mode of the state natural parks

In territory of the state natural parks the differentiated mode of protection and use, determined by Regulations about the given state natural park is established in view of local natural and social features.

According to it for territories of national natural parks are allocated:

- Reserved zones with mode stipulated for national parks;
- Custom-made zones, security zones of historical and cultural objects, zones of recreational, economic and other using on which the activity which is not contradicting to tasks of the state natural park is carried out. The opportunity and expediency of division on zones of territory of the state natural local parks will be determined by special state authorities in the field of nature protection.

In territory of the state natural parks it is forbidden:

- The activity menacing to existence of natural complexes and historical and cultural objects taken under protection;
- Prospecting works and development of minerals;
- Cut of trees, bushes, unsystematic using flora and fauna;
- Activity of enterprises representing special ecological danger (the pulp-and-paper, chemical industry);
- . The actions changing a hydrological mode;
- . Construction of the roads, pipelines, transmission lines and other communications which have been not connected to activity of parks;
- . Accommodation of alive organisms with the purpose of acclimatization.

SECTION XI. THE RESPONSIBILITY FOR INFRINGEMENT OF A MODE OF NATURAL PROTECTED AREAS

Asset 40. The responsibility for infringement of mode of natural protected areas

Citizens and the officials guilty of infringement of a mode of natural protected areas, bear the responsibility according to the current legislation.

Enterprises, establishments, organizations, including joint ventures, the international, foreign legal persons, and citizens are obliged to compensate the harm caused by them by infringement of mode of natural protected areas, in sizes and the order, established by the legislation of the Republic of Tajikistan.

SECTION XII. THE INTERNATIONAL CONTRACTS CONCERNING PROTECTION AND USE OF NATURAL PROTECTED AREAS

Asset 41. The international contracts

Natural protected areas of the Republic of Tajikistan can be included in the list of the world heritage and other categories of objects of the international value according to the international agreements.

If the international contract establishes other rules, than what to contain in the legislation of the Republic of Tajikistan on natural protected areas positions of the international contract operate.

The president of the Republic of Tajikistan
E.Rakhmonov
Dushanbe, December, 13, 1996, No. 328

ANNEX B4

GOVERNMENT OF THE REPUBLIC OF TAJIKISTAN

DECREE

No. 267 of June, 20, 1992

DECREE ON ESTABLISHMENT OF THE TAJIK NATIONAL PARK

With the aim of strengthening of nature protection, conservation of valuable landscape complexes, rare and disappearing species of flora and fauna, unique ecosystems, historical, natural and cultural monuments, development and ordering of tourism, the Government of the Republic of Tajikistan decrees:

1. To accept the proposal of the Ministry of Nature protection of the Republic of Tajikistan, Executive Committee of People Deputies of Gorno-Badakhshan autonomous region, Tavildara and Djirgital Executive Committees, Academy of Science of the Republic of Tajikistan, Forestry Union of the Republic of Tajikistan on creation of the Tajik National Park;

2. To oblige Ministry of nature protection of the Republic of Tajikistan
   - to establish the Directorate of the National Park;
   - To develop and submit to the Government of the Republic of Tajikistan the project of Statute of Tajik National Park within one month;
   - In cooperation with Ministry of agriculture of the Republic of Tajikistan and with above mentioned organizations specify the borders of the Tajik National Park and submit Land Use profile to the Government of the Republic of Tajikistan within next three months.
3. To determine that Ministry of nature protection of the Republic of Tajikistan will head the process of establishment and functioning of the Tajik National Park, provides together with Executive Committee of People Deputies of Gorno-Badakhshan autonomous region, Tavildara and Djirgital Executive Committees, protection and development of the territory of Tajik National Park.
4. To permit to the Ministry of nature protection of the Republic of Tajikistan to allocate in 1992-93 650 thousands rubles for research work on Tajik National Park, its staff from the funds of Nature Protection Fund.

5. To determine the beginning from January 1, 1994 the financing of the Tajik National park will be done by the principals of self-financing

Vice Prime Minister of the
Republic of Tajikistan **D. Karimov**

Deputy of Head of the Government
of the Republic of Tajikistan **I. Bozorov**

ANNEX B5

GOVERNMENT OF THE REPUBLIC OF TAJIKISTAN

DECREE

No. 253 **of July, 3, 2002**

DECREE ON ALLOCATION OF LANDS FOR TAJIK NATIONAL PARK

According to the assets No. 9 and 26 of the Land Code of the Republic of Tajikistan the Government of the Republic of Tajikistan decrees:

1. To Allocate land from Vanch, Rushan, Shugnan and Murghab of Gorno-Badahshan autonomous region, Tavildara and Jirgatal region 2611.7 thousands hectares for the Tajik National Park according to the enclosure;

   To allow to economic subjects found on the territory of the Tajik National Park to use land as the pasture land.
2. To oblige Ministry of nature protection of the Republic of Tajikistan, Ministry of agriculture of the Republic of Tajikistan, State committee on land use of the Republic of Tajikistan, Administration of the Gorno-Badakhshan autonomous region, Administrations of Tavildara and Jirgatal regions to conduct appropriate changes in lad registration documentation.

Chairman of the
Government of the
Republic of Tajikistan **E. Rakhmonov**

Appendix to the Decree
of the Government of the
Republic of Tajikistan
Of June 11 2001 No. 253

LANDS ALLOCATED FOR THE TAJIK NATIONAL PARK

No	Name of the Region	Category of the allocated land and land user	Total land (ha)	Including		
				Pastures	Bushes	Other lands
Gorno-Badakhshan autonomous region						
	Vanj region	State Land Fund	270000	201	34447	235352
	Rushan region	State Land Fund	350000			350000
	Shugnan region	State Land Fund	128100	4979	73	123048
	Murghab region - total	State Land Fund	1487049	155470	0	1331579
	including	Long term used lands of the farm economy “Karakul” on the state land fund	511684	63636		448048
		Long term used lands of the farm economy “Chechekty” on the state land fund	52000	7020		44980
		Long term used lands of the farm economy Shugnan region on the state land fund	62200	15109		47091
		Long term used lands of the farm economy Shoimkulov region on the state land fund	85500	8977		76523
		State Cattle service	23100	23100		
		State Land Fund	752565	37628		714937
		SUB TOTAL	**2235149**	**160650**	**34520**	**2039979**
Regions of Republican Subordination						
	Tavildara region	State Land Fund	306613	23388		283225
	Jirgital region	State Land Fund	69912	487	8	69417
		SUB TOTAL	**376525**	**23875**	**8**	**352642**
		GRAND TOTAL	**2611674**	**184525**	**34528**	**2392621**

ANNEX B6

GOVERNMENT OF THE REPUBLIC OF TAJIKISTAN

DECREE

No. 277 **of July, 3, 2002**

DECREE ON APPROVAL OF STATUTE OF THE TAJIK NATIONAL PARK

The Government of the Republic of Tajikistan decrees:

1. To approve the Statute of the Tajik National Park;

2. To determine the activity of the Tajik National Park financed from the funds, which are annually allocated in the budget of the Ministry of Nature protection of the Republic of Tajikistan and from off-budget funds which are coming in the special order.
3. To recognize as stale:
   - point 5 of the Decree of the Ministerial Council of the Republic of Tajikistan of July 20 1992 No. 267 “On creation of the Tajik National Park”;
   - Decree of the Government of the Republic of Tajikistan of 17 February 1993 No. 75 “On approval of Statute of the Tajik National Park”.

Chairman of the
Government of the
Republic of Tajikistan **E. Rakhmonov**

ANNEX B7

THE ORDER OF THE STATE DIRECTORATE OF PROTECTED AREAS OF THE STATE COMMITTEE ON ENVIRONMENT CONSERVATION AND FORESTRY OF THE REPUBLIC OF TAJIKISTAN

No. 147
November 9, 2005

DETERMINATION AND ALLOCATION OF RESERVE ZONE AND BUFFER ZONE OF THE TAJIK NATIONAL PARK

In the performance of implementation of Protected area Law of the Republic of Tajikistan and according to the article of statute of the Tajik National Park on internal zonation:

ORDER:

1. With the aim of development of the Tajik National Park to allocate reserve and buffer zone according to the geographical data of submitted map;
2. To fix the special regime within the reserved zone of the Tajik National Park and implement the necessary measures on its realization.
3. For the inclusion of reserved zone of Tajik National park to the World Heritage list submit the plan to the UNESCO WH Convention.
4. To impose the responsibility over implementation of the order for Deputy Director – Yusoufbekov Yu.

Director General **K.Kasirov**

ANNEX B8

GOVERNMENT OF THE REPUBLIC OF TAJIKISTAN

DECREE

March 4, 2005 **№ 79**

Decree on Approval of State Programme of Development of Protected Area fro 2005 – 2015 period

According to article 4 of PA Law of Tajikistan and with the aim of implementation of strategy and national action plan on conservation and wise use of biodiversity; improvement of functioning of Protected areas; the Government of Tajikistan decides:

1. To approve State Programme of PA Development for the 2005 – 2015 period; (attached);
2. State committee of environment conservation and forestry of Tajikistan in cooperation with state land use committee of Tajikistan and Chairman of Gomo – Badahshan, Authonomus Region, regions of Tajikistan, Dushanbe city, cities and districts encouraged to allocate buffer zones for each PA and provide the conservation of flora and fauna, with the aim of strengthening of reserve regime of PAs.
3. State Committee on environment conservation and forestry in cooperation with Academic of Science of Tajikistan encouraged developing and approving of prospective plan of scientific researches aimed on investigation of flora and fauna of Pas for 2005 – 10 periods and adopting necessary measures on its implementation.
4. Ministry of finance of Tajikistan encouraged to allocate financial resources in the State Budget of Tajikistan for State Committee of environmental conservation and forestry needed for implementation of State Programme of PAs development for 2006 - 2010 period.
5. Ministry of trade and economy of Tajikistan encouraged to plan in certain order the construction of main objects needed for development of infrastructure of reserves and TNP for 2006 – 2015 period.

Head of the Government
of the Republic of Tajikistan
E. Rahmonov.

Adopted by the Decision
of the government of the
Republic of Tajikistan
on March 4,2005
№ 79

STATE PROGRAMME OF PA DEVELOPMENT
for 2005 -1015 period

I. Introduction

State Programme of PAs development for 2005 -2015 period have been developed in according with principles of National Strategy and action plan on biodiversity conservation and wise use of Tajikistan and with the aim of realization of PA law of the Republic of Tajikistan.

PA are the places of distribution of mainly rare, disappearing and endemic species of flora and fauna, and include well conserved and protected and less changed or modified natural habitats of the wildlife.

The PA of the Republic of Tajikistan is inhabited by such rare species of fauna as Pamirs Argali (MP), snow leopard, brown bear, Bukhara deer, Markhor, Indian goose, and many others which have the special significant for development of ecotourism.

During the development of the programme the recommendation of the UN and international Conservation and Agreements, have been taken into account notified by Tajikistan.

The main aim of the programme is modernization of the management of natural PA in the future and effective conservation and development of natural wildlife of PA.

The Programme covers and addresses the main problems of functioning and development of national natural PAs as special etalons of ecosystems, and sustainable use of natural resources, development of sustainable tourism, recreation activities and establishment of buffer zones around the PAs.

Growing anthropogeniuos pressure on the natural resource predetermines the necessity and actuality of increasing of PAs area, their development and wise use.

Improvement of the activities of PAs of Tajikistan is the priority direction of social and economic development of society.

The system of PAs of Tajikistan includes natural state reserve and zakazniks, natural and historical – natural parks, natural monuments, recreational zones and other natural objects, which have national, regional and international significant.

This Programme assists to the development and planning of activities of PAs on the national, intergovernmental and regional levels; to the conservation and sustainable of natural resources.

II. Aim and objectives of the Programme.

The main aim of the Programme is to improve further functioning and development of PAs of Tajikistan and pursue the following objectives.

- harmonization of the legislation regulating functioning of natural reserves and zakaznikz according to the requirements of international and modern practice;
- Allocation of the buffer zones around natural reserves and increasing of territory of PAs;
- Establishment of transboundary intergovernmental natural parks, reorganization and transformation of PAs according their ecological conditions and significance;
- Восстановление (restoration) of scientific researches activities in state natural reserves and zakazniks;
- Realization of avia census of wild flora on the territory of PAs of Tajikistan;
- Conduction of forest management and land tenure every ten years (decade);
- Harmonization and modernization of PAs Law in accordance with international requirements and needs;
- Reconstruction of destroyed complex natural objects and sites;
- Development of scientific recommendations and substantiation on development and … use of PAs of Tajikistan
- Development of infrastructures of PAs with the aim of their proper and sustainable development and wise use of natural resources and development of ecotourism in PAs.
- Financing of research implementation process, construction and renovation of the main objects in PAs.
- Organization of training courses and workshops on improvement of qualification and increasing of experience of staff of PAs;
- Development of thematical data base and website;
- Publication of scientific and public books, brochures and other informational sources about PAs of Tajikistan;
- Strengthening of ecological propaganda through mass – media sources.

III. Financing resources

The total cost of the Programme and amount of financing needed for its implementation for 2005 – 2015 period is equal to 2962000 somoni, including 288200 somoni allocated from central government budget and special fund of the State Committee on environment conservation and forestry of Tajikistan (80000 somoni).

Financing is planed stage by stage and makes on years 2005 year – 20000 somoni, 2006 year – 710000 somoni, 2007 year – 740000 somoni, 2008 year – 453000 somoni, 2009

year – 483000 somoni, 2010 year – 376000 somoni, 2011 year – 76000 somoni, 2012 year – 26000 somoni, 2013 year – 26000 somoni, 2014 year – 26000 somoni, 2015 year – 26000 somoni.

From general extent of financing provides for construction of main extents and development of infrastructure of Tajik National Park 1400000 somoni and for obtaining scientific – laboratorial equipment and regular equipments for 60000 somoni.

Besides a series of actions on development of PAs recommended to realize by projects and representation their international organizations for financing.

ANNEX B9

GOVERNMENT OF THE REPUBLIC OF TAJIKISTAN

DECREE

No. 582 **of December, 29, 2003**

DECREE ON APPROVAL OF THE STATE PROGRAMME OF TOURISM DEVELOPMENT IN TAJIKISTAN FOR 2004-2009

With the aim of development of tourism branch in the Republic of Tajikistan the Government of the Republic of Tajikistan decrees:

1. To approve the State Programme of Tourism Development in Tajikistan for 2004-2009;

2. To oblige Ministry of economy and trade of the Republic of Tajikistan together with other interested ministries and departments of the Republic of Tajikistan to implement the Programme.

Chairman of the
Government of the
Republic of Tajikistan **E. Rakhmonov**

ANNEX B10

GOVERNMENT OF THE REPUBLIC OF TAJIKISTAN

DECREE

No. 93 **of February, 23, 1996**

DECREE ON STATE PROGRAM OF ECOLOGICAL UPBRINGING AND EDUCATION OF THE POPULATION OF THE REPUBLIC OF TAJIKISTAN FOR 2000-2010 YEARS

With the aim of implementation of the decree of the Government of the Republic of Tajikistan of 23 March 1995 No. 225 "About the question of organization of ecological upbringing and education of population of the Republic of Tajikistan" the Government of the Republic of Tajikistan decrees:

1. To Approve the enclosed State Program of ecological upbringing and education of the population of the Republic of Tajikistan for 2000-2010 years;
2. To oblige Ministry of nature protection of the Republic of Tajikistan, Ministry of education of the Republic of Tajikistan, Ministry of culture and information of the Republic of Tajikistan, Academy of science of the Republic of Tajikistan, in cooperation with other ministries, local executive power authorities (Hukumats) develop the action plan for implementation of State Program of ecological upbringing and education of the population of the Republic of Tajikistan for 2000-2010 years and submit it to the Government of the Republic of Tajikistan before May, 1, 1996 for consideration and approval.

Chairman of the
Government of the
Republic of Tajikistan **E. Rakhmonov**

Management Actions to be carried out in order to achieve objectives for 2012-2016 (5years):

Activities and objectives	Actions	Time limits	Executor	Indicators	Financial expenses, thousand somoni	Sources of financing	
						A. State budget	B. Donors
Objective 1	**Effective law enforcement and wildlife management activities established and maintained**						
Activity 1	Strengthen ranger network by increasing staff and supplying park staff with transport facilities (vehicles, and motorbikes), uniforms, communication equipment, weapons, binoculars, and cameras.	2012-2016	State Agency of Natural Protected Areas (SANPA) and TNP Directorate	Maintain and operational costs (gasoline etc.).	100	100	0
				Each year 5 additional rangers. By 2013: 4vehicles, 10 motorbikes, uniforms, weapons, binoculars for all rangers, 10 (pending availability of funds). Effective communication system established by 2013/14.	350	200	150
Activity 2	Carry out training seminars for rangers and other conservation staff	2012-2016	SANPA and TNP Directorate	Two training courses per year for up to 20 staff	10	3	7
Activity 3	Establish and support network of volunteer rangers	2012-2013	SANPA and TNP Directorate	Voluntary ranger network operational in all district (6) 2012/13	5	2	3

Activity 4	Strengthen cooperation between ranger network and other law enforcement bodies	2012-2016	SANPA and TNP Directorate, regional and district authorities	Joint patrols, cooperation on legal issues, information exchange established.	5	2	3
Activity 5	Ensure systematic patrolling by rangers in critical sites during periods of wildlife concentration and passage during migrations.	2012-2016	TNP Directorate Solijonov Sh., Davlatov N., Mamarasulov M.	Poaching of wildlife significantly reduced or absent reduced, based on 2011data in 2013. Populations of ungulates stable or increasing, behaviour of animals confirms absence of poaching pressure.	150	150	0
Activity 6	Establish boundary demarcation; manufacturing and installation of information panels in places frequently visited by local people and tourists.	2012-2016	TNP Directorate Solijonov Sh., Davlatov N., Mamarasulov M.	Presence of installed panels, at least 20 % of relevant borders marked each year.	200	100	100
Activity 7	Promote conservation of Indian goose and Tibetan snowcock by enhancing protection of their habitats.	2012-2016	TNP Directorate Solijonov Sh., Davlatov N., Mamarasulov M.	Numbers of these species stable or increased based on 2011 data, by 2016	200	50	150

Activity 8	Improve habitat for argali, ibex and snow leopard by limiting or banning cattle grazing and limiting herder access to critical habitats, e.g. breeding and lambing sites.	2012-2013	TNP Directorate Solijonov Sh., Davlatov N., Mamarasulov M.	Population numbers maintained or increased based on 2011 data by 2013	100	30	70
Activity 9	Initiate feasibility study on trophy hunting for limited economic use zone.	2012	SANPA and TNP Directorate	Report	30	5	25
Objective 2	**Infrastructure for environmentally friendly tourism established**						
Activity 1	Develop and advertise hiking trails.	2012-2013	SANPA and TNP Directorate	Hiking trails established Maps and information booklet distributed	100	50	50
Activity 2	Promote establishment of guesthouses and train local people to house and care for tourists.	2012-2014	SANPA and TNP Directorate	Guesthouses established and at least 2 families trained per year.	200	20	180
Activity 3	Establish park owned tourist guesthouse with all necessary equipment for accommodation, kitchen and transport such as vehicles boats and tents.	2012-2015	SANPA and TNP Directorate	Guesthouse established by 2015	500	100	400
Activity 4	Establish Information Center.	2014	TNP Directorate	Functioning Information Center established by 2014	200	50	150
Activity 5	Publish booklets, maps with tourist destinations, natural, historical and cultural sites.	2012-2015	SANPA and TNP Directorate	Booklets available	20	10	10

ANNEX B11

Activity 6	Promote cooperation with " Pamiri Handicraft" and the "Yak House" in Murghab to assist local people in villages inside and around the park in the production of tourist souvenirs.	2012-2016	SANPA and TNP Directorate	Cooperation with these 2 NGO established in 2012 and working by 2013	100	10	90
Activity 7	Train local people as tour guides.	2012-2016	SANPA and TNP Directorate	Up to 10 people trained each year	10	2	8
Activity 8	Establish camping sites, with all necessary facilities including information panels with information on the park and the relevant site.	2012-2013	SANPA and TNP Directorate	5 sites established each year	50	10	40
Objective 3	**Wildlife and habitat monitoring and research system established**						
Activity 1	Implement and monitor trophy hunting according to recommendations from feasibility study and legal regulations.	2013-2015	SANPA and TNP Directorate	Guidelines and Report	10	5	5
Activity 2	Prepare and publish guidelines on wildlife monitoring and training of conservation staff.	2012	SANPA, TNP Directorate, Academy of Science	Guidelines published and at least 20 staff trained.	50	30	20
Activity 3	Organize one survey of Marco Polo sheep, ibex and snow leopard populations and habitat analysis every 3 years (Marco Polo sheep and ibex survey in the context of coordinated large scale survey in all suitable habitats.)	2012 and 2015	SANPA and TNP Directorate	Data base with results	200	140	60

Activity 4	Investigate distribution and breeding biology of wetland birds, focus on Indian goose and brown-headed gull and prepare recommendations for improving their conservation status. GPS-mapping of their habitats;	2012-2016	TNP Directorate Solijonov Sh., Davlatov N., Mamarasulov M.	Distribution maps and scientific publications. Specific conservation action elaborated and implemented.	100	40	60
Activity 5	Investigate status of Tibetan snowcock and Pallas' sand grouse and prepare recommendations for improving their conservation status. GPS-mapping of their habitats;	2012-2016	TNP Directorate Solijonov Sh., Davlatov N., Mamarasulov M.	Distribution maps, recommendations on conservation elaborated and implemented, scientific ublications.	100	40	60
Activity 6	Monitor distribution areas of wild relatives of cultivated plants: GPS-mapping of locations and elaboration and implement recommendations for improving conservation.	2012-2016	.TNP Directorate Solijonov Sh., Davlatov N., Mamarasulov M.	Distribution maps published. Recommendations on conservation elaborated and implemented.	150	50	100
Activity 7	Monitor livestock numbers and impact in traditional grazing areas.	2012 and 2015	SANPA, TNP Directorate, Academy of Science	Monitoring report.	50	20	30
Activity 8	Facilitate monitoring of status and developments of the Fedchenko glacier in response to global warming. GPS-mapping of the lower part of the glacier.	2012-2016	TNP Directorate Solijonov Sh., Davlatov N., Mamarasulov M. Glaciologist from State Agency of Hydrometeorology	Maps and report on result of glacier monitoring.	200	30	170

ANNEX B11

Activity 9	Promote survey (satellite imagery) on status of the main glaciers in TNP and establishment of long term monitoring programme.	2012-2013	SANPA TNP Directorate State Agency of Hydrometeorology, and Academy of Science	Report. Monitoring programme established.	150	20	130
Activity 10	Collect, analyze and record major annual events and developments in the park.	2012-2016	TNP Directorate Solijonov Sh., Davlatov N., Mamarasulov M.	Annual report on major events.	25	25	0
Objective 4	**Support for TNP conservation raised in the population living in the TNP area, by a broad public education and awareness programme and specific rural development activities.**						
Activity 1	Elaborate Education/Awareness Strategy directed at different target groups.	2013	SANPA TNP Directorate with support from Ministry of Education	Strategy established by 2013 and implemented.	50	10	40
Activity 2	Prepare a film about the nature of TNP, brochures and advertising booklet.	2012-2016	TNP Directorate Solijonov Sh., Davlatov N., Mamarasulov M.	Film about nature of TNP, brochures and booklet	100	10	90
Activity 3	Initiate periodic publication of articles and interviews of leaders in mass media, researchers and experts on biodiversity conservation and TNP activities.	2012-2016	TNP Directorate Solijonov Sh., Davlatov N., Mamarasulov M.	Regular articles in Mass media.	10	10	0
Activity 4	Organize an exhibition about nature of the Pamirs and the Pamir-Alay.	2012-2016	TNP Directorate Solijonov Sh., Davlatov N., Mamarasulov M.	3 exhibitions organized.	50	10	40

Activity 5	Organize an annual “March for TNP” with students, schoolchildren, representatives of the local society, decision makers and mass media.	2012-2016	TNP Directorate, University, schools and Mass media	Annual	100	20	80
Activity 6	Explore possibilities for supporting energy efficiency and providing alternative energy resources to local population around the park and assist in following up recommendations.	2012-2013	TNP Directorate with local authorities	Report. Results based on recommendations.	500	0	500
Activity 7	Identify, and allocate pasture and hayfields for use by local populations in the TNP economic use zone, to promote cooperation and support for TNP goals in local communities around TNP	2012-2016	TNP Directorate with local authorities	Pastures and hay fields identified and allocated to the local people.	10	10	0
Objective 5	**Monitoring of management effectiveness**						
Activity 1	Monitor annual work plan implementation	2012-2016	SANPA and TNP Directorate	Evaluation report	30	30	0

ANNEX B12.

Considerations on Possible Trophy Hunting in the Economic Use Zone of Tajik National Park

Trophy hunting of endangered species is considered as a controversial issue by the conservation community and should only be taken into account when all other options have been explored.

WWF states: *"This is particularly the case in areas where alternative sources of income or land use practices are unlikely to bring in much needed funds for people or wildlife, or create sufficient incentives for conservation"* and "*where it is scientifically based and properly managed"* trophy hunting "*has proven to be an effective conservation and management method"*

IUCN, Resolution 3.094 at the World Conservation Congress (Bangkok 2004) aims into the same direction by stating "*that well-managed recreational hunting has a role to play in the managed sustainable consumptive use of wildlife populations*

IUCN Caprinae Specialist Group is more specific and recognizes that "*under appropriate management conditions, trophy hunting can be a valid component of many conservation programs for Caprinae and their habitats"* that satisfy the following criteria: A science based-harvest and a conservation oriented use of the funds generated by trophy hunting. Hunting for purely economic goals is not supported

There is good evidence, from several countries in Africa, Asia and in Russia that scientifically based and well managed trophy hunting can be an effective conservation management tool, which produces significant revenues for nature conservation, supporting protected areass and local communities, in addition to help reduce poaching on the target species and other wildlife.

An essential aspect of trophy hunting in general and in protected areas in particular has to be that it produces not only benefits for the conservation of the species or its habitat but also for nature conservation/protected area management and for local communities. A significant proportion of revenue generated should be reinvested into conservation programmes.

Possible Trophy Hunting in the economic use zone of Tajik NP should be based on the above criteria with particular focus on:

1. Science based harvest and habitat management plans have to be established for Ibex and Marco Polo sheep. Harvest of trophy males must be limited; a certain number of mature males must be allowed to die naturally. Excessive hunting of trophy males may lead to selection of small horns, or alter the life-history strategy of Caprinae males (IUCN Caprinaie Group).
2. An adequate legal framework to regulate all aspects of the trophy hunting programme should be in place (e.g. quota, trophy standards, national legislation, professional guide and hunter standards).
3. Most of the range of Ibex and Marco Polo sheep are fully protected and serve as refuge for species affected by hunting.
4. A science based- monitoring programme.
5. Funds generated by trophy hunting are used for conservation. A substantial part of the revenues should be spent on habitat management and protection, population monitoring, education, research and support for local communities).

Unacceptable is:

1. Hunting for purely economic reasons, where revenues go into government funds or to the international outfitters
2. Lack of benefits to local communities
3. Predator control
4. Artificial feeding
5. Selective hunting with the goal to affecting horn morphology
6. Overharvest

Background Information:

- WWF (2007); 3 case studies: WWF Projects with a trophy hunting component
- WWF (2010?); Using trophy hunting as an effective conservation tool
- Ute Grimm (2008) CITES Scientific Authority; Trophy hunting for endangered species.
- IUCN, Resolution 3.094 at the World Conservation Congress (Bangkok 2004).
- IUCN Caprinea Specialist Group (2008) http://pages.uherbrooke.ca/mfesta/iucnwork.htm

ANNEXES C
LISTS OF PLANTS AND ANIMALS

ANNEX C1.

SELECTIVE LIST OF RARE, ENDEMIC AND RELIC PLANTS OF THE NOMINATED SITE AND ITS ZONES (TAJIK NATIONAL PARK)

1. *Gymnospermium darvasicum (Regel) Takht*
2. *Cousinia corumbosa C.Winkl.*
3. *Cousinia Hilariae Kult*
4. *Jurinea darvasica Iljin*
5. *Saussurea caprifolia Iljin et F.Zapr.*
6. *Rosularia lutea Boriss.*
7. *Iris Hoogiana Dykes*
8. *Juno baldshuanica (O.et B.Fedtsch.) Vved.*
9. *Juno tadshikorum Vved.*
10. *Erianthera rhomboidea Benth.*
11. *Kudrjaschevia Korshinskyi (Lipsky) Pojark.*
12. *Kudrjaschevia Nadinae (Lipsky) Pojark.*
13. *Astragalus darwasicus Basil.*
14. *Chesneya tadzhikistana Boriss.*
15. *Keyserlingia mollis (Royle) Boiss*
16. *Oxytropis astragaloides Boriss.*
17. *Tragacantha Alexeenkoana (B.Fedtsch.et Ivanova) Boriss.*
18. *Allium stipitatum Regel*
19. *Petilium Eduardii (Regel) Vved.*
20. *Tulipa anisophylla Vved.*
21. *Tulipa Lehmanniana Merckl.*
22. *Tulipa linifolia Regel*
23. *Vassilczenkoa sogdiana (Lincz.)*
24. *Ficus carica L.*
25. *Jasminum revolutum Sims (J.humile L.var.revolutum (Sims) Stockes)*
26. *Paeonia intermedia C.A.Mey*
27. *Atraphaxis karataviensis Lipsch. Et N. Pavl.*
28. *Polygonum Ovczinnikovii Czuk.*
29. *Androsace bryomorpha Lipsky*

30. *Primula flexuosa Turkev.*
31. *Bergenia Stracheyi (Hook.f.et Thoms.) Engl.*
32. *Saxifraga Albertii Regel et Schmalh.*
33. *Bunium persicum (Boiss.) B.Fedtsch.*
34. *Cephalopodum badachschanicum Korov.*
35. *Seseli sclerophyllum Korov.*
36. *Zygophyllum darvasicum Boris.*
37. *Parasilaus asiaticus (Korov.)*
38. *Gymnospermium darvasicum (Regel) Takht*
39. *Cousinia corumbosa C.Winkl.*
40. *Cousinia Hilariae Kult*
41. *Jurinea darvasica Iljin*
42. *Saussurea caprifolia Iljin et F.Zapr.*
43. *Rosularia lutea Boriss.*
44. *Iris Hoogiana Dykes*
45. *Juno baldshuanica (O.et B.Fedtsch.) Vved.*
46. *Juno tadshikorum Vved.*
47. *Erianthera rhomboidea Benth.*
48. *Kudrjaschevia Korshinskyi (Lipsky) Pojark.*
49. *Kudrjaschevia Nadinae (Lipsky) Pojark.*
50. *Astragalus darwasicus Basil.*
51. *Chesneya tadzhikistana Boriss.*
52. *Keyserlingia mollis (Royle) Boiss*
53. *Oxytropis astragaloides Boriss.*
54. *Tragacantha Alexeenkoana (B.Fedtsch.et Ivanova) Boriss.*
55. *Allium stipitatum Regel*
56. *Petilium Eduardii (Regel) Vved.*
57. *Tulipa anisophylla Vved.*
58. *Tulipa Lehmanniana Merckl.*
59. *Tulipa linifolia Regel*
60. *Vassilczenkoa sogdiana (Lincz.)*
61. *Ficus carica L.*
62. *Jasminum revolutum Sims (J.humile L.var.revolutum (Sims) Stockes)*
63. *Paeonia intermedia C.A.Mey*
64. *Atraphaxis karataviensis Lipsch. Et N. Pavl.*
65. *Polygonum Ovczinnikovii Czuk.*
66. *Androsace bryomorpha Lipsky*

67. *Primula flexuosa Turkev.*
68. *Bergenia Stracheyi (Hook.f.et Thoms.) Engl.*
69. *Saxifraga Albertii Regel et Schmalh.*
70. *Bunium persicum (Boiss.) B.Fedtsch.*
71. *Cephalopodum badachschanicum Korov.*
72. *Seseli sclerophyllum Korov.*
73. *Zygophyllum darvasicum Boris.*
74. *Parasilaus asiaticus (Korov.)*

ANNEX C2

SELECTIVE LIST OF RARE AND DISAPPEARING ANIMALS OF THE NOMINATED SITE AND ITS ZONES (Red Book of the Republic of Tajikistan)

#	COMMON ENGLISH NAME	LATIN NAME	STATUS
	Pamir Argali Marco Polo	*Ovis ommon polii Blyth*	
	Snow leopard	*Uncia uncia Schreber*	
	Mongolian saker falcon	*Cherrug milvipes Jerdon*	
	Golden eagle	*Aquila chrysaetus daphanea Menzbier*	
	Bearded vulture	*Gypaetus barbatus hemachalanus Hutton*	
	Archerfish	*Carabus sphinx Reitt*	
	Ring-dove	*Columba palumbus casiotis Br.*	
	Snow pigeon	*Columba leuconota Vigors*	
	White-crowned (water) Redstart	*Chaimarrornis leucocephala Vigors*	
	Indian (Mountain) Goose	*Anser indicus Latham*	
	Himalayan griffon	*Gyps himalayensis Humme*	
	Tien Shan brown bear	*Ursus arctos isabellinus Horsfield*	
	Turkestani Linx	*Felis lynx isabellina Blyth*	
	Tibetan pallas sand grouse	*Syrrhaptes tibetana Gould*	
	Barbary falcon	*Falco peregrinus babylonicus Sclater*	
	Ibis-bill	*Ibidorhyncha struthersi Vigors*	
	Blue Bird	*Myophonus caeruleus turkestanicus Zarudnyi*	
	Alpine weasel	*Mustela altaica sacana Thomas*	
	Egyptian vulture	*Neophron pencnopterus L.*	
	Tibetan snowcock	*Tetraogallus tibetanus Gould*	
	Brown-headed gull	*Larus brunnicephalus Jerdon*	

ANNEX C3

SELECTIVE LIST OF SPECIES OF AVIAFAUNA OF THE NOMINATED SITE AND ITS BUFFER ZONE (TAJIK NATIONAL PARK)

#	COMMON ENGLISH NAME	LATIN NAME	STATUS
	Great cormorant	*Phalacrocoracs carbo sinensis Shaw*	
	Common heron	*Ardea cinerea cinerea L.*	
	Bar-headed goose	*Eulabea indica Lath.*	
	Himalayan merganser	Mergus merganser orientalis Gould.	
	Pochard	*Aythya ferina L.*	
	Garganey teal	*Anas querquedula L.*	
	Mallard duck	*Anas platyrhunchos L.*	
	Ruddy shelduck	*Tadorna ferruginea Pallas*	
	Saker Falcon	*Falco cherrug milvipes Jerdon*	
	Common kestrel	*F. tinnunculus L.*	
	Black kite	*Milvus korschun korschun Gmelin*	
	Neophron	*Neophron percnopterus percnopterus L.*	
	Bearded vulture	*Gypaetus barbatus hemachalanus Hutton*	
	Golden eagle	*Aquila chrysaetus daphanea Menzbier*	
	Griffon vulture	*Gips fulvus himalauensis Hume*	
	Hen-harrier	*Circus cyaneus cyaneus L.*	
	Marsh harrier	*Circus aeruginosus aeruginosus L.*	
	Keklik	*Alectoris kekelik palescens Hume*	
	Snowcock	*Tetraogallus himalayensis himalayensis Gray*	
	Tibetan snowcock	*Tetraogallus tibetanus tibetanus Gould*	
	Coot	*Fulica atra atra L.*	
	Gallinule	*Gallinula chloropus chloropus L.*	
	Little ringed plover	*Charadrius dibius curonicus Gm.*	
	Pamir plover	*Charadrius mongolus pamirensis Richm.*	
	Ibis-bill	*Ibidorhyncha struthersi Vig.*	
	Fiddler	*Tringa hypoleucos L. Tringa totanus totanus L.*	
	Spine	*Capella gallinago gallinago L.*	
	Tibetan scray	*Sterna hirundo tibetana Saunders*	
	Tibetan Pallass sand grouse	*Syrrhaptes tibttanus Gould*	
	Great black-headed gull	*Larus ichthyaetys Pallas*	
	Brown-haded gull	*Larus brunnicephalus Jerdon*	
	Rock dove	*Columda livia neglecta Hume*	
	Blue hill pigeon	*Columba rupestris turcestanica But.*	
	Owl	*Athene noctua bactriana Hutton*	
	Scops owl	*Otus scops pulchellus Pallas*	
	Eagle-owl	*Bubo bubo auspicoblis Dem.*	
	Nighthawk	*Caprimulgus europaeus sarudnyi Hart.*	
	Halcyon	*Alcedo atthis atthis L.*	
	Hoopoe	*Upupa epops epops L.*	
	Black swift	*Apus apus pekinensis Swinhoe*	

	Western slender-billed lark	*Calandrella acutirostris acutirostris Hume*	
	Horned lark	*Eremophila alpestris albigula Bp.*	
	Common swallow	*Hirundo rustica rustica L.*	
	House martin	*Delichon urbica meridionalis Hartert*	
	Crag martin	*Riparia rupestris rupestris Scopoli*	
	Indian oriole	*Oriolis oriolis kundoo Sykes*	
	Tibetan raven	*Corvus corax tibetanus Hodgson*	
	Eastern carrion-crow	*Corvus corone orientalis Eversm.*	
	Magpie	*Pica pica hemileucoptera Stegmann*	
	Central-Asian chough	*Pyrrhocorax pyrrhocorax brachypus Swinhoe*	
	Central-Asian alpine chough	*P. graculus forsythi Stoliczka*	
	Rock nuthatch	*Sitta neumayer tephronota Sharpe*	
	Wall creeper	*Tichodroma muraria L.*	
	White-bellied dipper	*Cinclus cinclus leucogaster Bp.*	
	Brown dipper	*Cinclus pallasi tenuirostris Bp.*	
	Tien-Shan wren	*Troglodytes troglodytes tianschanicus Sharpe*	
	Greenish warbler	*Phylloscopus trochiloides viridanus Blyth.*	
	Barred warbler	*Sylvia nisoria merzbacheri Schal.*	
	Whitethroat	*S., communis rubicola Stres.*	
	Black-throated thrush	*T. ruficollis atrogularis Jorocki*	
	Rock thrush	*Monticola saxatilis turkestanicus Zar.*	
	Turkestan whistling thrush	*Myophonus caeruleus turkestanicus Zarudnyi*	
	Common wheatear	*Oenanthe oenanthe oenanthe L.*	
	Mountain desert wheatear	*O. deserti oreophila Oberholser*	
	Red-tailed wheatear	*O. xanthoprymna chrysopygia De Fill.*	
	Blackcap	*Saxicola torquata maura Pallas*	
	Turkestan black redstart	*Phoenicurus ochruros phoenicuroides Horsfield et Moore*	
	Central-Asian Guldenstadt's redstart	*Ph. e Tringa rythrogaster grandis Gould*	
	White-capped redstart	*Chaimarrornis leucocephala Vigors*	
	Bluethroat	*L svecica tianschanica Tugarinov*	
	Whitefoot	*Microcichla scouleri scouleri Vig.*	
	Alpine accentor	*Prunella collaris rufilata Severtzow*	
	Himalayan accentor	*P. himalayana Blyth*	
	Tien-Shan brown accentor	*P. fulvescens fulvescens Severtzow*	
	Western yellow-headed wagtail	*M. citreola verae Buturlin*	
	Gray wagtail	*M. cinerea caspica Gm.*	
	Turkestan white wagtail	*M. alba personata Gould*	
	Rufous-backed shrike	*Lanius schach erythronotus Vigors*	
	Turkestan Red-Tailed Shrike	*Lanius cristatus phoenicuroides Schalow*	
	Alpine snow finch	*Montifringilla nivalis alpicola Pall.*	
	Spadger	*Passer domesticus griseogularis Sharpe*	
	Turkestan tree sparrow	*Passer montanus pallidus Zarudny*	

	Pamir twite	*Carduelis flavirostris pamirensis Zar.et Haerms.*	
	Mongol trumpeter bullfinch	*Bucanetes mongolicus Swinhoe*	
	Asian red-winged rose-finch	*Rhodopechys sanguinea sanguinea Gould*	
	Great rose-finch	*Erythrina rubicilla diabolica Koelz.*	
	Scarlet finch	*E. erythrina kubanensis Loubm.*	
	Chaffinch	*Fringilla coelebs coelebs L.*	
	Hodgson's rosy finch	*Leucosticte nemoricola altaica Eversm*	
	Pamir Brandt's rosy finch	*L. brandti pamirensis Sev.*	
	Red-headed bunting	*Emberiza bruniceps Brandt*	
	Pine bunting	*E. leucocephala leucocephala Gmelin*	
	Gray-necked bunting	*E. buchanani Blyth*	

ANNEX D

BIBLIOGRAPHY

1. Andrushko A.M. Mammals of mountain valley of the Allai /Pamirs/. Uch.Zap. LSU, serie of boil. sien., is. 181, L., 1955.
2. Armand A. Haymakingв in natural reserve – the ecocatastrophe // Hunting and Hunting facility. 1987. 10. P.6-7.
3. Gubski P.V. Snow cover in the Pamirs. Coll. “Vegetation and plant growing of the Pamirs”. T.1. Dushanbe. 1967.
4. Davydov G.S., Sokov I.A. The history of mammal researches in Tajikistan.-Zool. coll. part.1.- Dushanbe,1975.
5. V.Zapragaeva – Wild fruits. Publish. “Nauka”. M-L. 1964.
6. V.Zapragaeva – Forest resources. Publish. “Nauka”. M. 1976.
7. Kashkarov D. Animals of the Tajikistan. Coll. Tajikistan, Tashkent, 1925.
8. Kistyakovski A. Zoogeography of the Pamirs. Sc.not. Kiev. Vol.9. is. 6.1950.
9. Red Book of the Tajikistan. Publish “Donish”. 1988.
10. Kuznetsov B. Notes of fauna of mammals of Alai valley. Bull. MNP. Biol.div. voll.16 (2). M. 1937.
11. Kuznetsov B. Fauna of mammals of Central Asia. MNP. voll.10. 1963.
12. Kuteminski V., Leonteva P.S. Soils of Tajikistan. Condition of soil formation and geography of soils. Iss. 1. Publish. “Irfon”. Dushanbe. 1966.
13. Leonteva R. Soils. Atlas of Tajik SSR. Dushanbe-Moscow. 1968. P. 93-95.
14. Sapojnikov G. – Sustainable use and conservation of natural resourcesof the Tajikistan. Publish “Donish”. Dushanbe. 1967.
15. Severtsov N. Vertical and horizontal distribution of Turkestan animals. M.Publish. Natural history, anthropology and ethnography society, 1873, voll.2, iss.2. P.1-157.
16. Severtsov N. Travel to Terkestan Region (Akbashi and Aksay) - M., 1947.
17. “State of natural environment of the Republic of Tajikistan”, Dushanbe, Annual state report.
18. Stanyukovich K. About the zoning of mountain territories of Tajikistan, 1960, Voll.3, Iss.4 (Report of Academy of sciences of TajSSR).
19. Tajikistan (Nature and Natural Resources). Publish. “Donish”, Dushanbe. 1982.
20. Unique areas in cultural and natural heritage of regions. Editor – Yu.L. Mazurov, publication of RSII Cultural and Natural Heritage, Moscow, 1994.
21. Churshina N. “Mineral waters of Tajikistan”, “Donis”, Dushanbe, 1992, P. 43-263.
22. Vadim A. Ranov, Cecile Veber. Guide to the Principal Archaeological Sites of the

Eastern Pamirs (Tajikistan). Published by UNESCO project “Development of Cultural and Ecotourism in the mountainous regions of South and Central Asia”, Paris 2005, 27 pages.

23. Haslinger, A. The Challenges of Nature Conservation in the Tajik National Park – Objectives versus Realities. Diploma Thesis, University of Berne, 2004, 264 pages.

Management Plan of Tajik National Park for 2012-2016

State Agency of Natural Protected Areas of the Committee for Environment Protection under the Government of the Republic of Tajikistan

DUSHANBE – 2012

Approved by

the Chairman of the Committee
for Environment Protection
under the Government of
the Republic of Tajikistan

_____ T.O.Salimov

“_____”_____ 2012

Approved by
order of the Committee for Environment
Protection under the Government of the Republic of Tajikistan
“_____” _____ 2012 № _____

TABLE OF CONTENTS

Section **Page**

Photo on Title Page: Karakul Lake, by H. Jungius

ACRONYMS

GBAO	Gorno-Badakhshan Autonomous Oblast
INGO	International Non-Governmental Organization
IUCN	International Union for Conservation of Nature
NGO	Non-Governmental Organization
NRM	Natural Resource Management
SANPA	State Agency of Natural Protected Areas
TNP	Tajik National Park
TJS	Tajik Somoni (currency)
UNDP	United Nations Development Programme
UNEP	United Nations Environment Program
WWF	Word Wide Fund for Nature

EXECUTIVE SUMMARY

This Management Plan (MP) of Tajik National Park (TNP) is a medium term plan for the period 2012 - 2016.

The park covers a territory of 2,611,674 hectares (Decree of the Government of the Republic of Tajikistan No. 253 of June 11, 2001). It was established with the following objectives:

- Preserve the unique and spectacular landscapes of the Pamirs with its ecological processes and biological diversity
- Protect rare and endangered species of flora and fauna
- Safeguard historical, cultural and natural sites
- Promote tourism and contribute to the development of the region.

The park belongs to the Central Pamir geographical zone, which covers the northern part of the Eastern Pamir. The area is characterised by a system of grandiose east-west running mountain chains, separated from each other by 3,000 m deep valleys. High mountains with peaks covered by enormous glaciers above 7,000 m, high mountain plateaus and locked basin with lakes are the most typical features of the park.

Low rainfall and very low temperatures in winter cause permafrost. High daily and annual temperature fluctuations shape the high mountain environment together with strong insulation and constant winds.

Mountain tops are covered with glaciers or snow. Vanj and Yazgulom mountain ranges reach 5,000 - 6,000 m. The stunning high mountain environment includes the picturesque Sangvor valley, the mountain lakes Karakul, Yashilkul and Sarez, with a very special geological history, the Academy of Sciences and Zaalai mountain ranges with the highest peaks in the Pamirs - peak Somoni (7.495 m) and peak Istiqlol (formerly peak Lenin, 7.134 m.), the huge Fedchenko glacier, which is the longest and one of the biggest glaciers in the world outside the polar region, covering 1,000 sq km, hot mineral springs, a meteorite crater, and one of the biggest caves of Central Asia, at an altitude of 4.100 m. The territory is characterized by large differences of altitudes and heavily dissected terrain and shaped by glaciers during the last glacial period about ending 12 thousand years ago, until today. All forms of glacier morphology are found here.

TNP is characterized by the following main ecosystems:

- Nival, above 4,500 meters occupying about one-third of TNP territory;

- Cold High Mountain Desert, between 3,500 and 4,500 meters above sea level. Occupy more than one-third of TNP territory and include Udvardy's "Cold Winter Desert";
- Alpine meadows located between 3,200 – 4,000 m above sea level, occupying about one-third of TNP territory;
- High mountain wetlands.

The Western Pamir, including the Badakhshan area of the TNP, is renowned for wild relatives of cultivated plants. The Tavildara section of TNP is another important gene-pool; it includes "Walnut-Fruit-Forests".

The park's outstanding feature is an unspoiled high mountain wilderness. Land use is limited to small scale subsistence agriculture, traditional grazing, hay making and collection of firewood in a few small locations along the Park's borders. Excessive cutting of Eurotia and other plants for fuel and animal fodder is a problem in some areas, where villages border the park. This applies also to illegal hunting of ungulates (Ibex and Marco Polo sheep).

Mountaineering is the main form of land-use around the major peaks of the park; major recreational activities are limited to Lake Yashilkul in the south. There is no pressure on the park from other land developments, mining, roads or hydropower (except the use of Lake Yashilkul as semi-natural reservoir). Direct human impact on the area and its main features is therefore extremely small.

The MP is taking this situation into account and defines the following management priorities:

- Conservation and monitoring of biological processes and wildlife populations;
- Monitoring land-use in areas assigned for traditional use;
- Trophy hunting in specially assigned zones (planned);
- Environmental monitoring, e.g. impact of global warming on glaciers;
- Anti-poaching;
- Guiding and directing tourism, including alpinism;
- Education and awareness raising among the local population, decision makers, teachers, school children and visitors.

The park has been divided into different zones. Each zone is well defined and managed for specific objectives:

- *Core Zone:* Conservation of outstanding and special natural, ecological processes and phenomena, without any human interference, except controlled tourism and alpinism. Conservation of biodiversity with particular attention to rare and endangered species, and wild relatives of economically important plants.
- *Traditional Use Zone:* Maintain livelihoods of local people, by retaining traditional grazing rights, hay making and firewood collection, in selected areas. Tourism.
- *Limited Economic Use Zone:* Enhance protection and avert negative human influence on the core area.

  Help maintain the live support system for local people (controlled seasonal grazing and firewood collection).

  Allow well managed and controlled activities which provide revenues for the park, such as fishing, grazing and hunting tourism.

- *Recreation Zone:* Relieve pressure on the wilderness area by providing access and facilities for recreational use to sites of public interest.

The park suffers from an extremely small budget. Low staff numbers and limited equipment are the consequence. Each of the 6 districts has only 4 to 6 rangers, one 4-wheel-drive car, 1-2 binoculars, and uniforms for rangers. Computers are only available in four offices. All offices have mobile telephones for communication. Patrols by rangers are on foot.

It is obvious, that the control of this vast territory can hardly be ensured with these modest resources. The park's budget will need a significant increase to ensure proper protection and management of the park's resources, control of traditional use, anti-poaching, management of tourism, setting up a monitoring program, training of staff and implementation of a broad education and information program. This is of particular importance in view of the park's application for World Heritage status.

The management plan defines how this can be achieved over a period of five years, provided that the park can count on a high level political commitment, the necessary budget increase and new regular income (e.g. from trophy hunting revenues) to take the required steps for upgrading the park's status.

INTRODUCTION

This medium-term Management Plan for the Tajik National Park (TNP) for the years 2012-2016 is developed by officials of the State Agency of Natural Protected Areas (SANPA) of the Committee for Environmental Protection under the Government of the Republic of Tajikistan and the Academy of Sciences of the Republic of Tajikistan. The process was supported by international IUCN experts within the framework of an International Assistance Request under the World Heritage Fund project in support of the World Heritage nomination of TNP. "Instruction on Management Plan Development for Natural Protected Areas of Tajikistan" approved by the Head of State Agency of Natural Preserve Areas dated June 18, 2010 has been used in development of the Plan.

The purpose for developing the TNP Management Plan is to ensure enhancing management and planning in organisation and functioning of TNP according to the Law of the Republic of Tajikistan “On Natural Protected Areas and Objects” and the "Government Program for Development of Natural Protected Areas of the Republic of Tajikistan for 2005-2015". Also, international obligations of the Republic of Tajikistan on conservation of biological diversity and other international documents have been taken into consideration.

The Management Plan will also play an important role in informing the public about TNP activities and help promoting ecological knowledge among the population in the TNP area. This will contribute in developing a positive attitude towards nature conservation.

Existing information and analysis of TNP resources and study of existing problems in current management served as an initial basis for developing the Management Plan, in addition to specially conducted investigations and archive materials.

An important part of the work involved consultations with the local population, regional government bodies and local governments, land owners and users, scientific institutions, and non-governmental environmental organisations. To this end, working meetings were organized with participation of relevant stakeholders, during which basic directions and possibilities for the further development of TNP were discussed and agreed.

A list with the names of members of the working group for preparation of the Management Plan in attached, Annex 1.

CHAPTER 1. BACKGROUND INFORMATION ON TAJIK NATIONAL PARK

1.1 Status and Features of TNP

1.1.1 Overview

NAME OF PROTECTED AREA: Tajik National Park

Governing Body: State Agency of Natural Protected Areas of the Committee for Environmental Protection under the Government of the Republic of Tajikistan.

National Category: National Park.

IUCN Category: II.

Date of Preparation of the Management Plan: August 2011.

Management Plan Period (5 years): 2012 – 2016.

Purpose and Objectives of TNP:

The National Park was established with the objective to:

- Preserve the unique and spectacular landscapes of the Pamirs with its ecological processes and biological diversity;
- Protect rare and endangered species of flora and fauna;
- Safeguard historical, cultural and natural sites;
- Promote tourism and contribute to the development the region.

Location of Main office of TNP: 62, Druzhba Narodov Street, 734025, Dushanbe, Tajikistan, tel.: + (992 37) 222 14 67; fax: + (992 37) 222 07 97, E-mail: tajpark@yahoo.com

Area (in hectares): The total area of TNP is 2,611,674 ha.

The park covers an area of 306,613 ha in Tavildara District, 69,912 ha in Jirgatol District and 2,235,149 ha in GBAO, including the four districts: 1,487,049 ha in Murghab, 128,100 ha in Shugnan, 350,000 ha in Rushan, and 270,000 ha in Vanj.

Date of Establishment: Tajik National Park (TNP) was established by the Decision of the Cabinet of Ministers of the Republic of Tajikistan No. 267, dated 20 July 1992 covering an area of 1.6 million hectares. In 2002, the Government of the Republic of Tajikistan extended the area of TNP to 2,611,674 hectares and approved the statutes of the park (Decree of the Government of the Republic of Tajikistan No. 253 of June 11, 2001).

1.1.2 Description of General Borders of TNP

In the north the border of TNP coincides with the state border of the Republic of Tajikistan with the Republic of Kyrgyzstan until Altyn-Mazar. To the west it follows the mountain range along the left-bank of Muksu river until the peaks of Severtsov and Pulisangin in the Jirgatol district. (Annex 2). In the west the border coincides with the borders of "Sangvor" Natural Reserve (*zakaznik*) which belongs to Tavilidara Forestry Enterprise. From here it runs up to 3059 m up to Pieda, Viskharv, Kurgovad mounting passes until Pshikharv settlement of Vanj district. In the southeast borders follow the valleys of Vanj and Yazgulom rivers whose territory belongs to Vanj Forestry Enterprise and to agricultural enterprises of Vanj district. The southern border of TNP passes the Bartang gorge upwards to Barjadiv village, from here it runs to Patkhor peak in Shugnan district and from there to Yashilkul Lake. Along its eastern border, it runs north of Northern Alichur range, then the border crosses Pshart range and Pshart valley, from there via Akbaytal mountain to the east shore of Karakul Lake, it continues then to Markansu mountain valley and from there to the Kyzyl-Art mountain pass at the state border of Tajikistan with Kyrgyzstan (Annex 2).

1.2 Land Classification of the TNP Territory

According to the Decree of the Government of the Republic of Tajikistan No. 253 dated June 11, 2001, the total area of 2,611,674 ha is allocated to Tajik National Park (Table 1).

Table 1.

Land categories of TNP

Land category	Area, ha	% from total
Pasture	184,525	7.1
Woodlands and shrubs	34,528	1.3
Glaciers	282,755	10.8
Big Lakes (Karakul, Sarez, Yashilkul)	47,960	1.8
Small Lakes	4,700	0.2
Rivers	5,500	0.2
Cold Winter Desert	1,150,000	44.0
Rocks and taluses	900,786	34.5
Dirt roads of importance	920	0.1
Total	**2,611,674**	**100**

1.3 Legal Status and History of Protected Areas

Tajik National Park is a nature reserve of national importance. Its legal status is determined by the following state legislations:

- Law of the Republic of Tajikistan "On Specially Protected Natural Territories", No 329, dated 13.12.1996.
- The Decision of the Government of Tajikistan No267, dated 20.07.1992, "On Establishment of Tajik National Park."
- Order of the State Agency of Natural Protected Areas No47, dated 09.11.2005, "On Location of TNP Protected Zone".
- Control over the activities and law compliance related to the territory of TNP lies on SANPA.

According to the Laws of the Republic Tajikistan “On Natural Protected Areas and Objects”, the criteria of the International Union for the Conservation of Nature (IUCN), advice from United Nations Environment Program (UNEP), specialists of SANPA, advice from scientists from the Academy of Sciences of the Republic Tajikistan, an

IUCN international expert, and representatives of local authorities it was decided to divide the existing 2,611,674 hectares of TNP into the following zones (Annex 3).

- Core Zone: 1,685,411 ha, or about 64.6% of the TNP area.
- Traditional Use Zone: 127,665 ha or 4.9 % of the TNP area. This zone includes grasslands for hay making and high mountain pastures where traditional rights for summer and winter grazing are being maintained for local people. Controlled firewood collection is allowed.
- Limited Economic Use Zone: 740,198 ha or 28.3 % of the TNP area; it is established along and around fragile sites of the core area. Limited development is permitted, as long as this is not detrimental to the values of the Park.
- Recreation Zone: 58,400 ha or 2.2% of the TNP area. This zone allows recreation and tourism as well as placement of supporting facilities.

Forbidden activities: According to the statute of the TNP and the Law of the Republic of Tajikistan "On Protected Areas" any activities contrary to the objectives of TNP, namely: Cutting of forest, ploughing, cattle grazing in the core zone and during summer around lakes and wetlands (breeding period for several bird species), poaching, mining ores, production and use of chemicals and significant changes of the hydrological regime.

Allowed activities: According to the statute of the TNP and the Law of the Republic of Tajikistan "On Specially Protected Natural Areas" Limited economic activity, in specific zones, which does not contradict the objectives of conservation, namely: Limited cattle grazing in compliance with established rules, limited exploitation of natural resources, eco-tourism, conducting scientific and research works, conducting fire prevention and biotechnical activities. In the zone of limited economic use controlled hunting, water storage for hydro-power and fishing are allowed (see below).

Trophy hunting for Ibex and Marco Polo sheep is under consideration for four sites, to the west and to the south of Lake Karakul, north of Lake Yashilkul and in the region of Muzkul *zakaznik* (Ghudara-Aktash).

1.4 Brief Description of the Park's Main Physical Features and Characteristics

General Overview

The park belongs to Central Pamir geographical zone, which covers the northern part of Eastern Pamir. The area is characterised by a system of grandiose east-west running mountain chains, separated from each other by 3,000 m deep valleys. Spectacular snow-wrapped mountains and peaks above 7,000 m covered by enormous glaciers, high mountain plateaus and locked basin with lakes add up to the outstanding diversity of the region.

Low rainfall and very low temperatures in winter cause deep freezing of the soil and high daily and annual temperature fluctuations shape this high mountain environment together with high insolation (solar irradiation), and constant winds.

Mountain tops are covered with glaciers or snow. Vanj and Yazgulom mountain ranges reach 5,000-6,000 m. The snow line is 4700-5000 m above sea level. The National Park covers a stunning high mountain environment including the picturesque Sangvor valley, Karakul, Yashilkul and Sarez mountain lakes, the Academy of Sciences and Zaalai mountain ranges with the highest peaks Somoni (7,495 m) and Lenin (7,134 m), the huge Fedchenko Glacier covering 1000 sq km, hot mineral springs a meteorite crater, and one of the biggest caves of Central Asia, at an altitude of 4,100 m.

Climate

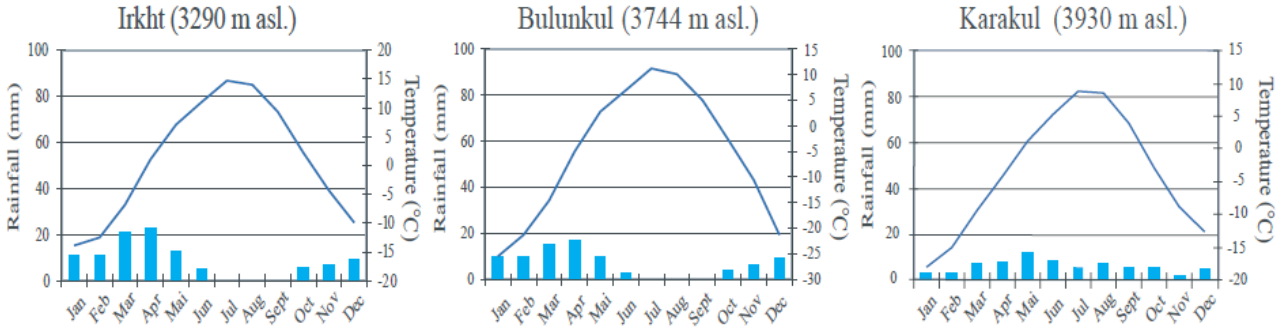
The climate is typical for Central Asia's high mountain regions with cool summers and harsh winters with little snow. The park is characterized by very low temperatures, high insolation, thin air and short summers.

The relief and huge difference in elevations led to the formation of distinctive local types of climate. The park is surrounded by several high mountain ranges, such as the Zaalai range in the north, Kashgar range in the east, the Hindu Kush with its high peaks in the south, and the Kokhi Lal ridge in the west. The inner mountain ranges of the park, such as Academy of Sciences, Zulumart, Muzkul, South Alichur and others are much lower. The park looks therefore like a huge bowl with raised edges. This structure leads to the isolation of the park from the humid air masses coming from the west (Atlantic Ocean via Mediterranean) and the south (Indian Ocean). This isolation, together with other factors is an important reason for the park's aridity in comparison to adjacent territories.

The park is characterized by a sharp continental climate, with large seasonal and daily fluctuations. Lowest temperatures are reported in January at an altitude of 4,000 m with a measured extreme of -63°C (winter 1959, Bulunkul), highest temperatures are reported in July at an altitude of 3,700 m, with +31°C. The annual amplitude reaches 94 degrees. The average temperature for the warmest month, July is 10-13°C; the coldest, January -18 - -25°C.

Precipitation is low. In the Eastern Pamir the mean annual precipitation varies from 63 mm to 117 mm while extreme annual values are from 21 to 159 mm. In the Western Pamir total precipitation is 300 to 500 mm on leeward slopes and increases to 1,200 to 1,800 mm on windward slopes. In the northeastern part of the TNP the annual rainfall is between 1,500 and 1,600 mm. The maximal amount of rainfall may be registered with a mean of 2,234 mm around Fedchenko Glacier on 4,300 m. Precipitation is much lower at the same altitude in the southern mountain ranges.

The distribution of precipitation over seasons is irregular. In the western parts of the Pamirs rainfall mainly occurs in winter and early spring, in the east highest rain falls in spring and summer. In total during autumn and winter precipitation is about 24% of annual rainfall and during the spring and summer 76%. A small amount of precipitation in spring and summer falls as snow. It should be noted that rainfall varies depending on the location of the valleys and wind direction.



Climate diagrams of different meteorological stations located inside or close to the TNP: Irkht (lake Sarez) and Bulunkul represent the conditions in the centre of the TNP. They are located along the segue from the Western to the Eastern Pamir and show a regime typical for the Western Pamir. Karakul, located in the eastern part of the TNP, indicates the typical climatic conditions of the Eastern Pamir. (Haslinger, 2004, based on data from Meteoservice GBAO, 2002).

Seasonal snow cover stays in some places until the end of April and sometimes until the beginning of May. In some places, depending on slope exposure, snow cover persists till 15-25 May. In general, the region is characterized by irregular snow cover. Its

thickness increases with altitude. At altitude of 3,860 m above sea level thickness of snow cover reaches 4-16 cm, while at altitude of 4,760 m it is 1-2 m. Wind and slope exposure have great influence in redistribution of snow cover. At high altitudes, mainly on northern slopes, snow may stay all year round.

The Park is exposed to strong winds that blow almost throughout the year. They reach the greatest strength in wide west to east running valleys, e.g. Markansu valley.

Due to the intense solar radiation, dry climate, low temperatures and limited precipitation the territory is considered as cold high-mountain desert: average annual temperature is below zero, amplitude of diurnal temperature variation is large and reaches 30°C; frost-free period is only 40-80 days; snow may even fall in summer at altitudes above 3,000 m, and may stay for a few days. The meteorological conditions vary considerably due to altitude. In summer, air temperature drops 0.5°C at each 100 m elevation.

Relief

The Pamirs, known as the "Roof of the World," is one of the highest regions in the world; only topped by the Tibetan Plateau. The park includes the highest peaks of the Pamir such as Peak Istiqlol (7,134), Somoni Peak (7,495), and Korzhenevskaya Peak (7,105 m).

The overall picture of the Park's relief is determined by enormous mountain ranges like Academy of Sciences, Zaalai, Beleuli, Zulumart, North Alichur ranges, the eastern parts of the Vanj, Yazgulom, Rushan, and Darvaz ranges. The territory is characterized by large differences of altitudes and heavily dissected terrain and shaped by glaciers in particular during the last glacial period, ending about 12,000 years ago. All forms of glacier morphology are found here, different types of moraines, glacier shaped valleys, glacier mills carved deep into rocks and rock surfaces polished by glaciers.

The main part of the core area is located in the Eastern Pamir. Only Yazgulom range and the eastern part of Darvaz range belong to the Western Pamir.

The Eastern Pamir part of the Park is an elevated plate about 6,000 m above sea level carved by rivers and valleys at 3,600-5,000 m. Some of the river valleys are 10-15 km wide, e.g. Murghab and Alichur.

The Western Pamir section of the Park, in contrast to the east, is shaped by fast running rivers and deep river gorges with steep slopes, for instance 2,000 to 5,000 meters in the Bartang River with its tributaries.

Description of Geological Structure and Soil

The Park is a branch of the Central Asian upland. Deep metamorphosed Precambrian formations are exposed, represented by gneiss, various schist and marbles. Limestone deposits in the northern part of the territory belong to the Cambrian. Within the Akbaytal pass coal deposits are represented by shale and limestone. In the north-western part of the park, Lower Permian deposits are composed of shale-limestone deposits. Upper Permian carbonate deposits were discovered in the north-eastern part of the territory. Triassic sediments are cropping out along the northern border of the Pamirs. The major minerals in TNP territory are molybdenum ores in the upper valley of Vanj River and fluorite in the upstream of Tanymas River.

The soils of the Park, as well as for the entire Pamirs have not been well studied.

Lakes

The largest lakes of TNP are: Karakul with area 364 sq km, Sarez 88 sq km (both in the core zone) and Yashilkul 35.6 sq km (Limited Economic Use Zone). KaraKul is by surface the largest lake in the Pamir and Sarez by water volume, with 17 thousand m3 of water and a maximum depth 500 meters. In addition to these large lakes, the park has more than 400 small ones.

Karakul Lake lies within a circular depression at 3,900 m, interpreted as a meteorite impact crater with a rim diameter of 52 km. A peninsula projecting from the south shore and an island off the north shore divides the lake into two basins, a smaller eastern one which is relatively shallow, between 13 to 19 m deep, and a larger western one, 221 to 230 m deep. It has no drainage outlet. The lake is surrounded by large wetlands.

Lake Sarez appeared in 1911 as result of an earthquake, it is the largest fresh water deposit in Tajikistan and Central Asia. The lake is situated between Muzkul and North Alichur ranges in the core area of TNP. It is considered one of the newest creations of the Earth. As a result of a nine magnitude earthquake, during the night of 18 to 19 February 1911, a six billion ton landslide blocked the Murghab River. The landslide buried the village of Uzoi which blocked the Murghab River and created the highest dam, both natural and manmade, in the world (567 m). The lake flooded a large valley with several villages, one of which gave its name to the lake. The current water level was reached in 1920.

The status of the lake remains very unstable. Geologists fear that a new large magnitude earth-quake might break loose 3 cubic km of rock which would crush into the lake, creating another major wave which might cause the dam to break with disastrous consequences for the Murghab Valley below. One more landslide occurred already in 1968, which caused 2 m high waves in the lake, without damaging the dam.

Hundreds of mountain rivers emerge in TNP, and provide the watershed for several larger rivers such as Gunt, Bartang, Yazgulom, Vanj, and Obikhingov, which run westward through impressive gorges of the Western Pamir. The most significant rivers inside the Park are: Alichur, Marjanoy, Katadara, Pakhchakiv, Kokuybel, Murghab, Tanymas, Gurdara, Khavrazdara, Belyandkiik, Akjilga, Karajilga, Beleuli, Markansu and Sauksay.

Glaciers

The largest glaciers of Central Asia are situated in TNP; including Fedchenko Glacier, the longest and one of the biggest glaciers in the world outside the polar region. Fedchenko Glacier is also the largest middle-latitude valley type glacier in the world, with a length of 77 km, 2 to 3 km wide, covering an area of 1,000 sq km and a maximum thickness of the ice of 1,000 m (Annex 4).

Fedchenko Glacier, being situated on elevations from 2,900 m up to 6,200 m, seems to be one of the glaciers most resistant to global climate change. Impact of global warming caused the glacier tongue to retreat by 1 km since 1933 causing a loss of 2 cubic km, which is 5 % of its volume, but relatively little compared to the melting glaciers in other parts of the Pamirs as well as in the European Alps and the Caucasus.

Further east Grum-Grzhimailo glacier (length 37 km and area of 143 sq km) is located. Garmo glacier, which lies between Peter the Great and Darvaz ranges, has a length of 30.4 km and area of over 114 sq km (Annex 4). Besides, there are glaciers with a length of more than 20 km; among them Oshanin, Akjilga, Vavilov, Chatkal, Tanymas-1, Tanymas-2, Tanymas-3, Yazgulom, Small Tanymas, Moskvin, Fortambek, and Nalivkina glaciers. There are dozens of other smaller glaciers in TNP, with a length of more than 2 km.

All glaciers constitute an important source and reservoir of fresh water on which the wellbeing of large parts of Central Asian depends. It is estimated that the largest contributory of the Amu Darya, the Panj River, annually takes an average of 26-28 cubic kilometers of unpolluted drinking water from the Pamirs. It is important to underline,

that the park is unique in Central Asia by acting as its main storage of fresh water. There is no such place in other Central Asian countries. TNP is the main water-tower of Central Asia.

Mountain Peaks, Waterfalls and Springs

Ice capped mountains, three above 7,000 m, 40 above 6,000 m, and more than 100 around 5,000 m add to the aesthetic value to the area. Waterfalls with crystal clear waters are a special attraction in the harsh mountain landscape. There are many geothermal, radon, and hydro-sulphide sources in TNP. The most famous are Madiyan, Suman, and Uzyuk. Hot springs are resting and treatment places for tourists and locals. Widely known for its hot spring is Yashilkul, where hundreds of people are treated annually.

1.5 Main Ecosystems

The TNP is characterized by the following main ecosystems:

- Nival, above 4,500 meters occupying about 900,786 hectares or 34.5%.
- Cold High Mountain Desert, between 3,500 and 4,500 meters above sea level. Occupying about 11,500 sq km or 44%, it includes Udvardy's "Cold Winter Desert".
- Alpine meadows located between 3,200 – 4,000 m above sea level, occupying a relatively smaller area of 1,000 sq km.
- High mountain wetlands area covering about 200 sq km.

Nival Ecosystems

Nival Ecosystems are characterized by glaciers and deep snow including rocky terrain and gravel. It is the highest mountainous zone with poor vegetation, located above the 4,500 m. These ecosystems are found in the northern and north-western part of the National Park and cover 900,786 hectares or 34.5 %. This is the summer habitat of Siberian ibex (*Capra sibirica*), Marco Polo sheep (*Ovis ammon polii*), snow leopard (*Panthera (Uncia) uncia*) and sometimes wolf (*Canis lupus*). Birds are Pallas' sand grouse (*Syrrhaptes tibetanus*), Tibetan snow cock (*Tetraogallus tibetanus*) and snow finch (*Montifringilla nivalis*). All these species move to lower altitudes in late autumn.

High Mountain Deserts including "Cold Winter Desert"

High mountain desert ecosystems exist from 2,800 up to 4,500 meters above sea level in the eastern part of National Park (about 11,500 sq km or 44%). The prevailing plants are: Teresken (*Eurotia ceratoides*), wormwoods (*Artemisia pamirica, A. korshinskyi*), ajania (*Ajania tibetica*), feather grasses (*Stipa glareosa*), oxytropis (*Oxytropis immersa, O. poncinsii*), and thorn cushion plant formations (*Acantholimon diaspensioides, A. pamiricum*).

Aridity and a continental climate with stark seasonal temperature differences ranging from +32°C in summer to –48°C in winter, with permafrost, strong winds and intensive insolation is a typical feature of this environment. Such landscapes with gravel plains and stony sandy soil, with no or sparse vegetation, dominated by teresken and wormwoods, are widespread in the sub-alpine and alpine zones (at 4,000 – 5,000 m meters above sea level) in the Eastern part of the National Park.

This habitat type of continental deserts with cold winter is not well covered in WH sites. Adding the Tajik National Park to the World Natural Heritage list would overcome this deficit.

Animals with seasonal use of cold winter desert ecosystems are Marco Polo sheep, snow leopard, Siberian ibex, red marmot (*Marmota caudata*), Pallas' sand grouse, horned lark (*Eremophila alpestris*), desert and red-tailed wheatear (*Oenanthe deserti* and *Oenanthe xanthoprymna*).

Alpine meadows

Alpine meadows ecosystems, with rich vegetations, are located between 3,200 up to 4,000 meters above sea level. They are scattered in small patches along mountain ranges in the western and south-western part of the National Park. This ecosystem occupies about 100,000 hectares. They are important grazing areas for wild ungulates and important feeding and breeding grounds for several bird species.

High Mountain Wetlands

Swampy and wet meadows and bogs, covering about 200 sq km around lakes, along rivers, and streams. They include a rich flora and fauna and several endemic species. Flooding, melting permafrost and buried ice sheets shape the landscape with small hillocks and a large variety of small creeks and water courses between 3,500 and 4,000

m. The rich plant cover is grazed by wild and domestic ungulates. These wetlands represent also critical breeding and feeding habitats for resident and migratory birds such as Indian goose (*Anser indicus*), Brown-headed gull (*Larus brunicephalus*), Tibetan and Himalaya Snow cock (*Tetraogallus himalayensis*) and several species of waders.

The most extensive wetlands of this type are found around Karakul Lake. Valuable species of these ecosystems are: bluegrass (*Poa alpina*), sedge (*Carex melanantha, C. stenocarpa*), kobresia (*Cobresia stenocarpa*), oxytrope (*Oxytropis savellanica*), thyme (*Thymus seravshanicus*) and others. In drier areas barley meadow (*Hordeum turkestanicum*) are found.

1.6 Flora

1.6.1 General Overview

Most of the Park's territory belongs to the Central Pamir which covers the northern part of the Eastern Pamir. The Western Pamir belongs to the southwestern Asia floristic region, the Eastern Pamir to the Central Asian floristic region.

The general character of vegetation in the Park is desert; large parts are classified as "Cold Winter Desert" (Udvardy). There are rare-grass steppes in the central part of the territory. On the slopes of the mountains and especially on the bottom of cliffs the vegetation is somewhat richer due to more moisture with elements of steppe feather grass and onions.

57 families, 248 genera, and 639 species of plants have been identified in the Central Pamir. The largest families of plants are *Poaceae* (32 genera, 92 species), *Asteraceae* (118 species) and *Brassicaceae* (34 genera, 64 species). Next are *Fabaceae, Rosaceae, Boraginaceae, Caryophyllaceae, Chenopodiaceae, Juncaceae, Lamiaceae, Liliaceae, Polygonaceae, Primulacae, Scrophulariaceae,* and *Apiaceae.* The other plant families account for a limited number of species, sometimes only one. The list main plant species in TNP presented in Annex 5.

1.6.2 Wild relatives of cultivated plants

According to N. Vavilov the Western Pamir, including the Badakhshan and Tavildara areas of the TNP, is renowned for wild relatives of cultivated plants.

The Badakhshan area includes a large number of varieties of soft and club wheat and ranks first in number of botanic diversity of *Triticum* L. varieties, 151 out of 273 (Annex 6). The diversity of endemic local varieties of wheat, compact club wheat, and its wild

relatives is unique, it includes: *Triticum aestivum* L. var. *japschorvi* Nigm., var. *ruchczianum* Nigm, var. *meridionale inflatum* Nigm. var. *nova.,* var. *quasimeridionale-inflatum* Nigm. var. *nova.,* var. *quasiheraticum* Nigm var. *nova*.; soft wheat without ligulae: var. *sarezicum* Nigm., var. *Bar-Darai* Nigm.; spring club wheat: *Tr. compactum* Host. var. *Humboldti-inflatum* Vav. et Kob..

The Tavildara section of TNP is an outstanding site for wild relatives of cultivated fruit trees and shrubs; it includes "Walnut-Fruit-Forests". This is a forest ecosystems dominated by wild fruit and berry bearing woody plants, including wild apple (*Malus sieversii*) Tajikistan pear (*Pyrus tadshikistanica*), Bukhara pear (*Pyrus bucharica*), walnut (*Juglans regia*), Tajikistan cherry (*Cerasus tadshikistanica*), veracious cheery tree (*Cerasus verrucosa*), plum (*Prunus domestica*), Darvaz plum (*Prunus darvasica*), Bukhara almond (*Amygdalus bucharica*), Vavilov almond (*Amygdalus vavilovii*), Pontic hawthorn (*Crataegus pontica*), Turkestan hawthorn (*Crataegus turkestanica*), Songor hawthorn (*Crataegus songorica*), Hissar hawthorn (*Crataegus hissarica*), heterobotryoidal barberry (*Berberis heterobotrys*) are found here (Annex 7).

1.7 Fauna

1.7.1 Ichthyofauna

The ichthyofauna of the Pamirs belongs to an ancient group originating from India. It is characterized by poorness of species, absence of prey representatives, resistance to low temperatures and endemism. Tectonic processes and glaciations caused complete isolation and unique environmental conditions; as a result fishes developed specific adaptive features: black peritoneum, protecting gonads from high radiation, one-time spawning, taking place in a short time and ensuring preservation of offspring during short summer; toxicity of roe, protecting it from spawn-eaters.

False osman (*Schizopygopsis stoliczkai*), in Tajikistan, is found only in the Pamirs. Other populations exist far away in tributaries of Indus and Brahmaputra rivers in India and in some rivers of the Tibetan Plateau. It is the largest fish in the Pamirs. A river and a lake variety are found in TNP. The species is very cold-resistant, adapting to high altitudes and productive, it is of great scientific and economic (sport fishing, farming) interest. Different forms/subspecies of the osman add to its interest for science, in particular in context of evolutionary research and speciation.

Karakul stone loach (*Nemachilus stoliczkai lacusnigri*) is an endemic subspecies. It differs from Tibetan stone loach (*Nemachilus stoliczkai*) by shape of head and longer fins. Its length does not exceed 10 cm. This species lives in salty Karakul Lake (core zone) and in freshwater streams and rivers flowing into it. Its biology has not been studied.

Since the late Pliocene, there have been no considerable changes in Pamir's ichthyofauna. All four species which occur in the Park (Annex 7) belong to a relict fauna, characterized by high isolation over a long time. Barriers formed by glaciers during the Pliocene led to the isolation of individual lakes, leading to high endemism, among others the Karakul stone loach. Relative stability of environmental conditions in the lakes and absence of human disturbance have contributed to preservation of an undisturbed ichthyofauna in the National Park.

An introduced fish species (Sevan trout *Salmo ischchan*) is found in Lake Yashilkul, Bulunkul Lake and few smaller lakes. This species was introduced from Lake Sevan (Armenia) before the park was established. Its impact on the local fauna is unknown and needs to be investigated. Based on the results of theses investigations decisions should be made if the introduced fish in future should either be sustainable used or deliberately reduced.

1.7.2 Amphibians and Reptiles

Amphibians and reptiles occur only along border areas of the park. E.g. on the borders with Badakhshan in the west and Alai in the east. Snake-eyed skink (*Ablepharus alaicus*), Himalayan agama (*Laudakia himalayana*), water snake (*Natrix tesselata*), and green toad (*Bufo viridis* complex) are observed. The green toads are of high interest from an evolutionary point of view as there are different species with differing genetic characteristics which are morphologically difficult to distinguish. Tadpoles of the green toad were also observed in one of the water filled glacier mills near the glacier tongue of the RSC glacier at 2.400 m.

1.7.3 Avifauna

The Park is inhabited by 162 bird species (Annex 5). 25 species are resident all year round, 30 are only visiting the park for breeding, others use the park for resting and breeding during migrations. Breeding birds are closely related the avifauna of Tibet.

The area is inhabited by several endemic subspecies: *Charadrius mongolus pamirensis*, *Oenanthe xanthoprymna chrysopygia*, *Montifringilla nivalis alpicola*, *Carduelis flavirostris pamirensis*, *Leucosticte brandti pamirensis*.

Many species of TNP are listed in the Red Book of Tajikistan. These include: mountain goose (*Anser indicus*), Himalayan griffon (*Gyps himalayensis*), bearded vulture (*Gypaetus barbatus*), golden eagle (*Aquila chrysaetus*), Central Asian saker falcon (*Falco cherrug coatsi*), Tibetan snow cock (*Tetraogallus tibetanus*), brevirostrate plover (*Charadrius mongolus pamirensis*), brown-headed gull (*Larus brunnicephalus*), Pallas' sand grouse (*Syrrhaptes tibetanus*), snow pigeon (*Columba leuconota*).

1.7.4 Mammals (Theriofauna)

General Overview

The terrestrial vertebrate fauna of TNP is very distinctive, and has much in common with the fauna of Tibet, and partially Central Tien-Shan. Out of 85 mammal species inhabiting Tajikistan, 33 live inside TNP. This includes: Pamir vole (*Microtus juldaschi*), grey hamster (*Cricetulus migratorius coereulescens*), red marmot (*Marmota caulata*), tolai hare (*Lepus tolai pamirensis*), big-eared pika (*Ochonota macrotis*), silvery vole (*Alticola argentata*), snow leopard (*Panthera (Uncia) uncia*), Alpine weasel (*Mustella altaica* subsp.), caress (*Mustella nivalis pallida*), stone marten (*Martes foina intermedia*), Tibetan wolf (*Canius lupus laniges*), fox (*Vulpes vulpes ferganensis*), otter (*Lutra lutra*), brown bear (*Ursus arctos isabellinus*). Siberian ibex (*Capra sibirica*) is common throughout the park between 3,200 and 4,500 m. Males of ibex carry large horns (length 110 – 130) which have high attraction for trophy hunters as well as Marco Polo sheep (*Ovis omoni polii*) see below (Annex 5).

Endemic Species

From the above list of mammals *Microtus juldaschi* and *Lepus tolai pamirensis*, *Ovis ammon polii* are endemic species or subspecies, respectively.

Pamir vole (*Microtus juldaschi*) is abundant and occurs throughout TNP in meadows of floodplains and subalpine and alpine regions.

Tolai hare (*Lepus tolai pamirensis*) occurs throughout TNP and inhabits sparsely vegetated slopes.

Marco Polo sheep (*Ovis ammon polii*). Most probably the largest subspecies of wild sheep in the world with the most impressive spirally curved horns. Reaching 60 inches

(152 cm) is not unusual, one trophy of 66 inches (168 cm) has been recorded. It is listed in the Red Book of Tajikistan and as subspecies of argali included in the Red List of IUCN (Near Threatened). The body length reaches 150 cm and weight of males is 200 kg or more. Its distribution is limited to the Pamir; inside TNP between 3,200 to 4,500 m. At least 5,000 animals are found inside the Park in Pshart spur, North Alichur, Muzkul, Zulumartsk, and the Zaalaisk ranges. The Park provides all critical habitats, all year round; this includes winter and summer grazing areas and lambing sites.

Rare Species

Many mammal species living in the park are listed in the Red Book of Tajikistan: White-clawed subspecies of brown bear (*Ursus arctos isabellinus*), otter (*Lutra lutra*), Turkestan lynx (*Lynx lynx isabellina*). Marco Polo sheep (*Ovis ammon polii*) and Snow leopard (*Panthera (Uncia) uncia*) and Red wolf (*Cuon alpinus*) are listed as endangered by IUCN.

Otter (*Lutra lutra*) is widely distributed in Western Pamir, in Panj River and its tributaries which are rich in fish. Through Gunt, Bartang and Obikhingou rivers' and their tributes the otter gets into TNP. It is rare, precise data are missing.

Turkestan lynx *(Lynx lynx isabellina*). It is observed throughout TNP, population numbers are not available.

Snow leopard (*Panthera (Uncia) uncia*). Occurs at high altitudes between 1,500 and 4,500 m, it preys mainly on wild ungulates, but also on livestock, in particular in winter. The total number in Pamirs is unknown, conservative estimates are about 200 individuals, of which about 120 exist in TNP.

Asiatic wild dog (*Cuon alpinus*) may as well occur in the Pamirs and observations have been reported several times. It is possible that Asiatic wild dogs in the past occasionally migrated into the Eastern Pamir. However, so far scientific evidence about the past or current presence of the species is missing.

1.8 Cultural Features of TNP

1.8.1 Historical Settlements

Remains of different historical settlements, dating back to the 11th century have been discovered, often associated with exploration and extraction of minerals. In some places, remains include entire villages with large public facilities, buildings, roads, and even baths. These are remains of mining settlements in Bazar-Dara, Zurchersek, Ak-Jilga and

Sasyk. In particular, silver was mined in the 11th century. The most famous place in Pamir is the old mine in Bazar-Dara.

According to archaeologists (Ranov V., Veber C., 2005) TNP includes the following archaeological sites (Table 2).

Table 2.

Summary of Archaeological Sites in the TNP territory

Site	Theme	Date
Karaart	Geoglyphs, kurgans	Iron Age, 8^{th}-3^{rd} century BC
Shurali	Geoglyphs, kurgans	Iron Age, 8^{th}-3^{rd} century BC
Jalang	Petroglyphs	Middle Ages, 11^{th} century AD
Bazar-Dara	Mining town	Middle Ages, 11^{th} century AD
Ak-Jilga	Petroglyphs	Bronze Age to Middle Ages 2000 BC to 1000 AD, 18^{th} century AD
Yashilkul	Kurgans and megaliths	Iron Age, 8^{th}-3^{rd} century BC

1.8.2 Burial Objects

Most of the detected burial objects are mounds, burial places covered with stones and earth. On the surface they look like round or square hills up to 1.5 meters height. These are typical burial places of nomads; most of the mounds belong to the early Bronze Age. Other different objects have also been found with more complex structure than the mounds, including one object which is considered as mausoleum.

1.8.3 Other Cultural Features

Geoglyphs, prehistoric stone arrangements on the ground. Most of the figures associated with burial places of Bronze Age's. A most impressive site is near Karakul Lake (Annex 8).

Petroglyphs, images depicted or carved on rock surface. Most drawings depict animals living in the Pamir such as mountain goat, sheep or yak. The most common

images are hunters with bows and arrows. The earliest known petroglyphs refer to the Bronze Age. They are found throughout the park, in particular in the eastern part of the park and around Karakul Lake (Annex 8).

Rock Paintings, are drawings made with colored pigments of plants, minerals, and/or other natural substances on rock surface. Paintings exist in Jalang and Akjilga, they belong to the Mesolithic Period; they are quite fragile and require protection.

CHAPTER 2. BRIEF DESCRIPTION OF LAND USE

(Analysis of Issues and Problems)

2.1 History of Human Settlements

Man settled in the Pamir shortly after the decrease of the glaciers in the last stage of glaciations, in 5-6 millenniums BC. People lived in Barchadev, Rukhch, Pasor, Bopasor, and Ghudara in summer, attracted by the abundance of wildlife during the Neolithic and Bronze Age. In winter, hunters descended to the warm valleys of Kashgar. Later, nomadic tribes settled gradually in the region, their descendants live here today. The main occupation of local people since ancient times is cattle breeding and self-supporting agriculture based on irrigation.

Five small settlements (Barchadev, Rukhch, Pasor, Bopasor, and Ghudara) are situated in the "Zone for Limited Economic Use", located upstream of Bartang river. There are no other settlements inside the Park.

2.2 Land-use in the Territory of TNP

The territory of TNP is legally classified as conservation area. This implies that any activity that contradicts its conservation purpose is prohibited. The area is remote; most of its territory is covered by high mountain habitats which are difficult to access. Land use is limited to small scale subsistence agriculture (potato and wheat), traditional grazing (mainly in summer), hay making and collection of firewood in a few small locations along the Park's borders. Excessive cutting of teresken (*Eurotia ceratoides*) and other vegetation for use as fuel and animal fodder is a problem in some areas, where villages border the park. This applies also to illegal hunting, including Ibex and Marco Polo sheep in the Karakul region and in the upper Bartang in the Ghudara-Aktash area. Although this is limited to a few small areas without known negative impact on the population of both species at this stage, measures have to be taken to stop these illegal activities.

Mountaineering is the main form of land-use around the major peaks of the park; major recreational activities are limited to Lake Yashikul in the south.

There is no pressure from other land developments, mining or roads. Hydropower is only generated from Lake Yashilkul which serves as a semi-natural water reservoir for a power station outside the park. This has impacts on the dynamics of the water level, which may affect the suitability of spawning areas for the ichthyofauna.

Direct human impact on the area and its main features is therefore extremely small. Indirect impact on the parks landscape, in particular its glaciers, caused by global warming, is beyond the park's control.

The park management is taking this situation into account when setting its management priorities, which are:

- Monitoring wildlife populations;
- Monitoring land-use in areas assigned to local people for agriculture, grazing, hay making, collection of plants and firewood;
- Facilitating environmental monitoring, in particular impact of global warming on glaciers;
- Anti-poaching;
- Guiding and directing tourism, including alpinism;
- Education and awareness raising among the local population, decision makers, teachers, school children and visitors;
- Providing guidelines for local community on collection of medical plants and fruits, monitoring and controlling their implementation;
- Developing recommendations for trophy hunting in specifically selected sites of TNP, e.g. for the establishment of community based wildlife management. Monitoring and control of its implementation.

2.3 Land-use in Adjacent Territories

Natural resources bordering TNP are subject of restricted use, which include cattle grazing and limited cultivation of crops. There is little negative impact from people living around the park on the park's resources, except those mentioned above (poaching, illegal collection of firewood, and food for livestock).

The road from Murghab to the Kyrgyz border runs along parts of the eastern park border. Traffic is fairly small and limited to a few trucks and smaller cars per hour. There is no measurable impact at this stage.

Impact on the park for other developments such as mining or hydro-power does not exist.

CHAPTER 3. ADMINISTRATION AND RESOURCES OF TNP

The park is divided into 6 districts: Tavildara, Jirgatol, Vanj, Rushan, Shugnan, and Murghab. Each district is headed by a district ranger ("Chief of Branch"). Vanj, Rushan, Shugnan and Murghab belong to Gorno-Badakhshan (GBAO) Region. The district chiefs report to the park director, based in Khorog. The director reports to the Head of State Agency of Nature Protected Areas in Dushanbe. Tavildara and Jirgatol belong to other Districts and report to the Head of SANPA in Dushanbe. The rangers posts throughout the TNP areas presented in Annex 9.

3.1 Staff Numbers in 2011

Table 3.

According to tasks	**Actual**	
	Total	**Including staff with higher education**
Total number of TNP staff		
54	54	15
Management staff		
3	3	3
Chief of TNP district subdivisions		
3	3	3
Number of main specialists		
6	6	6
Number of leading specialists		
6	6	6
Number of rangers		
19	19	2
Number of accounting and planning staff		
3	3	3
Number of service staff		
14	14	1

Although most of the park is difficult to reach and in large parts inaccessible, it is obvious that 54 staff is insufficient to manage and control this vast territory. Staff increase is foreseen and part of the next 5 year plan (see Chapter 4.5).

3.2 Budget for TNP Activities in 2011

Table 4.

##	Funding source	Tajik somoni
1.	(SB) Salary for staff	156,495
2.	(SB) Funding for services (stationeries, household equipment, repair of vehicles, electricity, telephone, internet, water, etc.)	38,527
3.	(SB) Funding for research	27,860
4.	(SB) Funding for construction	120,000
5.	***Subtotal (1-4) State Budget (SB) of the Republic of Tajikistan for TNP***	***342,882***
6.	Funds from foreign donors	0
7.	Funds from local Tajik sponsors	0
8.	Annual earnings from eco-tourism activities in TNP	8,700
	Total (5-8)	**351,582**

This budget is extremely low and not covering the basic needs of the park. It is sufficient to pay salaries for all staff, but totally insufficient to upgrade protection and management of this huge area according to international standards. A major source for additional income is required (see 3.3 below).

3.3 The Infrastructure of TNP

Each district has 4 to 6 rangers, one 4 wheel drive car, 1-2 binoculars, and uniforms for rangers. Computers are only available in 4 offices. All offices have mobile telephones for communication between each other and with head quarters (see details below). Patrols by rangers are on foot, often in cooperation with guards from district and regional Departments of Environment Protection in GBAO. None of the rangers is armed. This will change next year, as a new law will be approved by the end of 2011, permitting rangers to carry arms.

It is evident, that the control of the Park can hardly be ensured with these modest resources. Additional income is required to fulfill the fundamental requirements for a well managed park such as: Strengthening the ranger network, training, equipment, management infrastructure, monitoring, education and information, tourism facilities and more (see 4.5 and 4.6 below). One opportunity would be trophy hunting, under scientifically based and socially acceptable management. A feasibility study, based on experience from other national parks, will be undertaken to outline rules and regulations for implementing this, see Annex 11. Another option would be to apply for support from aid agencies. For details see 4.5 and 4.6 below.

Table 5.

Items	Quantity	Condition
Main office	1	Main office is in Dushanbe in the building of State Agency of Natural Protected Areas
Regional office in Khorog city of GBAO	1	At present in Khorog city, located in a rented building which belongs to Forest Department of GBAO. The Government of GBAO allocated 0.03 ha land for building a new TNP Regional Office in Khorog city. 120,000 somonis has been allocated in the 2011 Budget for State Agency of Natural Protected Areas for starting the construction of the TNP office in Khorog city.
District Office in Murghab district	1	In stage of construction
District Office in Jirgatol district	1	Rented
District Office in Tavildara district	1	In stage of construction
Motor vehicle: GAZ – 66	1	Working
Car: GAZ 31-02	1	Working
Car: Niva 3212214	1	Working
Car: UAZ 31-519	3	Working
Horse	2	Working
Telephone for office	1	Working
Mobile telephones	40	Working
Uniform	70 % of staff	

Firearms and small arms	0	To be supplied in 2012
Binoculars	2	Working
Computers	4	Working
Digital photo camera (Panasonic)	1	Working
Digital video camera	1	Working
Navigational aid GPS	1	Working

3.4 Key Stakeholders (In addition to the State Agency of Natural Protected Areas)

Table 6.

№	Interested Partners
1	The Committee for Environment Protection under the Government of Tajikistan
2	Ministry of the Economic Development and Trade of the Republic of Tajikistan
3	Ministry of Foreign Affairs of the Republic of Tajikistan
4	The Committee on Tourism and Youth under the Government of the Republic of Tajikistan
5	The Academy of Sciences of the Republic of Tajikistan
6	Executive authorities
7	Local population living around of TNP. In the eastern part of TNP near Karakul Lake is located Karakul village, along the western border of TNP in the upper Bartang valley Ghudara, Pasor, Bopasor and Barchadev villages, in the upper of Vanch district Poimazor village.
8	Companies which organize hunting; Opening the park for controlled trophy hunting will be organised in cooperation with relevant professional organisations. Details to be determined by feasibility study.
9	Tourist agencies

Research activities and ecological monitoring in TNP are organized and conducted by TNP staff jointly with scientist from the Academy of Sciences of the Republic of Tajikistan based on the annual working plan. Research works includes wildlife monitoring (mammals and birds), wildlife ecology and biology, monitoring various forms of land use, impact of climate change.

Ecological education programs and activities are realized directly by TNP staff and the Department of Science and Eco-education of SANPA with collaboration of local and international NGOs.

CHAPTER 4. ANALYSIS OF THREATS AND REACTION ON THEM

4.1 Main Threats

Threats	Description of the threats
Threat 1:	Illegal hunting of wildlife by local poachers and hunting tourists.
Threat 2:	Illegal plant (teresken) harvesting as fuel, which is main fodder supply for Marco Polo sheep.
Threat 3:	Uncontrolled hiking of tourists through the park without any authorization.
Main reason for threats	Poverty and low living standard of local population around the park, leads to illegal use of park resources, insufficient possibilities of the TNP for law enforcement, lack of incentives for the local population.

4.2 Aims and Tasks of Protected Area Management (in response to threats)

Goal and tasks	Response to threats
General Goal/ Result	Preserving unique natural landscapes, conservation of rare and endangered species of flora and fauna, historical, cultural and natural sites, development and rationalization of tourism, public education to promote rational use of natural resources (The Decision of the Government of Tajikistan No. 267, dated 20.07.1992, "On Establishment of Tajik National Park").
Vision: Desired situation at the end of 5 years Management Plan	Effective management of TNP. Local people will better understand the value/importance of TNP, effective communications and coordination will be established between local government and TNP. Conservation status of biodiversity, especially rare species of flora and fauna, will be improved as a result of better management with support of local population and better technical and financial capacity.
Tasks to Achieve Goals	Conserving wilderness, wildlife and ecological processes in TNP. Promoting good management of resources, for the benefits of nature and the enjoyment of the people of Tajikistan and visitors and for the local communities of the region. Raising additional funding from aid agencies to upgrade staff capacities and infrastructure of TNP. Take regular revenues from trophy hunting.
Task 1	Prevention of any illegal activities within the TNP.
Task 2	Maintaining and where possible improving wildlife habitats by

	monitoring the status of biodiversity and the impact of human use in selected areas and implementation of remedial measures.
Task 3	Raising awareness and understanding on the values and potential benefits of the park, increase the level of support from the local population; by providing tangible benefits from protection and sustainable use of natural resources
Task 4	Advise relevant government authorities in strengthening conservation legation, in particular in relations to protected areas.
Task 5	Education and awareness programs at schools to raise awareness and support for environmental conservation.
Task 6	Increase socio-economic situation for local people living inside and around TNP by developing income sources, based on joint management of natural resources, e.g. rangelands for livestock grazing, and direct benefits for the local communities from the sustainable use of the nature resources, e.g. income and funding for local development from tourism and planned trophy hunting.
Task 7	Promoting improved energy efficiency and use of alternative energy sources.

4.3 Specific Limitations for Effective Management

Limitations	Justification	Methods of solution
Technical Knowledge of staff \ training	Managers, engineers and technical personnel, as well as ranger are unable to perform their tasks properly due to lack of technical knowledge. Young professionals entering job after graduation, as a rule, have a very low level of knowledge and lack of practical skills.	Training workshops
Equipment	Due to lack of funds equipment has not been replaced for many years Equipment supplied during the Soviet period is at the end of its live cycle and completely written off. TNP needs, first of all, cross-country vehicles, motorbikes, communication equipment and field equipment for ranger.	Raising necessary funds from state budget and from donors. Ensure sustainability through targeted use of revenues from trophy hunting.
Financing	Limited funding from state budget for infrastructure improvement, fuel purchase, restricts management activities and opportunities.	Preparation of financial plan for implementation of the Management Plan with financial needs and

		identification of possible funding sources.
Monitoring	Lack of funds for monitoring status of wildlife and habitats reduces management efficiency considerably.	Development and funding of monitoring plan will help to improve effectiveness of managing impact of poaching, traditional land-use, tourism, including alpinism, and trophy hunting on relevant wildlife populations, based on indicators to be developed in 2012

4.4 Zones of TNP

General Characteristics of Functional Zones of TNP

The following zones were agreed, based on the Law of the Republic Tajikistan "On Natural Protected Areas and Objects" and according to International Union for the Conservation of Nature (IUCN) criteria, advice from United Nations Environment Program (UNEP), specialists of SANPA with scientists from Academy of Sciences of the Republic Tajikistan, an IUCN international expert, and representatives of local authorities (Annex 3):

- Core Zone;
- Traditional Use Zone;
- Limited Economic Use Zone;
- Recreation Zone.

4.4.1. Core Zone

***Objective*:**

- Conservation of outstanding and special natural areas and ecological processes and biodiversity with particular attention to rare and endangered species, without any human interference, except controlled tourism and research.

Description and Values:

This zone covers 1,685,411 ha or 64.6% of the TNP area. It is an area of dazzling

high mountain wilderness, characterised by several mountain peaks over 7,000 m, deep valleys, high plateaus and an outstanding assembly of enormous glaciers, including the glacier complex named after A. Fedchenko, which is one of the biggest in the world with length of 77 km and thickness of ice more than 1,000 m. This glacier together with others represents the water tower for Central Asia which nourishes the Amu Darya River system on which the wellbeing of 55 million people depends, by providing water for irrigation, industries and human consumption.

The Amu Darya River Basin covers parts of Tajikistan, Kyrgyzstan, Afghanistan, Uzbekistan, Turkmenistan. Several major cities, industrial complexes and agricultural regions depend on it such as Khorog, Kulyab, Kurghan-Tube in Tajikistan, Badakhshan, Faizabad, Mazorisharif in Afghanistan, Termez, Urgench, Karshi, Bukhara, Khiva, Nukus in Uzbekistan and Kerki, Mary, Turkmenabad (Chardzhou), Dashoguz in Turkmenistan.

The Amu Darya River is the largest river in Central Asia. Its length from the headwaters of the Pyanj River is 2,450 km, its watershed covers 309 thousand sq km. The Amu Darya River gets this name when Pyanj and Vakhsh River, which get most of their water from TNP region, meet in Tajikistan. Thus the TNP is the main area of formation of water flow of the Amu Darya River. Table 7 shows the total irrigated area in the Amu Darya River basin.

Table 7.

Irrigated area in the Amu Darya River Basin

Country	Irrigated area, thousand hectares			
	1960 year	1985 year	1990 year	1998 year
Kyrgyzstan	5.0	11.0	23.6	22.0
Tajikistan	210.0	450.0	474.2	469.0
Turkmenistan	435.0	1234.4	1329.3	1735.0
Uzbekistan	1625.0	2001.3	2280.2	2321.0
Total in Amu Darya River Basin	2275.0	3696.7	4107.3	4547.0

The annual average areas of agricultural land irrigated from the Amu Darya watershed in Uzbekistan, Turkmenistan, Tajikistan and Kyrgyzstan are 4.0-4.5 million hectares. Most of this water comes from the glaciers of TNP.

The Core Zone is characterized by undisturbed ecological and geomorphological processes, including a high diversity of glacial formation, glacier dynamics, landscapes and special features formed by glaciers (e.g. deep glacier miles carved into solid rock), fast running rivers and wide flood plains covered with gravel and rocks.

The area includes the largest high mountain lake in the Pamirs, Lake Karakul, at an altitude of 3,914 m above sea level with its special flora and fauna, including a large number of endemics.

The high mountain plateaus and valleys provide summer- and winter grazing areas for wild ungulates, Marco Polo sheep, and the Siberian ibex, as well as snow leopard, Tianshan brown bear, breeding sites for Indian goose, brown-headed gull, Tibetan and Himalaya snow cocks.

Other values of the core area are wild relatives of cultivated plants in the Badakhshan and Tavildara section of TNP (Annex 6, 7).

Management:

Conservation and maintenance of biodiversity and ecological processes. The area is accessible for mountaineering, hiking and wildlife observation. There is no traditional use (see 4.4.2 below). Trails and a few basic camping sites for visitors will be permitted. Number, nature and extent will be strictly controlled. Possible sites and regulations for hunting tourism will be defined by a feasibility study.

4.4.2. Traditional Use Zone

***Objective*:**

- Maintain livelihoods for local people, by retaining traditional grazing rights, hay making and firewood collection, in selected areas;
- Tourism.

Description and Values:

This zone covers 127,665 ha or 4.9 % of the TNP area. This zone, includes, grassland for hay making and high mountain pastures where traditional rights for summer and winter grazing are being maintained for local people:

- Around Lake Karakul Lake, in particular in the north and east;
- East and west of Barchadev village;
- North of Vanch District, village of Poimazor;
- Tavildara valley.

This includes summer grazing areas for small livestock and yaks and some smaller areas for grazing yaks in winter. These zones are well defined and agreed with the local population. This measure includes keeping winter grazing areas such as wetlands (e.g. around Karakul Lake) free from summer grazing from May to September. This measure helps to provide important breeding and feeding grounds for a large variety of bird species, including migratory species, without putting any hardships on the local population.

Management:

Activities in this zone are limited to traditional grazing and hay making. Grazing pressure and interactions between wild ungulates, predators and livestock will be subject to monitoring, as well as status of rangeland. Livestock monitoring will be based on data to be established in 2012.

Adequate management measures will be taken in case of livestock pushing wild life into marginal habitats, or conflict between herders and predators and overgrazing. It is well understood by the local population that they will have to tolerate predation on livestock as a precondition for obtaining certain land-use rights inside a national park. Providing compensation, based on national legislation, is under consideration. In land-use maps this territory is shown as a traditional pasture.

Based on written agreements with relevant local communities, park staff will ensure that wetlands are kept free from livestock from May to September.

Trails and a few basic camping sites for visitors will be permitted. Number, nature and extent will be strictly controlled. Possible sites and regulations for hunting tourism will be defined by a feasibility study.

4.4.3. Limited Economic Use Zone

***Objective*:**

- Enhance protection and avert negative human influence on the core area,

where it could be in contact with negative human developments.

- Help maintain the life support system for local people (seasonal grazing and firewood collection).
- Allow well managed and controlled activities which provide income for the park, such as hunting tourism.

Description and Values:

This zone covers 740,198 ha or 28.3 % of the TNP area, it is established along and around fragile sites of the core area. Limited development is permitted, as long as this is not detrimental to the values of the Park. A Limited Economic Use Zone is unnecessary in the northern and western parts of the park, where the park boundary runs along high mountain ranges and glaciers between 4,000 and 6,000 m. These are areas without any human interference and outside any future economic development such as hydro power stations or mining. The Limited Economic Use Zones are established in the following sites:

- **Yashilkul Lake**:

Land use includes:

Water flow from the lake is regulated by a small dam (10 to 15 m). Water is stored in summer and released in winter to feed the hydropower station in Khorog. The surroundings of the Lake are permanently inhabited by about 400 people who live on livestock and agriculture. A thermal spring is being used by visitors from the region; the Lake is inhabited by an introduced trout species, which is being used commercially.

Management:

Existing land use will be monitored and permitted to continue, expansion will not be allowed.

- **Karakul Lake**:

Land use includes:

Trophy hunting for Ibex and Marco Polo sheep is under consideration for an area to the west and another one to the south of Lake Karakul. The main purpose of trophy hunting is to provide regular income for the park and to a limited extent also for the local population in the relevant area.

Management:

A detailed study will determine the best site and regulations under which hunting will be permitted. IUCN and WWF recommendations on trophy hunting will be followed. See Annex 11. Trophy hunting will only be allowed under the following conditions:

- Science based planes for harvest, habitat management and monitoring;
- An adequate legal framework;
- A substantial part of the revenues generated by trophy hunting are transferred to the park. Money will be spent on habitat management and protection, population monitoring, education, research and support for local communities.

- **West and east of the motor highway** leading to the state border with Kyrgyzstan and China along the Eastern border of the Park:

Land use:

The area is influenced by traffic (mainly heavy trucks) to and from Kyrgyzstan.

Management:

Stopping, parking and camping along the road allowed.

4.4.4. Recreation Zone

***Objective*:**

- Relieve pressure on the wilderness area by providing access and facilities for recreational use to sites of public interest.

Description and Values:

This zone covers 58,400 ha or 2.2% of the TNP area. This zone allows recreation and tourism as well as placement of supporting facilities. It includes sites of interest to mountaineers and the territory around Karakul and Yashilkul. The relevant map in Annex 10 showing existing road networks and settlements. Main sites for alpinism include Moskvina Plateau with the peaks Ismoili Somoni (7,495 m), E. Korzhenevskaya (7,105 m), Revolutsiya (6,974 m), and Istiqlol (7,134 m).

***Management*:**

The main recreational activities in this zone are mountaineering, hiking, cave

exploration, and health treatment in thermal, cold water, and carbon dioxide springs.

People engaged in mountaineering, hiking and cave exploration will be permitted to stay in well defined camping sites. Campers will have to bring their own food and fuel, cutting of firewood is not permitted. Visitors must not leave garbage behind. A guest house for mountaineers exists on Moskvina Plateau; it is managed by a tourist company. Bed and Breakfast facilities are offered by local people around Yashilkul Lake. A zone for intensive tourism services will be established at a later stage, depending on the results of tourism and recreation planning in TNP.

4.5 Management Actions to be carried out in order to achieve objectives for 2012-2016 (5years):

Activities and objectives	Actions	Time limits	Executor	Indicators	Financial expenses, thousand somoni	Sources of financing	
						A. State budget	B. Donors
Objective 1	**Effective law enforcement and wildlife management activities established and maintained**						
Activity 1	Strengthen ranger network by increasing staff and supplying park staff with transport facilities (vehicles, and motorbikes), uniforms, communication equipment, weapons, binoculars, and cameras.	2012-2016	State Agency of Natural Protected Areas (SANPA) and TNP Directorate	Maintain and operational costs (gasoline etc.). Each year 5 additional rangers. By 2013: 4vehicles, 10 motorbikes, uniforms, weapons, binoculars for all rangers, 10 (pending availability of funds). Effective communication system established by 2013/14.	100 350	100 200	0 150
Activity 2	Carry out training seminars for rangers and other conservation staff	2012-2016	SANPA and TNP Directorate	Two training courses per year for up to 20 staff	10	3	7
Activity 3	Establish and support network of	2012-	SANPA and	Voluntary ranger	5	2	3

	volunteer rangers	2013	TNP Directorate	network operational in all district (6) 2012/13			
Activity 4	Strengthen cooperation between ranger network and other law enforcement bodies	2012-2016	SANPA and TNP Directorate, regional and district authorities	Joint patrols, cooperation on legal issues, information exchange established.	5	2	3
Activity 5	Ensure systematic patrolling by rangers in critical sites during periods of wildlife concentration and passage during migrations.	2012-2016	TNP Directorate Solijonov Sh., Davlatov N., Mamarasulov M.	Poaching of wildlife significantly reduced or absent reduced, based on 2011data in 2013. Populations of ungulates stable or increasing, behaviour of animals confirms absence of poaching pressure.	150	150	0
Activity 6	Establish boundary demarcation; manufacturing and installation of information panels in places frequently visited by local people and tourists.	2012-2016	TNP Directorate Solijonov Sh., Davlatov N., Mamarasulov M.	Presence of installed panels, at least 20 % of relevant borders marked each year.	200	100	100
Activity 7	Promote conservation of Indian goose and Tibetan snowcock by enhancing protection of their habitats.	2012-2016	TNP Directorate Solijonov Sh.,	Numbers of these species stable or increased based on	200	50	150

			Davlatov N., Mamarasulov M.	2011 data, by 2016			
Activity 8	Improve habitat for argali, ibex and snow leopard by limiting or banning cattle grazing and limiting herder access to critical habitats, e.g. breeding and lambing sites.	2012-2013	TNP Directorate Solijonov Sh., Davlatov N., Mamarasulov M.	Population numbers maintained or increased based on 2011 data by 2013	100	30	70
Activity 9	Initiate feasibility study on trophy hunting for limited economic use zone.	2012	SANPA and TNP Directorate	Report	30	5	25
Objective 2	**Infrastructure for environmentally friendly tourism established**						
Activity 1	Develop and advertise hiking trails.	2012-2013	SANPA and TNP Directorate	Hiking trails established Maps and information booklet distributed	100	50	50
Activity 2	Promote establishment of guesthouses and train local people to house and care for tourists.	2012-2014	SANPA and TNP Directorate	Guesthouses established and at least 2 families trained per year.	200	20	180
Activity 3	Establish park owned tourist guesthouse with all necessary equipment for accommodation, kitchen and transport such as vehicles boats and tents.	2012-2015	SANPA and TNP Directorate	Guesthouse established by 2015	500	100	400
Activity 4	Establish Information Center.	2014	TNP	Functioning	200	50	150

			Directorate	Information Center established by 2014			
Activity 5	Publish booklets, maps with tourist destinations, natural, historical and cultural sites.	2012-2015	SANPA and TNP Directorate	Booklets available	20	10	10
Activity 6	Promote cooperation with " Pamiri Handicraft" and the "Yak House" in Murghab to assist local people in villages inside and around the park in the production of tourist souvenirs.	2012-2016	SANPA and TNP Directorate	Cooperation with these 2 NGO established in 2012 and working by 2013	100	10	90
Activity 7	Train local people as tour guides.	2012-2016	SANPA and TNP Directorate	Up to 10 people trained each year	10	2	8
Activity 8	Establish camping sites, with all necessary facilities including information panels with information on the park and the relevant site.	2012-2013	SANPA and TNP Directorate	5 sites established each year	50	10	40
Objective 3	**Wildlife and habitat monitoring and research system established**						
Activity 1	Implement and monitor trophy hunting according to recommendations from feasibility study and legal regulations.	2013-2015	SANPA and TNP Directorate	Guidelines and Report	10	5	5
Activity 2	Prepare and publish guidelines on wildlife monitoring and training of conservation staff.	2012	SANPA, TNP Directorate, Academy of Science	Guidelines published and at least 20 staff trained.	50	30	20
Activity 3	Organize one survey of Marco Polo	2012	SANPA and	Data base with	200	140	60

	sheep, ibex and snow leopard populations and habitat analysis every 3 years (Marco Polo sheep and ibex survey in the context of coordinated large scale survey in all suitable habitats.)	and 2015	TNP Directorate	results			
Activity 4	Investigate distribution and breeding biology of wetland birds, focus on Indian goose and brown-headed gull and prepare recommendations for improving their conservation status. GPS-mapping of their habitats;	2012-2016	TNP Directorate Solijonov Sh., Davlatov N., Mamarasulov M.	Distribution maps and scientific publications. Specific conservation action elaborated and implemented.	100	40	60
Activity 5	Investigate status of Tibetan snowcock and Pallas' sand grouse and prepare recommendations for improving their conservation status. GPS-mapping of their habitats;	2012-2016	TNP Directorate Solijonov Sh., Davlatov N., Mamarasulov M.	Distribution maps, recommendations on conservation elaborated and implemented, scientific publications.	100	40	60
Activity 6	Monitor distribution areas of wild relatives of cultivated plants: GPS-mapping of locations and elaboration and implement recommendations for improving conservation.	2012-2016	.TNP Directorate Solijonov Sh., Davlatov N., Mamarasulov M.	Distribution maps published. Recommendations on conservation elaborated and implemented.	150	50	100
Activity 7	Monitor livestock numbers and impact	2012	SANPA, TNP	Monitoring report.	50	20	30

	in traditional grazing areas.	and 2015	Directorate, Academy of Science				
Activity 8	Facilitate monitoring of status and developments of the Fedchenko glacier in response to global warming. GPS-mapping of the lower part of the glacier.	2012-2016	TNP Directorate Solijonov Sh., Davlatov N., Mamarasulov M. Glaciologist from State Agency of Hydrometeorology	Maps and report on result of glacier monitoring.	200	30	170
Activity 9	Promote survey (satellite imagery) on status of the main glaciers in TNP and establishment of long term monitoring programme.	2012-2013	SANPA TNP Directorate State Agency of Hydrometeorology, and Academy of Science	Report. Monitoring programme established.	150	20	130
Activity 10	Collect, analyze and record major annual events and developments in the park.	2012-2016	TNP Directorate Solijonov Sh., Davlatov N., Mamarasulov M.	Annual report on major events.	25	25	0

Objective 4	**Support for TNP conservation raised in the population living in the TNP area, by a broad public education and awareness programme and specific rural development activities.**						
Activity 1	Elaborate Education/Awareness Strategy directed at different target groups.	2013	SANPA TNP Directorate with support from Ministry of Education	Strategy established by 2013 and implemented.	50	10	40
Activity 2	Prepare a film about the nature of TNP, brochures and advertising booklet.	2012-2016	TNP Directorate Solijonov Sh., Davlatov N., Mamarasulov M.	Film about nature of TNP, brochures and booklet	100	10	90
Activity 3	Initiate periodic publication of articles and interviews of leaders in mass media, researchers and experts on biodiversity conservation and TNP activities.	2012-2016	TNP Directorate Solijonov Sh., Davlatov N., Mamarasulov M.	Regular articles in Mass media.	10	10	0
Activity 4	Organize an exhibition about nature of the Pamirs and the Pamir-Alay.	2012-2016	TNP Directorate Solijonov Sh., Davlatov N., Mamarasulov M.	3 exhibitions organized.	50	10	40
Activity 5	Organize an annual “March for TNP” with students, schoolchildren, representatives of the local society,	2012-2016	TNP Directorate, University,	Annual	100	20	80

	decision makers and mass media.		schools and Mass media				
Activity 6	Explore possibilities for supporting energy efficiency and providing alternative energy resources to local population around the park and assist in following up recommendations.	2012-2013	TNP Directorate with local authorities	Report. Results based on recommendations.	500	0	500
Activity 7	Identify, and allocate pasture and hayfields for use by local populations in the TNP economic use zone, to promote cooperation and support for TNP goals in local communities around TNP	2012-2016	TNP Directorate with local authorities	Pastures and hay fields identified and allocated to the local people.	10	10	0
Objective 5	**Monitoring of management effectiveness**						
Activity 1	Monitor annual work plan implementation	2012-2016	SANPA and TNP Directorate	Evaluation report	30	30	0

Approved by
the Chairman of the Committee
for Environment Protection
under the Government of
the Republic of Tajikistan

_____ T.O.Salimov

"_____" _____ 2012

4.6 Annual Work Plan for 2012

Activities and objectives	Actions	Time limits	Executor	Indicators	Financial expenses, thousand somoni	Sources of financing	
						A. State budget	B. Donors
Objective 1	**Effective law enforcement and wildlife management activities established and maintained**						
Activity 1	Strengthen ranger network by increasing staff and supplying park staff with transport facilities (vehicles, and motorbikes), binoculars, and cameras.	2012	State Agency of Natural Protected Areas (SANPA) and TNP Directorate	1 vehicle 4 motorbikes provided, 2 binoculars and 2 cameras purchased	88,5	48,5	40
Activities 2	Purchase uniforms for TNP staff	2012	Chief of Finance department of SANPA Rakhimov V.	20 rangers have uniforms	25	13	12

Activities 3	Ensure funding for construction of the administrative buildings	2012	Chief of Finance department of SANPA Rakhimov V.	Continuation of construction	28,6	28,6	0
Activities 4	Operational costs (stationeries, household equipment, repair of vehicles, electricity, telephone, internet, water supply, etc.)	2012	Chief of Finance department of SANPA Rakhimov V.	Equipment in place	25	10	15
Activities 5	Acquisition of vehicles and boats for development of tourism, such as tents, and transport equipment.	2012	Division on Tourism and International Relations of SANPA	Availability of vehicles, motor boats, tents and other equipments.	40	10	30
Activity 6	Carry out training seminars for rangers and other conservation staff	2012	SANPA and TNP Directorate	Two training courses for up to 20 staff	10	5*	5
Activity 7	Establish and support network of volunteer rangers	2012	SANPA and TNP Directorate	Voluntary ranger network operational in all district (6) 2012/13	3	3**	0
Activity 8	Strengthen cooperation between ranger network and other law enforcement bodies	2012	SANPA and TNP Directorate, regional and district authorities	Joint patrols, cooperation on legal issues, information exchange established.	2	2**	0

Activity 9	Regular patrols of key wildlife habitats and the traditional use zone by rangers.	2012	TNP Directorate Solijonov Sh., Davlatov N., Mamarasulov M.	Reduction of poaching by 10 % based on 2011 data.	30	4	26
Activity 10	Establish boundary demarcation; manufacturing and installation of information panels in places frequently visited by local people and tourists.	2012	TNP Directorate Solijonov Sh., Davlatov N., Mamarasulov M.	Presence of installed panels, at least 10 % of relevant borders marked.	35	5*	30
Activity 11	Promote conservation of Indian goose and Tibetan snowcock by enhancing protection of their habitats.	2012	TNP Directorate Solijonov Sh., Davlatov N., Mamarasulov M.	Monitoring programme established	30	5*	25
Activity 12	Improve habitat for argali, ibex and snow leopard by limiting or banning cattle grazing and limiting herder access to critical habitats, e.g. breeding and lambing sites.	2012	SANPA and TNP staff	Baseline data will be established and used as monitoring tool for the following years.	20	2	18
Activity 13	Initiate feasibility study on trophy hunting for limited economic use zone.	2012	External experts and SANPA and TNP staff	Report on possible sites for trophy hunting (Lake Karakul, Marjanay	30	5*	25

				valley and Southern Alichur Range, Muzkul *zakaznik*			
Objective 2	**Infrastructure for environmentally friendly tourism established**						
Activity 1	Develop and advertise hiking trails.	2012	SANPA and TNP Directorate	At least 2 hiking trails established Maps and information booklet distributed	20	4	16
Activity 2	Establish park owned tourist guesthouse with all necessary equipment for accommodation, kitchen and transport such as vehicles boats and tents.	2012	SANPA and TNP Directorate	Search for potential donor	5	5*	0
Activity 3	Production of promotional booklets, maps with tourist destinations, natural, historical, and cultural attractions, etc.	2012	SANPA and TNP Directorate	Availability of booklets.	10	4	6
Activity 4	Promote cooperation with “De Pamiri Handicraft” and the “Yak House” in Murghab to assist local people in villages inside and around the park in the production of tourist souvenirs.	2012	SANPA and TNP Directorate	Cooperation with these 2 NGO established in 2012 and working by 2013	30	0	30
Activity 5	Train local people as tour guides.	2012	SANPA and TNP Directorate	Up to 10 people trained	5	2**	3

Activity 6	Establish camping sites, with all necessary facilities including information panels with information on the park and the relevant site.	2012	SANPA and TNP Directorate	2 sites established	20	0	20
Objective 3	**Wildlife and habitat monitoring and research system established**						
Activity 1	Implement and monitor trophy hunting according to recommendations from feasibility study and legal regulations.	2012	SANPA and TNP Directorate	Guidelines and Report	5	2**	3
Activity 2	Preparation of simple and practical methodology for monitoring of key indicator species of flora and fauna.	2012	SANPA, TNP Directorate, Academy of Science	Availability of methodology.	2	2	0
Activity 3	Training for TNP staff on monitoring species, diversity of flora and fauna and natural resources.	2012	SANPA, TNP Directorate, Academy of Science	1 seminar and 1 training, 20 staff trained.	30	0	30
Activity 4	Wildlife surveys in autumn and analysis habitat status.	2012	TNP staff and hired specialist	Survey report	12	2	10
Activity 5	Carrying capacity established for Marco Polo sheep and Ibex in key habitats.	2012	SANPA and TNP Directorate	Key habitats and their carrying capacity identified.	6	4	2
Activity 6	Bird nesting sites around Lake Karakul and Lake Sarez identified and restriction of land use in these areas established.	2012	SANPA, TNP Directorate, Academy of Science	Nesting sites for wetland birds identified and free from disturbance (livestock and	12	2	10

				people).			
Activity 7	Monitor livestock numbers and impact in traditional grazing areas.	2012	SANPA, TNP Directorate, Academy of Science	Monitoring report.	10	3**	7
Activity 8	Promote survey (satellite imagery) on status of the main glaciers in TNP and establishment of long term Environmental monitoring (weather, glaciers) programme.	2012	SANPA TNP Directorate State Agency of Hydrometeorology, and Academy of Science	Report. Establishment of Monitoring programme under way	10	4	6
Activity 9	Collect, analyze and record major annual events and developments in the park	2012	TNP Directorate Solijonov Sh., Davlatov N., Mamarasulov M.	Annual report on major events.	5	5**	0
Objective 4	**Support for TNP conservation raised in the population living in the TNP area, by a broad public education and awareness programme and specific rural development activities.**						
Activity 1	Elaboration of 3-year Awareness and Education Program with clear milestones to reach different target groups.	2012	SANPA TNP Directorate with support from Ministry of Education	Elaboration of strategy under way, to be completed by 2013	10	0	10

Activity 2	Periodic publications in mass media	2012	SANPA TNP Directorate with support from State Committee of TV and Radio	Regular articles in Mass media.	5	5***	0
Activity 3	Organize an exhibition about nature of the Pamirs and the Pamir-Alay.	2012	SANPA TNP Directorate with support from Committee for Environment Protection	1 exhibition organized.	15	5**	10
Activity 4	Organize an annual “March for TNP” with students, schoolchildren, representatives of the local society, decision maker and mass media.	2012	TNP Directorate, University, schools and Mass media	One event organised.	10	5 **	5
Activity 5	Explore possibilities for supporting energy efficiency and providing alternative energy resources to local population around the park and assist in following up recommendations.	2012	TNP Directorate with local authorities	Identify possible funder for investigation and implementation.	20	0	20
Activity 6	Identify, and allocate pasture and hayfields for use by local populations in the TNP economic use zone and traditional use zone to promote cooperation and support for TNP goals in local communities around TNP. Make agreement with local communities on livestock numbers.	2012	TNP Directorate with local authorities	Pastures and hay fields identified and allocated to the local people. Livestock numbers agreed	5	3*	2

Objective 5	**Monitoring of management effectiveness**						
Activity 1	Annual Review of the Management Plan with assessment of achievements, failures and constraints and recommendations for improvements.	2012	TNP Directorate Solijonov Sh., Davlatov N., Mamarasulov M.	Review of indicators.	3	3**	0
Activity 2	Monitor annual work plan implementation	2012	SANPA and TNP Directorate	Evaluation report	6	6**	0
Activity 3	Ensure salary for staff	2012	Chief of Finance department of SANPA Rakhimov V.	Finance report	249,743	249,743	0
				Subtotal I: State Budget for TNP		**387,843**	
				*Subtotal II: Budget from TNP Eco tourism		**28**	
				**Subtotal III: Support Budget from CEP		**36**	
				***Subtotal IV: State Budget direct from State Committee of TV and Radio		**5**	
				TOTAL:	**872,843**	**456,843**	**416**

Head of State Agency of the Natural Protected Areas **N. Saidov**

Annexes

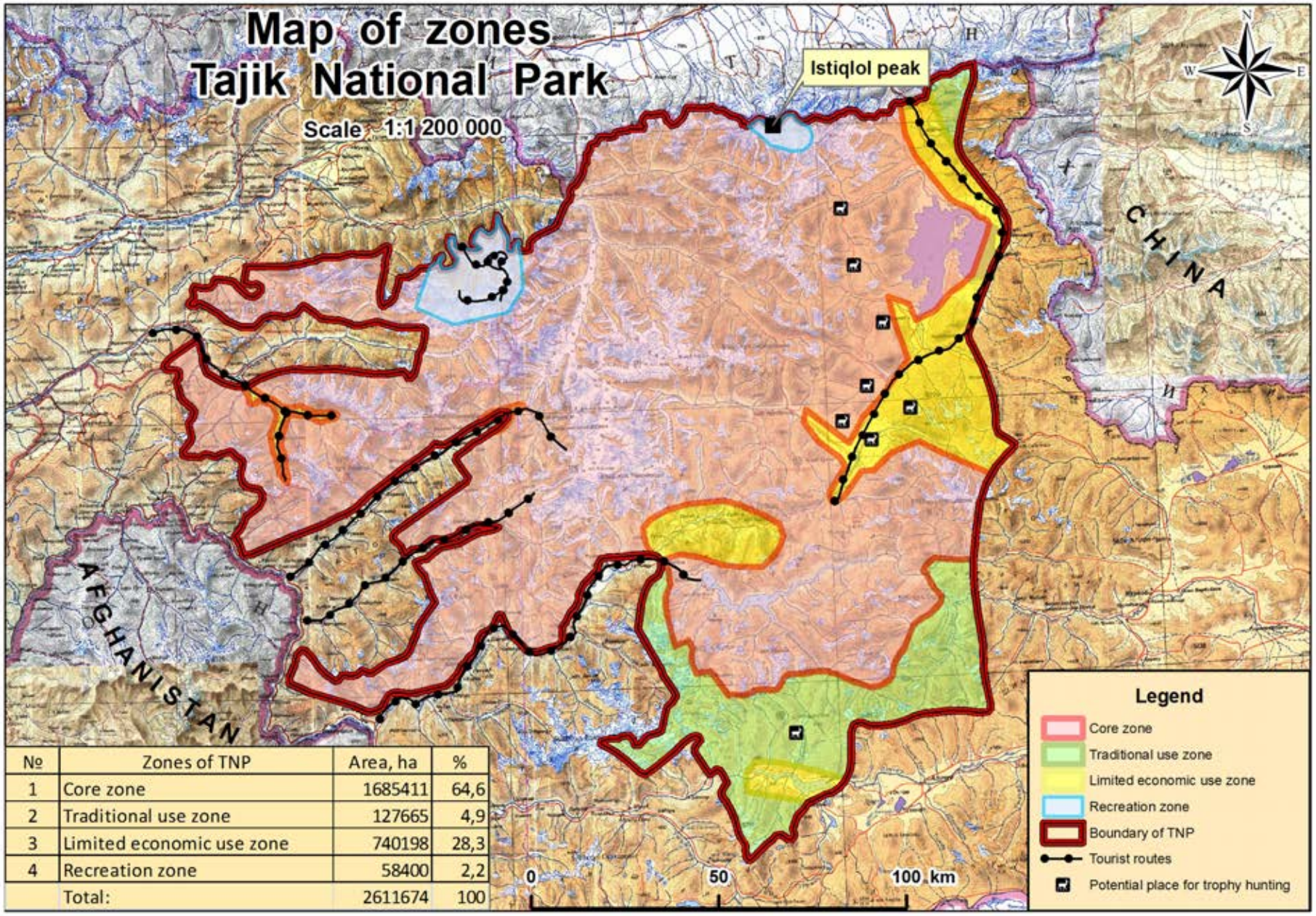
ANNEX 1. List of Member Working Group for Preparation of Management Plant for TNP

According to order of Chairman of CEP from April 29, 2011 under number 46 was created working group from national experts. The list of member of national experts included:

1. Dr. Nurali Saidov – Head of State Agency of Natural Protected Areas – Head of National Expert Group;
2. Mr. Usefbek Usufbekov - Deputy of Head of State Agency of Natural Protected Areas – deputy of Head of national experts;
3. Dr. Adulnazar Abdulnazarov – Head of department of forestry of Gorno Badakhshan Autonomous Oblast (GBAO) – member of working group;
4. Mr. Shodibek Qurbonov – Expert of Department of Forestry and Natural Protected Areas of Committee for Environment Protection under Government of the Republic of Tajikistan - member of working group;
5. Mr. Ustyan Ivan Petrovich – Chief of department of nature reserve and parks of State Agency of Natural Protected Areas- member of working group;
6. Mr. Shodi Solijonov – Director of regional office of Tajik National Park in GBAO - member of working group;
7. Dr. Rustam Murodov – Senior research worker of Institute of zoology and parasitology of Academy of Science of Tajikistan - member of working group;
8. Mr. Alisher Agzamov – Attaché of Tajik National committee of UNESCO - member of working group;
9. Dr. Butorin A.V. - Senior research worker of Institute of Geography of Academy of science of Russian - member of working group;
10. Mr. Shvartz A.B. – GIS consultant;
11. Dr. Hartmut Jungius – International consultant to IUCN and WWF International.
12. Ms. Gafurova Irina Akhmedova- Cartographer engineer, Chief Administration for Geodesy and Mapping (Tajikaerokosmogeodezija).
13. Mr. Ubaidullo Akramov – Expert on education.

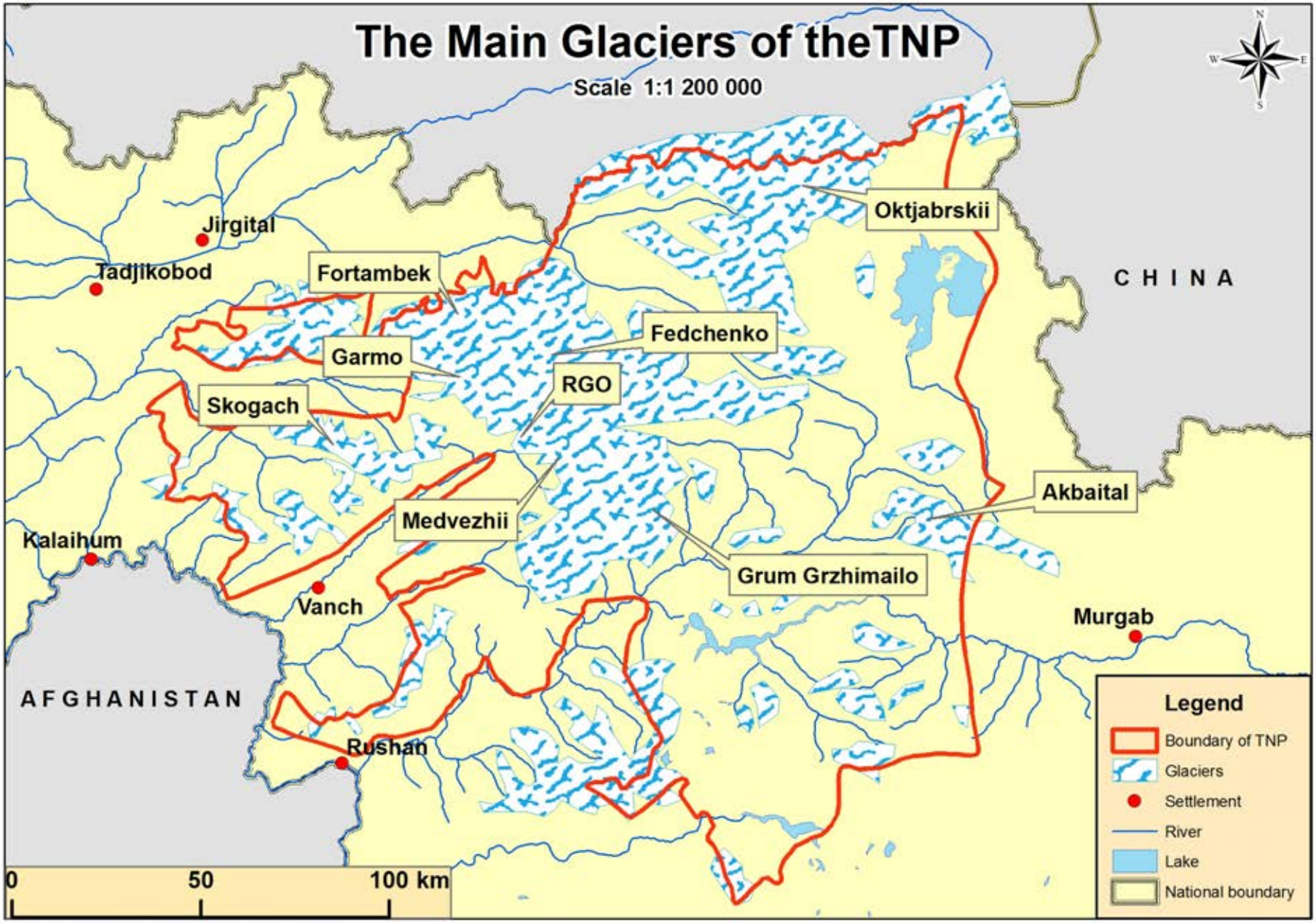
ANNEX 2. Map of TNP View

ANNEX 3. Zones of TNP



№	Zones of TNP	Area, ha	%
1	Core zone	1685411	64,6
2	Traditional use zone	127665	4,9
3	Limited economic use zone	740198	28,3
4	Recreation zone	58400	2,2
	Total:	2611674	100

ANNEX 4. The Main Glaciers of the TNP.



ANNEX 5. Flora and Fauna

LIST OF COMMON AND RARE SPECIES OF THE PAMIR

Flora	Fauna
PLANT RARE SPECIES (RED BOOK)	**ANIMAL RARE SPECIES (RED BOOK)**
	Insects
Acantholimon varivtzevae	*Carabus (Deroplectes) sphinx dardazicus* - Carabus beetle
Allium stipitatum	*Papilio alexanor* – Butterfly
Androsace bryomorpha	*Polyommatus (Eumedonia) kogistana* - Small blue-winged butterflies
Astragalus darwasicus	*Dolbinopsis grisea* - Hawkmoth
Atraphaxis karataviensis	
Bergenia stracheyi	**Reptiles**
Bunium persicum	*Ablepharus alaicus* – Alai snake-eyed skink
Cephalopodum badachschanicum	*Vipera lebetina* – Levantine viper
Chesneya tadshikistana	
Cousinia corumbosa	**Birds**
Cousinia hilariae	*Anser indicus* – Bar-headed (Indian/mountain) goose
Desideria pamirica	*Ibidorhyncus struthersi* – Ibis-bill
Desmatodon altipes	*Neophron percnopterus* – Egyptian vulture
Erianthera rhomboidea	*Gyps himalayensis* – Himalayan griffon
Erianthera rhomboidea	*Gypaetus barbatus* – Lammergeyer
Ficus carica	*Aquilia chrysaetus daphanea* – Golden eagle
Gymnospermium darvasicum	*Falco cherrug coatsi* – Mongol saker falcon
Gymnospermum darvasicum	*Falco peregrinus babylonicus* –Barbary falcon
Iris hoogiana	*Tetraogallus tibetanus* – Tibetan snowcock
Jasminum revolutum	*Charadrius mongolus pamirensis* – Shortbilled plover
Juno baldshuanica	*Larus brunnicephalus* – Brown-headed gull
Juno tadshikorum	*Syrrhaptes tibetanus* – Tibetan Pallas sand grouse
Jurinea darvasica	*Columba leuconota* – Snow pigeon
Keyserlingia mollis	*Columba palumbus casiotis* – Ring dove
Kudrjaschevia korshinskyi	*Chaimarrornis leucocephala* – White crowned
Kudrjaschevia nadinae	

Ostrowskia magnifica *Oxytropis astragaloides* *Oxytropis hedini* *Paeonia intermedia* *Parasilaus asiaticus* *Petilium eduardii* *Polygonum ovczinnikovii* *Primula flexuosa* *Pulsatilla kostyczewii* *Rosularia lutea* *Saussurea caprifolia* *Saxifraga albertii* *Saxifraga pulvinaria* *Seseli sclerophyllum* *Tragacantha alexeenkoana* *Tulipa anisophlla* *Tulipa lehmanniana* *Tulipa linifolia* *Vassilczenkoa sogdiana* *Zygophyllum darvasicum*	(water) redstart *Myophonus caeruleus turkestanicus* – Blue bird **Mammals** *Ursus arctos isabellinus*– Tien Shan brown bear *Mustela altaica sacana* – Alpine weasel *Lutra lutra* – Otter *Lynx lynx isabellina* – Turkestan lynx *Panthera (Unicia) uncia* – Snow leopard *Ovis ammon polii* – Pamir Marco Polo argali sheep
COMMON SPECIES **Nival – 4800m+** *Melandrium apetalium* *Ctrastium ctrastoides* *Tanacetum xhyllorhisum* *Sibalidia tetranda* **Alpine-4200-4800m** *Tanacetium xyllorhisum* *Oxytropis immerse* *O. poncinsii* *Smelovskia calicina*	**COMMON SPECIES** **Fish** *Schizopygopsis stoliczkai* – false osman *Schizotorax intermedius* – marinka *Nemachilus stoliczkai lacusnigri* – Karakul loach (endemic) **Amphibians** *Bufo viridis* complex – green toad (species group) *Rana ridibunda* – sea frog **Reptiles** *Agrionemus horsfieldi* – Central Asian tortoise

Eurotia ceratoides *Artemesia skornjakovii* *Tanacetium xyllorhisum* **Sub-alpine – 4100-4200m** Eurotia and Stipa desert steppe *Ceratoides paposa* – teresken, gray eurotia *Artemesia rhodantha* – sagebrush *Ajania tibetica* *Acantholimon diapensioides* *Oxytropis immerse* *Subbaldia tetranda* *Festuca sulcata* *Stipa glareosa* *S. oritntalis* *Christolea crassifolia* **Sub-alpine meadows** *Carex melanantha* *C. pseudo-foetida* *C. orbicularis* *Kobresia capilliformis* *K. stenocarpa* *Artemesia rutfolia* *A. santolinifolia* *Waldheimia rutifolia* *Saussurea glacialis* *Macrotomia euchroma* *Medisarum cephalotes* *Acantholimon pamiricum*	*Laudakia himalayana* – Himalayan agama *Ablepharus brandti* – Asiatic snake-eyed skink *Natrix tesselata* – water snake *Hemorrhois ravergieri* – spotted whip snake *Agkistrodon halys* – halys viper **Birds** *Charadrius mongolus pamirensis* (endemic)– Pamir plover *Oenanthe xanthoprymna chrysopygia* (endemic) *Montifringilla nivalis alpicola* (endemic) - Alpine snow finch *Carduelis flavirostris pamirensis* (endemic) - Pamir twite *Leucosticte brandti pamirensis* (endemic) - Pamir Brandt's rosefinch *Phalocrocoracs carbo sinensis* – Great cormorant *Ardea cinerea cinerea* – Common heron *Eulabea indica* – Bar-headed goose *Mergus merganser orientalis* – Himalayan merganser *Aythya ferina* – Pochard *Anas querquedula* – Garganey teal *A. platyrhynchos* – Mallard *Tadorna ferruginea* – ruddy shelduck *Falco cherrug milvipes* - Saker falcon *F. tinnunculus* - kestrel *Milvus korschun korschun* –Black kite *Neophron percnopterus percnopterus* – Egyptian vulture *Gypaetus barbatus hemachalanus* - Bearded vulture *Aquila chrysaetus daphanea* – Golden eagle *Gyps fulvus himalayensis* – Griffon vulture *Circus cyaneus cyaneus* – Hen harrier *C. aeruginosus aeruginosus* – Marsh harrier *Alectoris kekelik palescens* – Keklik *Tetraogallus himalayensis himalayensis* – Snowcock *T. tibetanus tibetanus* – Tibetan snowcock *Fulica atra atra* - Coot

	Gallinula chloropus chloropus – Gallinule *Charadrius dibius curonicus* – Little ringed plover *Ibidorhyncha struthersi* – Ibis bill *Tringa hypoleucos* – Fiddler *Capella gallinago gallinago* – Spine *Sterna hirundo tibetana* – Tibetan scray *Syrrhaptes tibetanus* – Tibetan or Pallas' sand grouse *Larus ichthyaetys* – Great black-headed gull *L. brunnicephalus* – Brown-headed gull *Columba rupestris turcetanica* – Blue hill pigeon *Athene noctua bactriana* – Little owl *Otus cops pulchellus* – Scops owl *Bubo bubo auspicoblis* – Eagle owl *Caprimulgus europaeus sarudnyi* – Nighthawk *Alcedo atthis atthis* – Halcyon *Upupa epops epops* – Hoopoe *Apus apus pekinensis* – Black swift *Calandrella acutirostris acutirostris* – Western slender-billed lark *Eremophila alpestris albigula* – Horned lark *Hirundo rustica rustica* – Common swallow *Delichon urbica meridionalis* – House martin *Riparia rupestris rupestris* – Crag martin *Oriolis orilois kundoo* – Indian oriole *Corvus corax tibetanus* – Tibetan raven *C. corone orientalis* – Eastern carrion-crow *Pica pica hemileucoptera* – Magpie *Pyrrhocorax pyrrhocorax brachypus* – Central Asian chough *P. graculus forsythi* – Central Asian alpine chough *Sitta tephronota* – Rock nuthatch *Tichodroma muraria* – Wall creeper *Cinclus cinclus leucogaster* – White-bellied dipper *C. pallassi tenuirostris* – Brown dipper

	Troglodytes troglodytes tianschanicus – Tien-Shan wren *Phylloscopus trochiloides viridanus* – Greenish warbler *Sylvia nisoria merzbacheri* – Barred warbler *S. communis rubicola* - Whitethroat *T. ruficollis atrogularis* – Black-throated thrush *Monticola saxatilis turkestancius* – Rock thrush *Myophonus caeruleus turkestanicus* – Turkestan whistling thrush *Oenanthe oenanthe oenanthe* – Common wheatear *O. xanthoprymna chrysopygia* – Red-tailed wheater *O. deserti oerophila* – Mountain desert wheatear *Saxicola torquata maura* – Blackcap *Phoenicurus ochruros phoenicuroides* – Turkestan black redstart *P. rythrogaster grandis* - Central-Asian Guldenstadt's redstart *Chaimarrornis leucocephala* – Whitecapped redstart *Lesvecica tianschanica* – Bluethroat *Microcichla scouleri scouleri* – Whitefoot *Prunella collaris rufilata* – Alpine accentor *P. himalayana* – Himalayan accentor *P. fulvescens fulvescens* – Tien Shan brown accentor *M. citreola verae* – Western yellow-headed wagtail *M. cinerea caspica* – Gray wagtail *M. alba personata* – Turkestan white wagtail *Lanius schach erythronotus* – Rufousbacked shrike *L. cristatus phoenicuroides* – Turkestan red-tailed shrike *Passer domesticus griseogularis* – Spadger *P. montanus pallidus* – Turkestan tree sparrow *Carduelis flavirostris pamirensis* – Pamir twite *Bucanetes mongolicus* – Mongol trumpeter bullfinch *Rhodopechys sanguinea sanguinea* – Asian red-winged rose-finch *Erythrina rubicilla diabolica* – Great rosefinch *E. erythrina kubanensis* – Scarlet finch *Fringilla coelebs coelabs* – Chaffinch

	Leucosticte nemoricola altaica – Hodgson's rosy finch *Emberiza bruniceps* – Red-headed bunting *E. leucocephala leucocephala* – Pine bunting *E. buchanani* – Gray-necked bunting **Mammals** *Microtus juldaschi* – Pamir field vole (endemic) *Cricetulus migratorius* – Migratory field vole *Marmota caulata* – Red marmot *Lepus tolai pamirensis* – Tolai hare (endemic) *Ochotona macrotis* – Piping hare *Alticola argentata* - Silver field vole *Lynx lynx isabellina* – Turkestan lynx *Panthera(Uncia) uncia* – Snow leopard *Mustela alticola* – Alpine weasel *Mustella nivalis pallida* – Least weasel *Martes foina intermedia* – Stone marten *Canus lupus laniges* – Wolf *Vulpes vulpes ferganensis* - Fox *Lutra lutra* – Otter *Ursus arctos isabellinus* – Tien Shan Brown bear *Capra sibirica sakeen* – Central-Asian ibex *Ovis ammon polii* - Pamir argali (endemic)

Table of TNP Mammalia with Russian names

№	Russian name	Latin name	English name
Artiodactula			
1.	Памирский архар	*Ovis ammon polii*	Marco Polo sheep
2.	Сибирский козерог	*Capra sibirica*	Ibex
3.	Кабан	*Sus scrofa*	Wild boar

		Carnivora	
4.	Снежный барс	*Panthera uncia*	Snow leopard
5.	Туркестанская рысь	*Lynx lynx*	Lynx
6.	Бурый медведь	*Ursus arctos*	Brown bear
7.	Волк	*Canis lupus*	Wolf
8.	Лисица	*Vulpes vulpes*	Fox
9.	Солонгой	*Mustela altaica*	Mountain weasel
10.	Ласка	*Mustela nivalis*	
11.	Горностай	*Mustela erminea*	Stoat
12.	Каменная куница	*Martes foina*	
13.	Барсук	*Meles meles*	Badger
14.	Среднеазиатская выдра	*Lutra lutra*	
		Lagomorpha	
15.	Большеухая пищуха	*Ochotona roylei*	Royle’s pika
16.	Красная пищуха	*Ochotona rutila*	
17.	Заяц-толай	*Lepus tolai*	Tolai hare
		Rodentia	
18.	Красный сурок	*Marmota caudate*	Long-tailed marmot
19.	Лесная соня	*Dryomys nitedula*	
20.	Туркестанская крыса	*Rattus turkestanicus*	Turkestan rat
21.	Домовая мышь	*Mus musculus*	House mouse
22.	Лесная мышь	*Apodemus sylvaticus*	Forest mouse
23.	Серый хомячок	*Cricetellus migratorius*	Grey hamster
24.	Серебристая полевка	*Alticola argentata*	Royle’s mountain vole
25.	Памирская полевка	*Microtus juldaschi*	Pamir vole
26.	Арчовая полевка	*Microtus carruthersi*	Junipers vole
27.	Восточная слепушонка	*Ellobius tancrei*	
		Chiroptera	
28.	Нетопырь карлик	*Pipistrellus pipistrellus*	
29.	Кожановидный нетопырь	*Vespertilio savii*	
30.	Усатая ночница	*Myotis mystacinus*	
		Insectivora	
31.	Бухарская бурозубка	*Sorex buchariensis*	
32.	Белохвостая белозубка	*Crocidura perigresea*	

Table of TNP Reptilia with Russian names

1. Степная черепаха – *Agrionemus horsfieldi*
2. Гималайская агама – *Laudakia himalayana*
3. Азиатский гологлаз – *Ablepharus brandti*
4. Алайский гологлаз – *Ablepharus alaicus*
5. Водяной уж – *Natrix tesselata*
6. Разноцветный полоз – *Hemorrhois ravergieri*
7. Гюрза – *Vipera lebetina*
8. Щитомордник – *Agkistrodon halys*

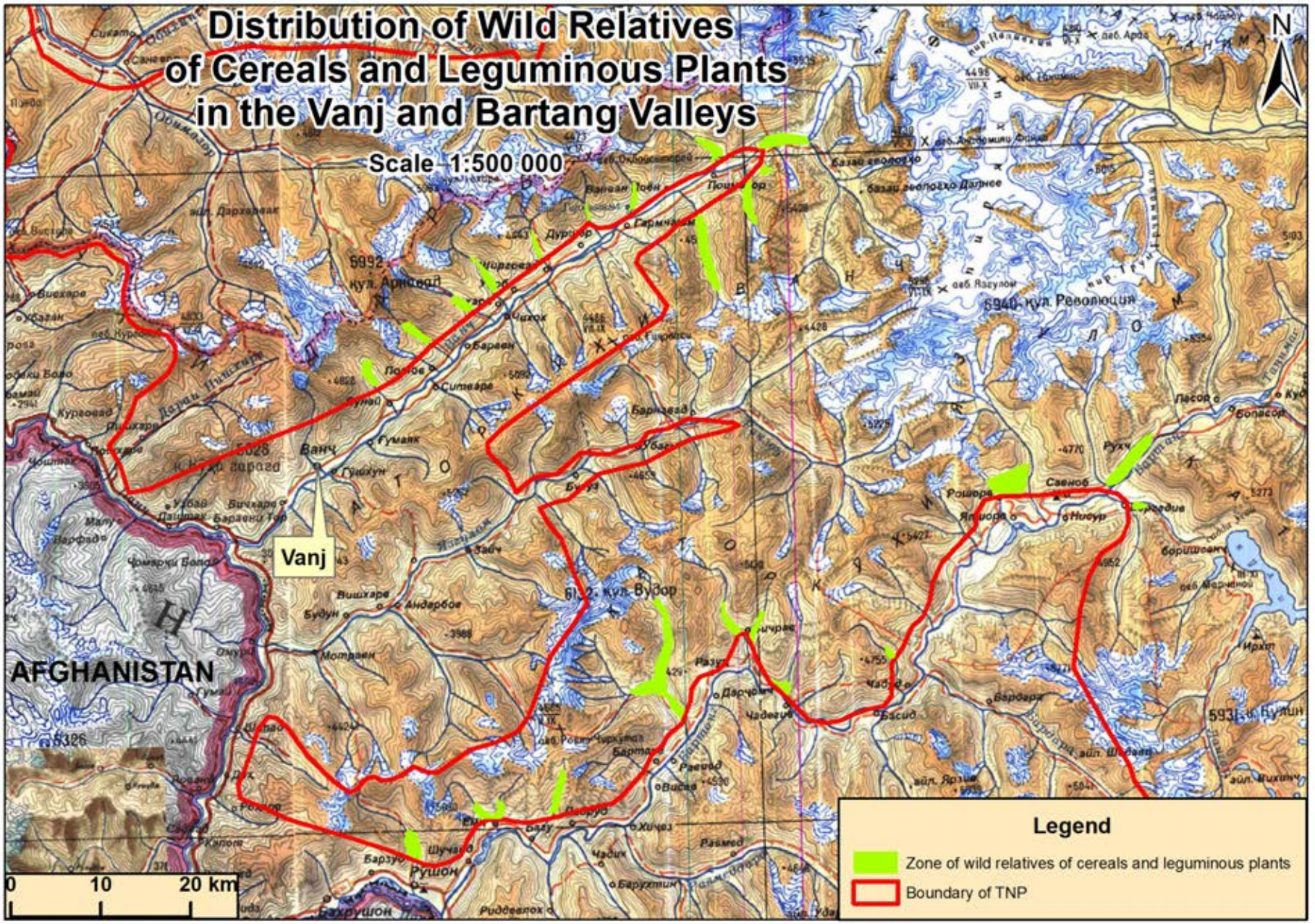
Table of TNP Amphibians with Russian names

1. Озерная лягушка – *Rana ridibunda*
2. Зеленая жаба – *Bufo viridis* complex

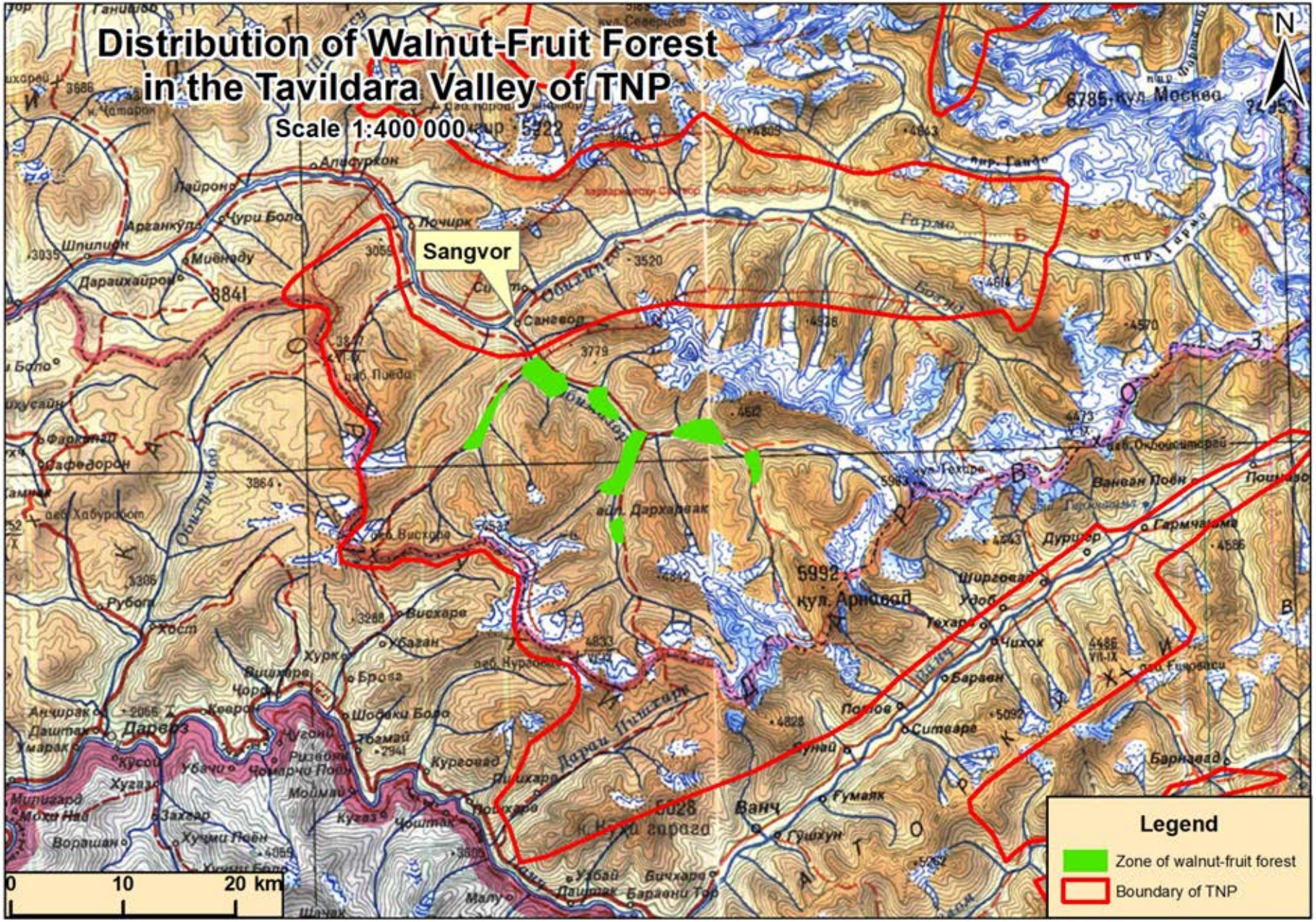
Table of TNP Fishes (Pisces) with Russian names

1. Обыкновенная маринка – *Schizothorax intermedius*
2. Лжеосман – *Schizopygopsis stoliczkai*
3. Каракульский голец – *Nemachilus stoliczkai lacusnigri*
4. Тибетский голец – *Nemachilus stoliczkai*
5. Иссыкульская форель – *Salmo ischan*
6. Амударьинская форель – *Salmo trutta*
7. Пелядь - *Coregonus peled*

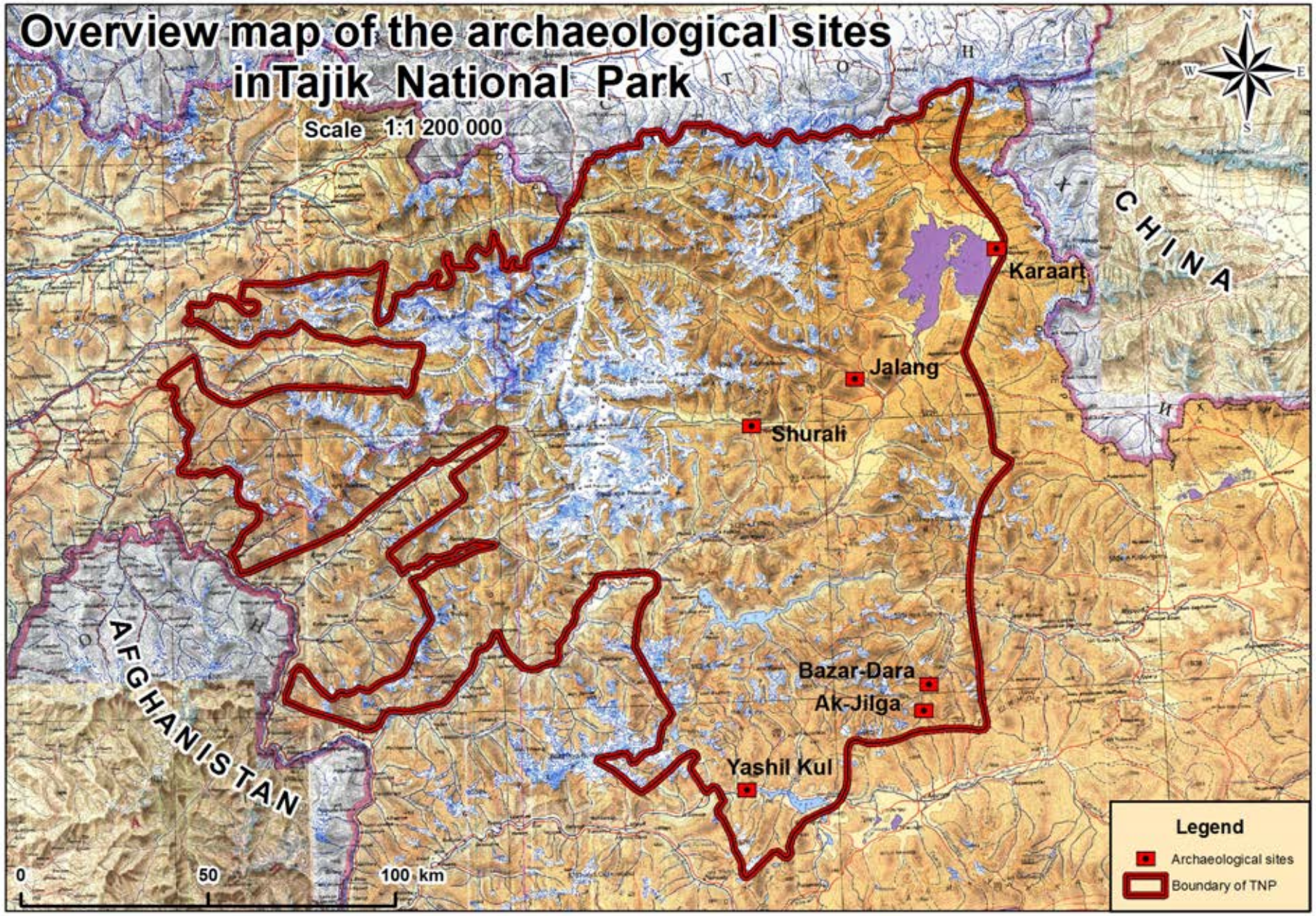
ANNEX 6. Distribution of Wild Relatives of Cereals and Leguminous Plants in the Vanj and Bartang Valleys.



ANNEX 7. Distribution of Walnut-Fruit Forest in the Tavildara Valley of TNP.

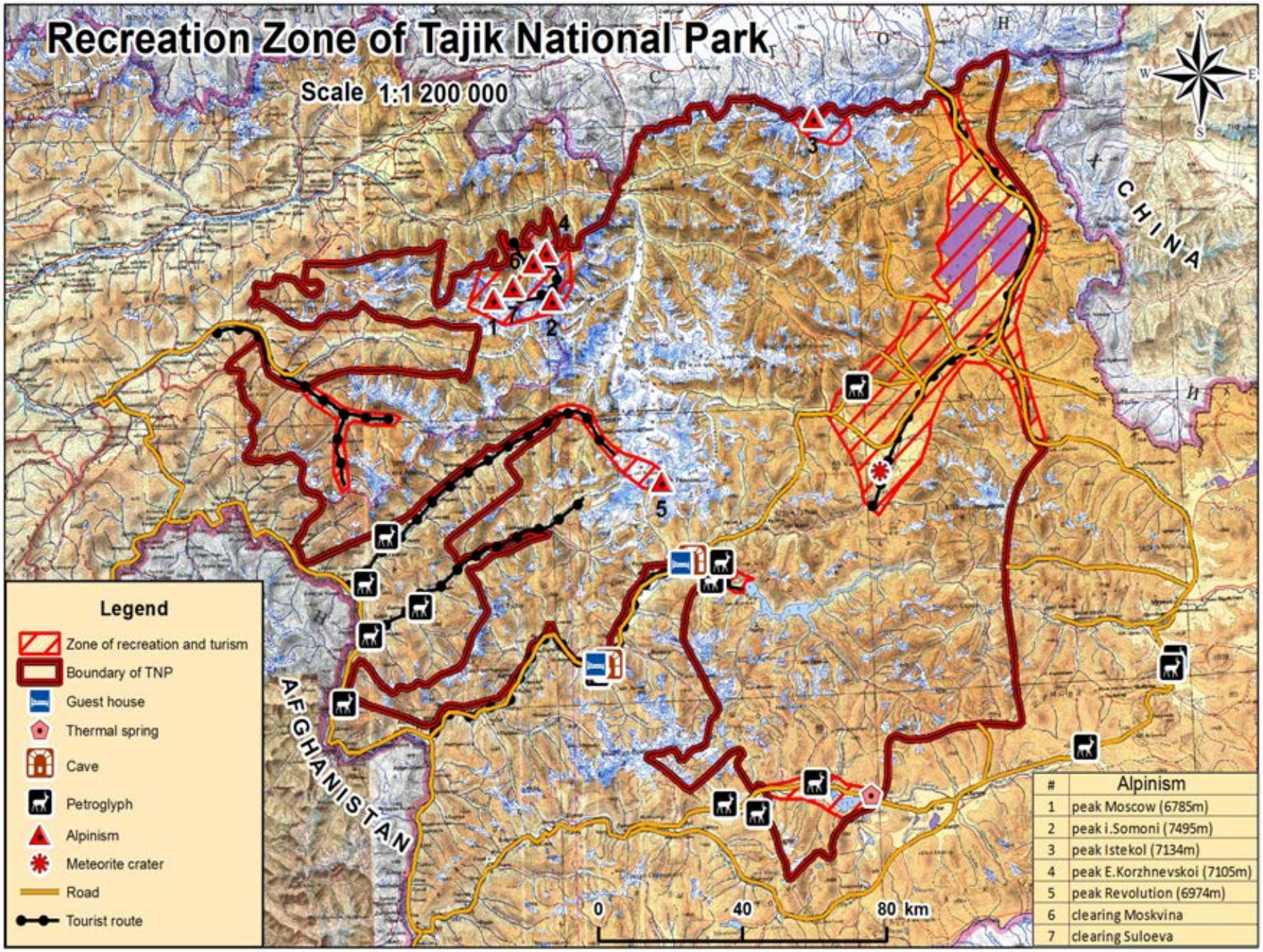


ANNEX 8. Overview map of the archaeological site in TNP.



ANNEX 9. Ranger Posts in TNP Areas.

ANNEX 10. Recreation Zone of TNP.



ANNEX 11.

Considerations on Possible Trophy Hunting in the Economic Use Zone of Tajik National Park

By

Dr. Hartmut Jungius

Trophy hunting of endangered species is considered as a controversial issue by the conservation community and should only be taken into account when all other options have been explored.

WWF states: "*This is particularly the case in areas where alternative sources of income or land use practices are unlikely to bring in much needed funds for people or wildlife, or create sufficient incentives for conservation*" and "*where it is scientifically based and properly managed*" trophy hunting "*has proven to be an effective conservation and management method*"

IUCN, Resolution 3.094 at the World Conservation Congress (Bangkok 2004) aims into the same direction by stating "*that well-managed recreational hunting has a role to play in the managed sustainable consumptive use of wildlife populations*

IUCN Caprinae Specialist Group is more specific and recognizes that "*under appropriate management conditions, trophy hunting can be a valid component of many conservation programs for Caprinae and their habitats*" that satisfy the following criteria: A science based-harvest and a conservation oriented use of the funds generated by trophy hunting. Hunting for purely economic goals is not supported

There is good evidence, from several countries in Africa, Asia and in Russia that scientifically based and well managed trophy hunting can be an effective conservation management tool, which produces significant revenues for nature conservation, supporting protected areas and local communities, in addition to help reduce poaching on the target species and other wildlife.

An essential aspect of trophy hunting in general and in protected areas in particular has to be that it produces not only benefits for the conservation of the species or its habitat but also for nature conservation/protected area management and for local communities. A significant proportion of revenue generated should be reinvested into conservation programmes.

Possible Trophy Hunting in the economic use zone of Tajik NP should be based on the above criteria with particular focus on:

1. Science based harvest and habitat management plans have to be established for ibex and Marco Polo sheep. Harvest of trophy males must be limited; a certain number of mature males must be allowed to die naturally. Excessive hunting of trophy males may lead to selection of small horns, or alter the life-history strategy of Caprinae males (IUCN Caprinae Specialist Group).
2. An adequate legal framework to regulate all aspects of the trophy hunting programme should be in place (e.g. quota, trophy standards, national legislation, professional guide and hunter standards).
3. Most of the range of Ibex and Marco Polo sheep are fully protected and serve as refuge for species affected by hunting.
4. A science based monitoring programme.
5. Funds generated by trophy hunting are used for conservation. A substantial part of the revenues should be spent on habitat management and protection, population monitoring, education, research and support for local communities).

Unacceptable is:

1. Hunting for purely economic reasons, where revenues go into government funds or to the international outfitters
2. Lack of benefits to local communities
3. Predator control
4. Artificial feeding
5. Selective hunting with the goal to affecting horn morphology
6. Overharvest

Background Information:

- WWF (2007); 3 case studies: WWF Projects with a trophy hunting component
- WWF (2010); Using trophy hunting as an effective conservation tool
- Ute Grimm (2008) CITES Scientific Authority; Trophy hunting for endangered species.
- IUCN, Resolution 3.094 at the World Conservation Congress (Bangkok 2004).
- IUCN Caprinea Specialist Group (2008) http://pages.uherbrooke.ca/mfesta/iucnwork.htm

КОМИССИЯИ МИЛЛИИ
ҶУМҲУРИИ ТОҶИКИСТОН
ОИД БА КОРҲОИ ЮНЕСКО

NATIONAL COMMISSION
FOR UNESCO
REPUBLIC OF TAJIKISTAN

хиёб.Рӯдаки 42, Душанбе, Ҷумҳурии Тоҷикистон
тел.: 992 37 221 17 50; факс: 992 372 221 02 59
unesco@mfa.tj
42 Rudaki av., Dushanbe, 734051, Tajikistan
tel.: 992 37 221 17 50, fax: 92 37 221 02 59

Ref.: 295

Subject: Supplementary information on IUCN Evaluation

Tajikistan National Commission for UNESCO presents its compliments to the UNESCO World Heritage Centre and has the honor to transfer the letter of Committee for Environment protection under the Government of the Republic of Tajikistan regarding the IUCN Evaluation of the "Tajik National Park (Mountains of the Pamir)" (Tajikistan) –Request for Supplementary information.

Tajikistan National Commission for UNESCO avails itself of this opportunity to renew to the UNESCO World Heritage Centre the assurances of its highest consideration.

Dushanbe, February 12th, 2013

UNESCO World Heritage Centre

Dir WHC
rec'd 20.02.13
→ EUR
→ PSM

COMMITTEE FOR ENVIRONMENT PROTECTION UNDER THE GOVERNMENT OF THE REPUBLIC OF TAJIKISTAN

734034, Republic of Tajikistan, Dushanbe, 5/1 Shamsi street, Tel: +(992 37) 2364059, Fax: +(992 37) 2361353, http://www.hifzitabiat.tj, E-mail:muhit@hifzitabiat.tj

№ 1/4-03-195
«12» February 2013.

To Director of World Heritage Programme of International Union for Conservation of Nature (IUCN) H.E. Mr. Tim Badman

Your Excellency,

The Committee for Environment Protection under the Government of the Republic of Tajikistan highly appreciated excellent results of technical evaluation mission to the Tajik National Park (Mountains of the Pamirs) conducted by the World Heritage Programme of International Union for Conservation of Nature (IUCN).

The Committee for Environment Protection under the Government of the Republic of Tajikistan with a great pleasure inform You that your request for Supplementary Information on IUCN Evaluation of the Tajik National Park (Mountains of the Pamirs) (Tajikistan) from December 20, 2012 was reviewed and States Parties willing to providing fully support to this request.

In this connection the Committee for Environment Protection under the Government of the Republic of Tajikistan guarantees that each year according to "The Management Plan of the Tajik National Park for the period of 2012-2016" it will be allocated fives vacancies of rangers for the Tajik National Park.

We again express our highly appreciation to You and willing to collaborate with IUCN in this very important field.

Attachment: 2 pages, Staffing table and salary rates of Tajik National Park (TNP) staff according to approved State Budget for 2013 year.

Chairman T. Salimov

Copy to: UNESCO Word Heritage Centre, Mr. Jing Feng and Mr. Alessandro Balsamo;
IUCN Regional Office in Europe, Mr. Hans Ereiderich, Regional Director;
Tajik National Commission for UNESCO, Ms. Shahlo Abdurahimova, Secretary-General.

Approved by
the Chairman of the Committee
for Environment Protection
under the Government of
the Republic of Tajikistan
T.O.SALIMOV
"29" January 2013

Staffing table and salary rates of Tajik National Park (TNP) staff according to approved State Budget for 2013 year

Years		2012			2013			
№	Name of position	Staff quantity	Monthly salary per unit in Tajik Somoni	Total monthly salary for staff in Tajik Somoni	Staff quantity	Monthly salary per unit in Tajik Somoni	Total monthly salary for staff in Tajik Somoni	Difference
1	Director of regional TNP office in Gorno-Badakhshan Autonomous Region (GBAR)	1	343,20	343,20	1	600,00	600,00	256,80
2	Director of TNP in Tavildara and Jirgatol districts	2	286,00	572,00	2	500,00	1 000,00	428,00
3	Deputy director of regional TNP office in GBAR	1	314,60	314,60	1	550,00	550,00	235,40
4	Chief accountant in TNP office in GBAR	1	286,00	286,00	1	500,00	500,00	214,00
5	Chief accountant in Tavildara and Jirgatol districts	2	243,10	486,20	2	425,00	850,00	363,80
6	Human resources officer in TNP office in GBAR	1	185,90	185,90	1	325,00	325,00	139,10

7	Main specialists in TNP office in GBAR	4	286,00	1 144,00	4	500,00	2 000,00	856,00
8	Main specialists in Tavildara and Jirgatol districts	2	257,40	514,80	2	450,00	900,00	385,20
9	Leading specialists in TNP office in GBAR	6	228,80	1 372,80	6	350,00	2 100,00	727,20
10	Chief of TNP district subdivisions in GBAR	3	314,60	943,80	3	550,00	1 650,00	706,20
11	Senior rangers in GBAR	3	200,20	600,60	3	325,00	975,00	374,40
12	Senior rangers in Tavildara and Jirgatol districts	2	178,75	357,50	2	300,00	600,00	242,50
13	**Rangers in GBAR***	**7**	**171,60**	**1 201,20**	**15**	**300,00**	**4 500,00**	**3 298,80**
14	**Rangers in Tavildara and Jirgatol districts***	**7**	**157,30**	**1 101,10**	**9**	**275,00**	**2 475,00**	**1 373,90**
15	Supply manager in GBAR	1	185,90	185,90	1	325,00	325,00	139,10
16	Supply manager in Tavildara and Jirgatol districts	2	171,60	343,20	2	300,00	600,00	256,80
17	Driver	3	171,60	514,80	3	300,00	900,00	385,20
18	Security guard	3	114,40	343,20	3	200,00	600,00	256,80
19	Cleaner	3	114,40	343,20	3	200,00	600,00	256,80
Monthly		**54**	4 211,35	11 154,00	**64**	7 275,00	22 050,00	10 896,00
Annual		**12**		**133 848,00**	**12**		**264 600,00**	**130 752,00**

**Difference between 2012 and 2013 years in increasing of rangers staff according to the Tajik National Park Management Plan for 2012-2016 years.*

Head of State Agency of
the Natural Protected Areas
"29" January 2013

N. Saidov