

PROPOSALS ON DEVISING THE BIKIN NATIONAL PARK MANAGEMENT PLAN

1. The Infrastructure Formation

In order to fulfil the Bikin National Park's tasks effectively, it is planned to create the production infrastructure (*Fig.1*), including:

- The Central Office in Krasny Yar settlement
- The operational office in Luchegorsk urban-type settlement
- A visit center at the Khabarovsk-Nakhodka motorway, near the bridge across the River Bikin
- A visit center in Okhotnichiy settlement
- An office for organizing the protection in Maximovka settlement (or Terney settlement)
- An office for organizing the protection in Vostok-2 settlement (or Roshchino settlement)
- 2 scientific monitoring centers (Ulma and Laukha)
- 4 basic protective cordons (Ada, Zeva, Tavasikchi, Vostok-2)
- 15 permanent protective cordons
- Patrol itineraries and paths with stop points
- Permanent inventorying itineraries and paths
- Permanent sites for monitoring and observing the wild animals, birds, and vegetation
- 3 airdromes for small aircraft (Laukha, Okhotnichiy settlement, Ada)
- 9 helidromes

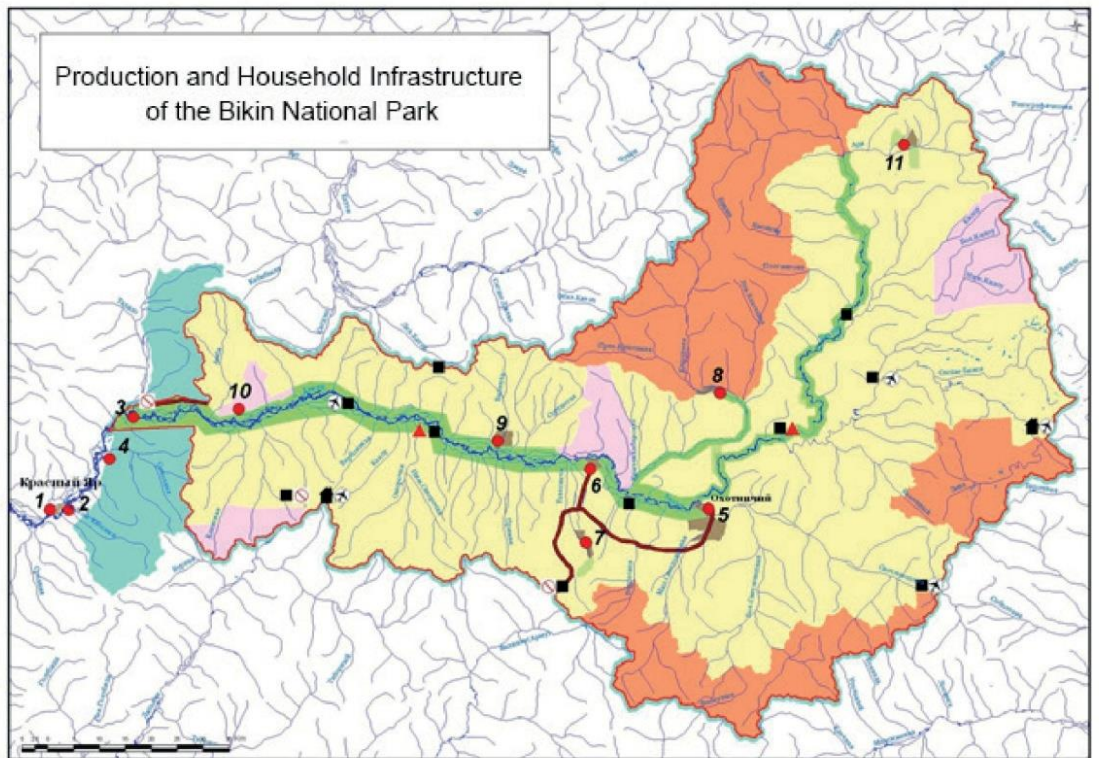








Fig. 1. Production and Household Infrastructure of the Bikin National Park

The Legend to the Map of the Bikin National Park's Production and Household Infrastructure

Functional zones

	Reserved zone
	Special protection zone
	Recreational zone
	Zone for economic purposes
	Zone for traditional use of nature
	Protective zone

Production and household infrastructure

	Central protective cordon
	Permanent protective cordons
	Infrastructure for recreation and rest
	Places where roads are blocked
	Helidrome
	Planned earth roads

- **1. Bikin River's bank in Olon village:**
 - Airdrome for small aircraft (servicing the runway without a hard-surface pavement, equipping the place for storing and filling with fuels and lubricants for air and automobile transport, equipping the place for the passengers to wait for the plane, consolidation of the Bikin River bank from the side of the airdrome in order to prevent inundation).

- **2. Krasny Yar village:**
 - Construction of the Bikin National Park Administration building, with a helicopter pad on the roof of the building and other buildings and structures necessary to ensure the National Park functioning (garage, warehouse, etc.)
 - Construction of a nationally-styled building for accommodation and work of the Permanent Council of the Indigenous Small-Numbered Peoples of the Federal State Budgetary Establishment 'Bikin National Park'
 - Repairing and arranging the ethnocultural center of the indigenous small-numbered peoples (museum, souvenir workshop, hotel) and its territory

- **3. The area of the bridge across the River Bikin on Khabarovsk-Nakhodka motorway:**
 - Place for stopover and overnight stay of the guests and tourists (hotel, bath, pavilion, car parking, helidrome, equipment and transport rental place)
 - Motor filling station
 - Bikin National Park's check-point
 - Bikin National Park's visit center

- **4. On Khabarovsk-Nakhodka motorway, in the Bikin National Park's economic zone:**
 - Places where roads are blocked
 - National Park's permanent protective cordon

- **5. Okhotnichye village:**
 - Airdrome for small aircraft (servicing the runway without a hard-surface pavement, equipping the place for storing and filling with fuels and lubricants for air and automobile transport, equipping the place for the passengers to wait for the plane)
 - Hotel for the tourists and guests
 - Bikin National Park's visit center
 - Bikin National Park's check-point

- **6. Laukha site:**
 - Bikin National Park's scientific monitoring center
 - Bikin National Park's permanent protective cordon
 - Airdrome for small aircraft (servicing the runway without a hard-surface pavement)

- **7. Tavasikchi site, Melnichny Spring:**
 - Infrastructure for recreation and rest
 - National Park's central protective cordon
 - Helidrome

- **8. Bachelaza site:**
 - Infrastructure for recreation and rest
 - National Park's permanent protective cordon
 - Helidrome with place for storing fuels and lubricants

- **9. Khabagou site:**
 - Infrastructure for recreation and rest
 - National Park's permanent protective cordon
 - Helidrome

- **10. Ulma site:**
 - Bikin National Park's scientific monitoring center
 - Infrastructure for recreation and rest
 - National Park's permanent protective cordon

- **11. Ada site:**
 - Infrastructure for recreation and rest
 - National Park's central protective cordon
 - Airdrome for small aircraft (servicing the runway without a hard-surface pavement)

2. Protecting the Natural Complexes

Organizing the Protection

The access to a greater part of the national park's territory is difficult, that is why the controlling efforts should be concentrated near the roads available or the spots where neighboring roads come close to the boundaries of the specially protected natural territory (*Fig. 2*).

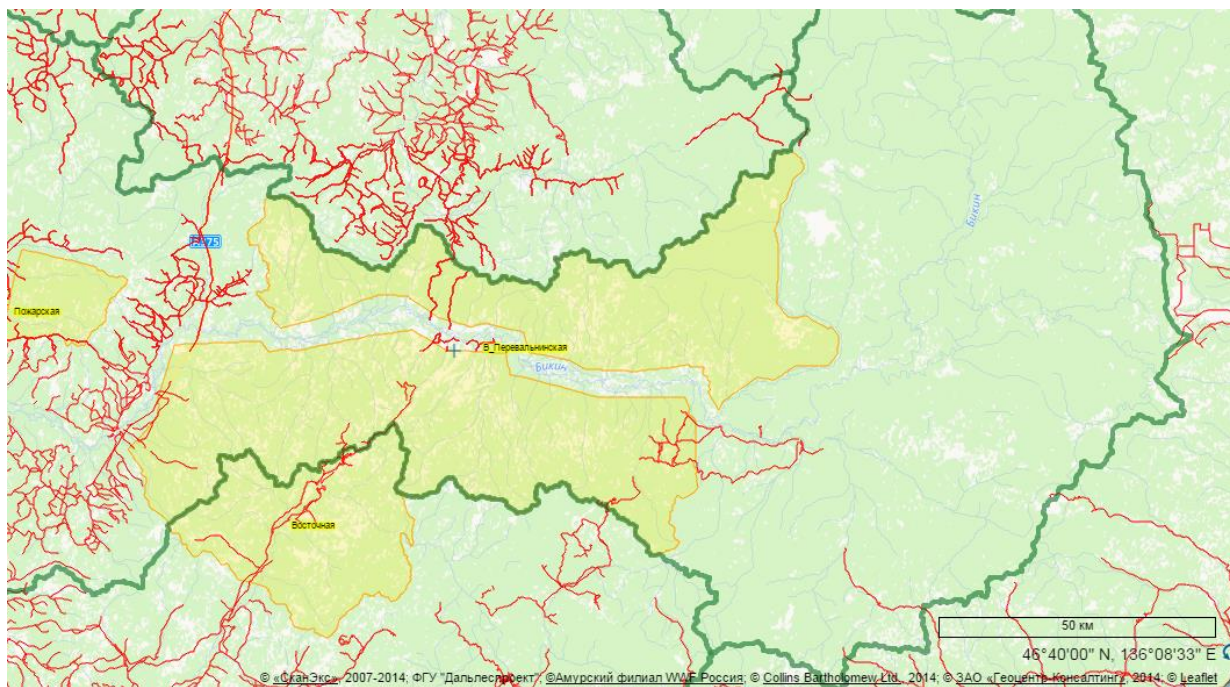


Fig. 2. The road network in the Bikin National Park territory and adjacent districts (based on the automatic analysis of Landsat satellite photos)

When deciphering the satellite photographs, the wheel-worn blizzard tracks and abandoned geological roads have also been classified as the roads. Nevertheless, the scheme well reflects the problematic spots and places from where people enter the specially protected natural territory. Moreover, the Bikin riverbed is the main 'road': by motorboats in summer and snowmobiles in winter. It is on these entrances that the cordons are planned to be placed in order to control the national park visitors (Fig. 1):

1. 'Vilyuyka' — at the boundary of the Bikin territory of traditional use of the nature, the motorway that joins Verkhny (Upper) Pereval village with Yasenevoye, upper reaches of the River Vilyuyka (a tributary of the Bikin River), height 441.5.
2. 'Takhalo' — at the boundary of the national park's protective zone (the administrative border of Khabarovsk and Primorsky Krays) on the Khabarovsk-Nakhodka motorway, 426.0 height slope, Mount Pogranichnaya.
3. 'Takhalinsky Bridge' — near the bridge across the Bikin on the Khabarovsk-Nakhodka motorway, the River Bikin's left bank, 370.5 height slope, Mount Blizkaya.
4. 'Vostok' — at the administrative border of Pozharsky and Krasnoarmeysky Districts on the timber-carrying road that goes from Vostok-2 settlement, 1057.3 height slope, Mount Bisernaya.
5. 'Bikin' — on the right bank of the River Bikin in the River Videnka's outfall.
6. 'Snezhnaya' — at the administrative border of Pozharsky and Krasnoarmeysky Districts, the watershed between the Sukhoy Spring (a tributary of the Spring Snezhny) and Tavasikchi (a tributary of the River Bikin) on the forest road.

7. 'Okhotnichiy' — at the outfall of the River Svetlovodnaya (a tributary of the River Bikin).
8. 'Kamenny' — the administrative border of Pozharsky and Terneysky Districts at the watershed of the Rivers Svetlovodnaya (a tributary of the River Bikin) and Sobolevka.
9. 'Zeva' — at the administrative border of Pozharsky and Terneysky Districts in the middle reaches of the River Zeva.
10. 'Ada' — on the right bank of the River Ada (a tributary of the Bikin River) in the basin of the Spring Khmury (a tributary of the Ada River).

The national park will be managed and its protection will be organized from the central office in Krasny Yar village and additional offices in Terneysky and Krasnoarmeysky Districts. For promptly reacting and constantly inspecting the territory in order to detect and suppress violations of the established regime in the planned territory, the work of 4 operational groups of specially trained specialists will be organized.

Systematic involvement of small aircraft will be needed for patrolling the territory and possibly dropping the inspectors to the protective cordons as well as for timely detecting and promptly quenching the forest fires. Also, introduction of the GLONASS system and a reliable radio or satellite communication is necessary to organize the work effectively, to control the fulfilment of the tasks set and the safety precautions in the national park's territory because of its large area, distant character and difficult access to the territory.

The national park's territory is a historical place where the indigenous small-numbered peoples conduct their traditional way of life. In the course of time, the local people's traditions and customs have formed to protect the territory and use its natural resources, not only the Udeges' and Nanai's ones, but also the ones of all the other nationalities who live with them and use the nature. Division of the territory into the ancestral (hunting) plots is one the most significant and effective methods of controlling and protecting the territory. The local people are directly interested in preserving the lands assigned to them. Official employment of the locals is recommended in the national park for them to be additionally interested and motivated, to still enhance the control effectiveness, the material and technical support. To do this, the manning table that is being elaborated provides for positions of low-qualified workers, for example, firemen, watchmen, or keepers of the scientific stations.

Fire-Fighting

The detailed plan of fire precautions for the territory will be devised during the national park forest management; now, the materials prepared for the Bikin nut-production zone spot (Project..., 2009) can be taken as the basic ones. The national park's territory is a part of Roshchinsky Forest Fire Okrug of Ussuriyskaya Forest Fire Oblast. In conformity to 'The Rules of Fire Safety in the Forests' dated June 30, 2007, No. 417, as well as 'A Scale for Assessing the Natural Fire Hazard of the Forest Spots' (Khabarovsk, 1982), the forests have been distributed as follows by the natural fire hazard classes:

- Quarters Nos. 121, 214, 216, 218, 220, 223, 274, 269, 326, 328, 330, 332, 334, 337, 365, 367, 407, 409, 413 of Krasnoyarskoye plot forestry and quarters Nos. 335, 340, 341, 408, 443, 444, 446, 447, 448, 449, 450, 451, 452, 454, 471, 472, 473, 476, 477, 478, 479, 480, 498, 499, 500, 502, 503, 507, 508, 509, 512, 571 of Okhotnichye plot forestry belong to class IV of the natural fire hazard.
- The rest of the quarters of Sobolinoye, Krasnoyarskoye, and Okhotnichye plot forestries belong to class III of the natural fire hazard.

In general, the forest plot has been assigned the medium (third) class of the natural fire hazard. The subaerial protection of the forests from fires is provided for only on 4827 ha of the area in quarters 107, 108, 109, 110, 112, 113 of Sobolinoye plot forestry with availability of year-round roads. The rest of the territory needs aviapatrolling and using paratroopers.

Fire precautions on a forest spot provides mainly for preventive measures. *Table 1* gives information about the availability and need for fire machinery, equipment, outfits and implements in compliance with ‘The Rules of Fire Safety in the Forests’ (2007).

Table 1.

Calculations of the need in fire machinery, equipment, outfits and implements

Name	Measurement unit	In compliance with the guidelines in force	Projected acquisition, lease, making
Hand tools:			
Spades	Item	15	-
Axes	Item	5	-
Rakes	Item	10	10
Crosscut saws	Item	5	5
Buckets or other containers for water with a volume up to 12 liters	Item	20	20
Electromegaphones	Item	1	1
Portable ultrashort or short waveband radio stations	Item	2	-
Motopumps with accessories	Item	1	-
First-aid kit	Item	2	-
Individual dressing packages	Item	According to the number of the workers	-
Cans or canisters for drinking water with a capacity of up to 20 liters	Item	3	3
Cups for water	Item	According to the number of the workers	-
Off-road vehicle	Item	-	-
Wooden motorboats	Item	-	-
Petrol saws	Item	-	-
Backpack fire-extinguishers	Item	-	-
A fireman’s outfit	Kit	-	-

A fire-fighting team of 25 people, including 4 leaders, must be formed on the basis of the national park for the prompt reaction. 20 seasonal workers have to be involved in patrolling and quenching the forest fires from April 1 to October 31. The preparedness of the subaerial forest protection units and their working regulations must comply with the requirements of the “Guidelines on Fire Prevention in Forests and Regulations on the Work of Forest Fire Services”. The Protection Deputy Director is responsible for fire safety at the enterprise.

The fires will be detected and promptly quenched on the basis of the contract with the aviation forest protection establishment of Primorsky Kray. The permanent stock of fire-fighting implements, coveralls and field feeding will be created in Krasny Yar and Okhotnichiy settlements as well as at the basic cordons. Formation of the special team from the local people who traditionally use the nature in the national park’s territory is an effective method of extinguishing the forest fires that arise. In Krasny Yar and Sobolinoye settlements, a voluntary fire-fighting brigade will be formed and trained in addition to the national park staff. It is supposed that the producing hunters will be able to work as watchmen thus ensuring the fire-fighting work directly on their plots during the fire-hazardous period.

3. Scientific Research and Monitoring

Taking into account the unique value of the national park, which is inscribed on the Tentative List of the World Natural Heritage properties, it is necessary to provide for a full-fledged scientific department as a part of its staff to be similar to scientific departments of Russian reserves, but with additional tasks of studying the culture of the indigenous small-numbered peoples and the traditional use of the nature, for ensuring the development of aboriginal and ecological tourism and for tracking their influence on the natural complexes. The national park's scientific department will conduct continuous stationary research on their own and will involve researchers from different universities and scientific centers under the conditions of the stringent compliance with the nature-protective restrictions of the national park.

In order to ensure the scientific work, it is planned to create scientific stations in the pine-broadleaf forests (Ulma and Laukha), as well as in the high-mountain spruce forests and alpine meadows (the upstream stretch of the River Peshcherka or in the vicinity of Mount Anik). By creating the conditions for habitation and full-fledged scientific work of the Russian and foreign scientists, the national park can involve hundreds of scientists in order to conduct researches in conformity with the programs agreed or simply to familiarize themselves with the natural complexes (scientific tourism), which will enhance the international authority of the specially protected natural territory and will bring in significant income. The initial data for the further in-depth research are available.

The following scientific research areas seem the most topical:

- Inventorying the flora and fauna of the Bikin River basin and adjoining territories
- Studying the populations of the Amur tiger and the wild hoofed animals
- Studying the old-aged pine-broadleaf forests
- Assessment of the climate change influence of the Central Sikhote-Alin biota
- Studying the populations of the scaly-sided merganser and fish owl
- Assessing the touristic influence on the Bikin River ecosystems

In order to ensure the succession of the observations and to compile the long-term data ranges, it is sensible to use the methods and inventory sites where such works were performed in the previous years (Kudriavtsev, 2014) when organizing the monitoring of the animals to chronicle the National Park's nature.

The complex winter after-production inventory (February and March):

- Inventory at 20 stationary sites with a total area of 24,542 ha, (red deer (Manchurian deer), elk, wild boar, roe, musk deer, lynx, sable, yellow-throated marten, Siberian weasel (kolinsky), squirrel, hare. Also some trails are found: of the tiger, wolf, brown and Asiatic black bears, as well as birds are met: hazel grouse, spotted capercaillie, Siberian sickle-winged grouse)
- The winter itinerary inventory: 46 itineraries with a total length of about 460 kilometers (the trails of the Manchurian deer, elk, wild boar, roe, musk deer, lynx, sable, yellow-throated marten, Siberian weasel (kolinsky), squirrel, hare, and hazel grouse are met)
- The production is mapped by interviewing the hunters (using the questionnaires). In total, 31 hunters are interviewed, the total area of the mapped spots equals 438,320 ha, with gathering information about all the wild animal species in general as well as the field observations about the characteristic factors that influence the animals' habitation conditions and environment (climate, crop yield, etc.).

- Inventorying the otter and mink through the itinerary method. In total, 180 out of 730 km of the total extent of the floodplains where these species usually dwell are examined.

In April-May, **the brown and Asiatic black bears** are inventoried when they leave their dens. The work is done at eight inventory sites of 23,000 ha in area: the brown bear usually dwells on 1,269,400 ha of the hunting entity's territory and the black bear inhabits 860,800 ha.

According to the hunting management data, waterbodies with 725 km of the bank length fit for swimming birds' habitation are located in the Middle and Upper Bikin territory, 125 km out of them are of type 2 and 600 km are of type 3. **The swimming birds are inventoried** from the boats from mid July to mid August. Three itineraries 520 km long in total have been established:

1. Krasny Yar — along the River Bikin — along the left bank to the outfall of the River Svetlovodnaya (Ulunga) — Okhotnichiy settlement with all the tributaries and gulfs, 210 km long
2. Krasny Yar — along the River Bikin — along the right bank to the outfall of the River Plotnikov with all the channels and gulfs, 280 km long
3. Krasny Yar — along the River Bikin — along both sides to the outfall the Channel Chintafu with all the channels and gulfs, 30 km long

Besides the basic inventory work complex, information about other species is also collected. The last examinations of the territory in order to estimate the number of the badger and racoon dog were conducted in 2008, the muskrat — in early September 2007, and the pheasant — in late September 2007.

Since 1998, the trails of the tiger and wild hoofed animals have been inventoried annually within the framework of the **Amur Tiger Monitoring** Program at the Bikin's middle reaches.

4. Organizing the Traditional Use of the Nature

The Principles of Organizing the Traditional Use of the Nature

In the entire national park's territory (except the reserved and special protection zones), the traditional economic activities are conducted by the indigenous small-numbered peoples, their communities, as well as by the people who do not belong to the indigenous small-numbered peoples but who permanently reside in the places of the traditional dwelling of the indigenous small-numbered peoples and who practice the same traditional use of the nature and traditional way of life as the indigenous small-numbered peoples. The citizens entitled to use the nature traditionally in the national park's territory will be identified by the Permanent Council of the Indigenous Small-Numbered Peoples under the Bikin National Park.

The above-mentioned persons and their communities conduct the traditional economic activities free of charge, including allotment of place for them to create the infrastructure necessary for conducting their traditional economic activities and traditional production in compliance with the approved plans and projects devised jointly by the National Park's Directorate and the Council of the Indigenous Small-Numbered Peoples.

The traditional economic activities must be conducted in compliance with the principles of non-exhaustive use of the nature within the volumes sufficient for satisfying the vital economic, material, and spiritual needs, as well as for preserving and developing the entire traditional culture of the Udeges and Nanai as a united system. In the territory, the traditional activities will include:

- Hunting, processing, and realization of the hunting products
- Procurement, processing, and realization of the animals that are not hunted

- Gathering, including picking wild fruits and herbs, as well as processing and realization of wild plants and their fruits (berries, mushrooms, edible and medicinal herbs, nuts, etc.)
- Fishing, processing and realization of the water biologic resources
- Making the national utensils, implements, sledges, boats, national clothes, footwear, and realizing them
- Making the national souvenirs, other artistic and other works of the national culture, as well as realizing them
- Farmstead olericulture
- Beekeeping
- Building the national accommodations or equipping accommodations in conformity to the national traditions and customs

For the most effectively defending the native habitation environment, preserving and developing the traditional use of the nature, the culture and the way of life of the small-numbered peoples who conduct their activities in the national park's territory and for ensuring the participation of the indigenous small-numbered peoples in the co-management, the following basic principles must be complied with:

1. Any economic activities must be coordinated with the representatives of the indigenous small-numbered peoples and their communities united into the Council of the Indigenous Small-Numbered Peoples under the Director of the National Park
2. The Council of the Indigenous Small-Numbered Peoples under the Director of the National Park directly distributes the hunting plots, limits, and ecotour schedule among representatives of the indigenous small-numbered peoples
3. Building of the infrastructure objects, touristic bases and stopover sites must be coordinated directly with the Council of the Indigenous Small-Numbered Peoples and the representative of the indigenous small-numbered peoples for whom this territory has been allotted
4. The executive authorities of Primorsky Krai have to take into account the peculiarities of the traditional use of the nature and the way of life of the indigenous small-numbered peoples, provide for tax benefits and facilitation of the product processing and cottage industries
5. The executive authorities of Primorsky Krai and the local self-government bodies have to devote more attention to teaching and employing the youth of the indigenous small-numbered peoples by assisting them through allotment of special scholarships and in building the accommodations in the countryside.
6. Representatives of the indigenous small-numbered peoples and the persons equated to them must be given priority when employing to the national park's staff in accordance with their qualification and experience.

The Directorate of the National Park is in charge of and manages the zone for the traditional extensive use of the nature, the recreational and economic ones in a close cooperation and concurrence (taking into account their opinions and recommendations) with the specially created permanent Council of the Indigenous Small-Numbered Peoples under the Director in conformity to the Regulations on the Council approved by the Minister of Natural Resources and Environment of the Russian Federation. The Council is formed from 12 locals, mainly (2/3 of the numbers) from the indigenous small-numbered peoples according the voting at their general meeting. The Council members are approved by the National Park Director's order. The President of the Council performs his/her duties in conformity to the position of the National Park's Deputy Director on the issues of preserving and developing the traditional economic

activities of the indigenous small-numbered peoples as well as conserving the conditions for the traditional way of life in the national park's territory.

The permanent Council of the Indigenous Small-Numbered Peoples under the National Park:

- Takes part in controlling the use of the lands of different categories necessary for the traditional economy and traditional production of the small-numbered peoples
- Participates in controlling the compliance with the Russian Federation legislation and these Regulations
- Participates in preparing and taking decisions, submits its proposals and recommendations about conducting any activities in the national park' territory, with a special attention to the zone for the traditional extensive use of the nature, to the Directorate of the National Park
- Initiates and participates in performing ecological and ethnological expert examinations
- Devises the rules, procedures and recommendations for the citizens who traditionally use the nature in the national park's territory taking into account the traditions and customs and without violating the Russian Federation legislation in force
- Receives all the necessary information and documentation from the Establishment and, if necessary, from the Russian Federation state authorities in order to ensure the duties entrusted

5. Recreational Use of the Territory and Development of the Ecologic and Aboriginal Tourism

In the national park's territory, the best recreational districts are covered with various types of pine and pine-broadleaf forests and, to a lesser extent, with larch forests and bald mountains with their panoramic view, the far less number of blood-sucking insects and, at the same time, with considerable reserves of berry subshrubs (cowberry, bog bilberry) and medicinal herbs (golden root, etc.). The territory spots that are the most favorable for developing the recreational use of the nature are mainly associated with the nut-production zone of the River Bikin's middle reaches, its ecological recreational capacity amounts to about 1,205,000 people (Vyshin, 2003).

The recreational capacity of the nominated property can be significantly increased by providing the necessary facilities and developing the infrastructure, the transport network, selecting the qualified personnel capable of using the nature for recreational purposes correctly. In order to create favorable conditions for organizing the mass, excursion, touristic rest and walks, to increase the recreational capacity of the territory and to reduce the load on the natural complexes, it is recommended to improve the recreational places allotted.

Table 2.

The recommended amount of measures for improving the recreational forests of the Verkhne-Perevalnenskoye forestry

Entry No.	Improvement element	Measurement unit	Amount
1.	Gravel roads	km	122 km
2.	Car parking places	item	10
3.	Benches	item	12030
4.	Picnic tables (for 6 people)	item	1445
5.	Sheds against rain	item	240
6.	Hearths for cooking	item	720
7.	Litterbins	item	2400
8.	Waste receptacles	item	10

9.	Toilets	item	240
10.	Passage bridges	item	as needed
11.	Banners	item	300
12.	Sports grounds	m ²	10
13.	Indicators	item	10
14.	Scenic spots	item	50
15.	Sites for putting up tents	m ²	250

The tourism will be developed mainly in the national park's recreational zone (109,625 ha) in the valley of the Bikin and its tributaries, near the Takhalinsky bridge and available hunting bases, as well as in the economic zone (7,061 ha) around Okhotnichiy and Staraya Rechka settlements. Ecologic, fishing, sport tourism that involves active movement along the itineraries and ethnical (aboriginal) tourism are the most preferable. These types of tourism exist now, too (up to ten thousand fishermen and rafting amateurs per year), that is why putting them in good order, organizing and further development are the top priority task. The intact virgin nature and the culture of the Udeges and Nanai, the possibility to catch fish and gather mushrooms, nuts and berries, the picturesque landscapes as well as the Amur tiger and the traces of its stay, other rare animals and plants will be of the main interest.

The full-fledged development of tourism in the Bikin National Park's territory and a substantial improvement of the quality of people's life in Pozharky District depend, first of all, on creation of the **road-and-transport infrastructure**; to do this, it is necessary:

- To ensure the constant maintenance and quality of the motorway from Verkhny Pereval village to Krasny Yar and maintenance of the bridge in Krasny Yar settlement across the River Bikin
- To ensure the constant maintenance and quality of the motorway from Krasny Yar — Yasenevo — Sobolinoye to the federal Khabarovsk-Nakhodka ('Vostok') motorway
- To promote resumption of building of the federal Khabarovsk-Nakhodka ('Vostok') motorway with the direct junction to Krasny Yar village
- To organize regular deliveries of fuels and lubricants to Krasnoyarskoye rural settlement
- To repair the forest road from Okhotnichiy settlement to the neighboring Krasnoarmeysky District, with a branch to the Laukha site
- To inspect the state of the existing helidromes, the takeoff and landing grounds and, if necessary, to create new helidromes
- To make air service to Krasny Yar and Okhotnichiy settlements affordable for a wider circle of consumers, to replace the AN-2 plane with a D-6 plane made in Canada for 19 people and to perform regular flights at least 2 times a week

Organization of **the public utilities and communication** requires taking decisions in the following areas:

- Elaboration of measures for using the traditional and alternative sources of electricity (solar cells and mini hydropower plants) at the touristic infrastructure enterprises
- Electrification of the place where the national park's visit center is situated
- Arranging water supply, water disposal and sewerage at the created touristic infrastructure objects in compliance with the sanitary-epidemiologic and ecologic safety norms
- Organization of the litter collection, sorting and disposal system in the national park's recreational zone

- Expansion of the coverage zone and improvement of the cellular communication and Internet
- Consideration of the issue of whether wire telephone and fiber-optic communication are advisable at the places where the touristic infrastructure objects are situated and, if yes, providing them

These work areas will permit supporting not only the work of the touristic infrastructure enterprises, make the National Park accessible to order and organize the services, but are also aimed at ensuring the safety of the park visitors and workers, contributing to the nature-protective functions and enhancing the effectiveness of the scientific and research activities of the specially protected natural territory personnel.

Creation of **accommodations for the tourists** is a key task of the touristic infrastructure development. At the initial stage, it is sensible to use the existing accommodations and places of the touristic stream attraction; the new infrastructure should be created in future (Fig.1).

Okhotnichiy settlement is one of the main attraction places for fishermen tourists; this category of the tourists create demand for hotel services and motorboat escort along the rivers. Also, days-long pedestrian (horse) itineraries can be developed. It is necessary to create the following infrastructure: a Visit Center stylized as an Old Believers' village, a hotel-touristic center with 20 beds including a year-round hotel, a bathhouse complex, a touristic outfit rental post, a boathouse for storing the boats and motors, yard structures (livestock yard, stable) and kitchen garden. It is also necessary to repair the road and equip the places for the tent camp near the Bikin River banks.

The Laukha site can be deemed promising for the development of the ecologic tourism, accommodating the fishermen and participants of the scientific and research events. For this aim, it is necessary to devise the project and equip a hotel with 10-15 beds and the zone near the banks. Today the forest road from Krasnoarmeysky District to Okhotnichiy settlement, with a branch to the Laukha site is barely passable, but is strategically important for ensuring the territory with materials, fuels and lubricants. This way conditions the accessibility of the territory for tourists and ensures entrance to the main infrastructure places. This forest road can also be a good recreational itinerary, if the places for the staging posts, tent camps and for the tourists to sight are equipped with the necessary facilities.

The Ulma site is located on the right bank of the Bikin River, 25 km upstream of the Takhalinsky bridge. Today here are a small two-storey house and a winter hut (3×4 m); an ecologic path to the scenic sightseeing ground (1.5 km) has been equipped. Taking into account the natural uniqueness and interest of international scientific and nature-protective organizations, it is necessary to use the potential of the special protection zones for development of scientific works on studying the natural complexes and objects in their territories. It is proposed to equip two scientific stations of international level in the close vicinity of the special protection zones on the Ulma and Laukha sites for the year-round accommodation of scientific workers, postgraduate and undergraduate students (up to 10-15 people).

At the Tavasikchi site, it is required to complete building the yard and the interior of the buildings. There are all the necessary utility structures, a kitchen, a bath, a two-storey guest house, and rooms for the personnel. The ecologic tourism is a promising area, it possible to organize hunting the brown and Asian black bears, Mancurian deer, elk and wild boar within the scope of the permitted activities in the national park. These places are rich in mammals and fish, there are natural saline soils.

The Takhalinsky bridge is the area of the bridge across the River Bikin on the federal Khabarovsk-Nakhodka ('Vostok') motorway, which is under construction. Today it is the main place through which the main stream of the tourists enter the national park's territory, mainly fishermen on motorboats. There is a check-point house and a private residential house. In order

to develop the touristic infrastructure, it is necessary to build a Visit Center stylized as a Jurchen stronghold, hotels, public catering enterprises (cafes), a guarded car parking, and places for a tent camp. It is necessary to organize a service for escorting the tourists and providing flotation devices as well as for organizing winter (ice) fishing.

Ada Spring area. It is located in the very center of the Sikhote-Alin mountain range, at a height of approximately 650 meters above sea level. It is one of the uppermost tributaries of the River Bikin. Accommodation of the tourists, ecologic itineraries, sites for observing the wild animals and birds (brown bear, elk, spotted capercaillie, Siberian sickle-winged grouse, etc.), sport amateur fishing (these places are famous for the large grayling) are promising services. There is a site for small aircraft, 3 log houses (3×4 m) and a bath (3×4 m), which can be used for accommodating the personnel and as utility rooms. It is necessary to build a highly-comfortable hotel for 15-20 people in order to accommodate the tourists, a kitchen and a bath. Because the district is distant and the transport communication is expensive, prosperous tourists can be the target consumers of the touristic services, consequently, the accommodation and service conditions should be highly comfortable.

At the initial stage, it is sensible to develop the touristic activities on the basis of the existing infrastructure of Okhotnichiy settlement and Tavasikchi site. They provide a year-round accommodation for the visitors and adequate service quality. Also, first of all it is necessary to equip tent camps at Khomyaki and Laukha sites, at the River Terrasnaya's outfall, and, if possible, also year-round guest houses and utility structures for arrangement of the winter tours. All these places should be closed by a network of itineraries along the rivers and on the land in order to organize the rest, ecologic paths, observation of the wild animals, summer and winter (ice) fishing. An itinerary with sites for observing the wild animals can be organized at the Tavasikchi site. It has all the necessary for the initial tourism organization measures: the personnel and initial infrastructure. The rooms should be equipped and finished for accommodating the tourists.

6. Ecologic Enlightenment and Education

The work of the ecologic (ethnologic) enlightenment and tourism department will be conducted in two areas: organizing the touristic activities and enlightening the locals.

1. Two heads of the visit centers (in Okhotnichiy settlement and at the Takhalinsky bridge) as well as the head of the museum (ethno-natural center) in Krasny Yar village will work directly with the tourists. It is desirable that they be representatives of the indigenous small-numbered peoples with higher or secondary special education who would use the local colors for the work. They will provide the tourists with maps, booklets, leaflets, souvenir products, conduct talks, lectures, show video films. If the tourists have free time, they will be able to attend paid training master classes where they will be taught the simplest ways of making the souvenirs so that the tourists can both buy the ready-made souvenirs and try themselves to make the articles from birch bark, leather and beads.

Two methodologists on ecological (ethnological) enlightenment devise printed products for the national park. They must be specialists with higher education, be skilled in special computer programs and able to select, analyze and process the material.

The national park's manager orders the touristic souvenir products at the souvenir and joiner's workshops that already exist in Krasny Yar and where the locals who have the skills work. The national park accepts the products to be sold not only on the spot but also at outlets in cities. Not only the souvenirs but also the non-wooden products of the forest, for example, berries, herbal teas, dried and salted fern, nuts can be sold through the visit centers and museum. It is important that a professional marketing manager will help to arrange selling the products made by the local masters and provide the advertisement.

Teachers of the local schools, students who come home for summer holidays and elder pupils can work as the guides in Krasny Yar settlement in summertime, when there are a lot of the tourists. Some guides who ensure the permanent tours along the river in summer and by snowmobiles in winter can be employed on a permanent basis to the department.

A press officer together with an Internet resource specialist ensure dissemination of information about the park's work in official mass media, social networks, are in charge of the site and attract both Russian and foreign tourists to the park.

2. Three target groups have been marked out in the work with the locals: hunters, schoolchildren, and the other inhabitants.

The hunters are marked out as a special target group because it is they that will be the main keepers of the national park's nature. It is necessary to give them explanations about the rare and vanishing species, elucidate the wildlife monitoring system, obtain information from the questionnaires about the numbers of the animals and forage harvests, familiarize them with the work of trail cameras, with modern ways of procuring the fur-bearing animals, with the rules and norms of procuring the hoofed animals. The hunters will work as the seasonal fire watchmen, which will also need additional training.

The children will be able to study the national dances in Agdaymi ensemble, which will be directed by a worker of the national park. This will permit not only preserving the unique traditional culture, but also advertising the special ethnological tourism. The girls will be able to study how to make the souvenirs, be competent in medicinal herbs, compose herbal teas, prepare traditional national dishes and take care of the household.

At the 'Pathfinder School', which will open in the national park, the boys will study to use the nature traditionally: to hunt, fish, gather the forest gifts and make tools for the work: boats, fishing rods, skis, traps, etc. Training of how to survive under the severe taiga conditions and the ability to read the trails of the animals and birds will take a special place. The good traditions of the Udege and Nanai people permit them to exist in harmony with the nature by taking only the most necessary for their lives. The hunters who go in for these activities today become older. It is necessary to prepare teenagers so that the successors come in the taiga.

The manager of the works on ecology and regional studies in the national park will give lessons to the schoolchildren who will decide to choose studies in specialties necessary for the national park. The history of the native land, basics of biology and ecology, role and significance of the specially protected natural territories for preserving the nature, basics of ecological and ethnological enlightenment and tourism will be the main topics.

Two methodologists will carry out popularization works with other inhabitants, including artistic family contests, colorful festivals, films about nature and the work of the national park, publication of the national park's newspaper. The methodologists will create groups of interested local initiators to assist the national park. One group can accommodate the tourists in their houses. A second one can show how to cook the national dishes for the tourists. A group of those who love the national songs and stories can appear and offer the tourists the evening program. All these will help the national park to attract a lot of tourists and the locals to earn money.

7. The Manning Table of the Bikin National Park

Taking into account the huge area, the length of the boundaries and the complicated territory management logistics, a manning table that includes 220 people has been proposed for the Bikin National Park to work effectively. The Director of the Establishment is the Chief State Inspector at the same time. His rights and obligations have been stipulated in the Establishment's Regulations. The Director will be appointed by the Ministry of Natural Resources and Environment of the Russian Federation with the concurrence of the President's plenipotentiary

representative in the Far Eastern Federal Okrug and Primorsky Krai Governor taking into account the opinion of the Council of the Indigenous Small-Numbered Peoples. It is proposed to appoint 6 Deputy Directors for managing the departments and, in addition, a Deputy Director for the development and one for building.

Table 3.

A draft manning table of the Bikin National Park

Position	Number of units	Note
Directorate		
Director	1	Chief State Inspector
Deputy Director for Development	1	
Secretary	2	
Total:	4	

Department of Accounting, Economy and Planning		
Deputy Director, Head of Department	1	Chief Accountant
Accountant	2	
Planning economist	1	
Specialist for state purchases and public sales	1	
Cashier	1	
Total:	6	

The Bikin National Park is a pilot project that has to demonstrate the possibility of combining the nature protection and support of the indigenous small-numbered peoples' culture. To do this, representatives of the indigenous small-numbered peoples who reside in Krasny Yar settlement or those who are ready to return there should be employed by the Establishment. All the specialists belonging to the indigenous small-numbered peoples who have received education closely related to the activities should be employed according to their qualification. It is necessary to encourage the youth who have not returned to the settlement after having graduated from higher educational institutions due to absence of job or habitation prospects to come back. With the concurrence of Krai Governor, a support program will be fulfilled for Krasny Yar school-leavers to study at the expense of the state budget at higher educational institutions related to the park's activities. First of all, these are forestry and gamekeeping specialties at Perm State Agricultural Academy, the touristic specialty at Vladivostok State University of Economics and Service. Vyazemsky Forestry Technical School is ready to provide middle-level training for work in the national park's forest engineering service. A system for preparation of guides on the aboriginal tourism will be organized jointly with the Russian Federation Tourism State Committee. These tasks will be entrusted to the Establishment's department of human resources.

Human Resources		
Head of the Human Resources Department	1	
Human Resources specialist	1	
Archivist	1	
Total:	3	

Scientific Department		
Deputy Director for Scientific Work	1	
Leading Scientific Worker	2	Mammalogist, geobotanist
Senior Scientific Worker	3	Ichthyologist, ornithologist, ethnographer

Scientific worker	2	Recreation specialist, silviculturist
Programmer	1	GIS specialist
Laboratorian	2	Zoologist, phenologist
Total:	11	

Department for Ensuring the Traditional Use of the Nature		
Deputy Director for the Traditional Use of the Nature	1	President of the Permanent Council of the Indigenous Small-Numbered Peoples
Assistant of the Deputy Director for the Traditional Use of the Nature	1	Secretary of the Permanent Council of the Indigenous Small-Numbered Peoples
Chief Gamekeeper	1	
Chief Specialist for Harvesting the Food and Medicinal Herbs	1	
Head of the museum (ethno-natural center)	1	According to the contract with the Territorial-Neighbor Community of the Indigenous Small-Numbered Peoples 'The Tiger'
Methodologist for production of souvenirs	1	
Marketing manager	1	
Total:	7	

Organization of the ecological and ethnological enlightenment, ecological and aboriginal tourism will be entrusted the special department, which will also include a press group. In compliance with the RF President's instruction about the necessity of a wide involvement of the indigenous small-numbered peoples in the management and work of the national park, the manning table will include the positions of the Head of the ethnographical ensemble 'Agdaymi', the manager of the works on ecology and regional studies under the secondary school (in order to prepare the pupils for specialties necessary for work in the national park) and the Head of the Pathfinder School to conduct the vocational counselling for the future hunters and guides on the aboriginal tourism. In order to develop the aboriginal tourism, personnel who belong to the indigenous small-numbered peoples will be maximally involved, some of them will be employed on a permanent basis and some based on contracts.

Department for Ecological (Ethnological) Enlightenment and Tourism		
Deputy Director for Ecological (Ethnological) Enlightenment and Tourism	1	Chief Manager
Head of Tourism Department	1	
Head of the Visit Center	2	Okhotnichiy settlement, Bikin River bridge
Methodologist for ecological (ethnological) enlightenment	2	
Specialist for ecological (ethnological) enlightenment	3	Head of Agdaymi ensemble, Head of Pathfinder School, manager of the works on ecology and regional studies
Tour operator	1	
Guide	10	Seasonal work
Press officer	1	
Internet resource specialist	1	On Internet resources
Total:	22	

The estimated number of the territory protection inspectors is based on the average norm of 15 thousand ha for one inspector. In principle, the Protection Department is divided into two services. In order to detect and suppress the gravest violations of the nature-protective legislation in the National Park's territory and protective zone effectively and in time, the manning table provides for formation of the Operational Detachment consisting of 3 operational groups. They will be the most trained specialists for a continuous inspection of the territory and sorties, if certain information appears. They will also control observance of the park's nature-protective regime by the national park workers proper. The groups will be formed territorially in order to ensure the control from the side of Krasny Yar and Khabarovsk (the western group), from the side of Krasnoarmeysky District (southern) and from the side of Terneysky District (eastern). Each group will comprise one plot inspector and 3 inspectors, an off-road vehicle, snowmobiles and motorboats. When devising the operations, the leader of the operational detachment will be directly subordinate to the National Park's Director.

The second service will be responsible for fire-fighting, forest engineering and biotechnical measures. It will also be organized based on the territorial principle (3 plot forestries). It will include 24 inspectors to ensure the shift control at the 4 national park's entrance check-points and 24 inspectors responsible for order in the ancestral plots of the indigenous small-numbered peoples. This will permit employing the responsible hunters who have their permanent hunting plots. Division of the territory into the plots and assignment of them to the responsible locals for the traditional use of the nature is a method of protecting the territory (traditional method). The Establishment will be able to encourage their work additionally (permanent salary and other pecuniary and technical assistance), will obtain the possibility to influence on and organize the hunter's work in order to fulfil the territory protection tasks. The National Park's protection service, including the fire-fighting one, is planned to have some positions that do not require special education or high qualification (25 fire watchmen).

Protection Department		
Deputy Director for Protection, Head of the Department	1	
Plot State Inspector for Protecting the Specially Protected Natural Territory	1	Lawyer for nature protection issues
Senior State Inspector for Protecting the National Park's Territory	1	Leader of the operational detachment
Plot State Inspector for Protecting the Reserve Territory, Leader of the Operational Group	3	1. Pozharsky District 2. Terneysky District 3. Krasnoarmeysky District
State Inspector for Protecting the Territory — member of the operational group	9	1. Pozharsky District 2. Terneysky District 3. Krasnoarmeysky District
Senior State Inspector for Protecting the National Park's Territory, Head of the Forest Engineering Service	1	Responsible for fire-fighting, forest engineering and biotechnical measures
Plot State Inspector for Protecting the Specially Protected Natural Territory	3	Heads of forest engineering service subdivisions in Pozharsky, Terneysky, and Krasnoarmeysky Districts
State Inspector for Protecting the Specially Protected Natural Territory	24	Making rounds, ensuring the fire-fighting and forest engineering measures
Plot State Inspector for Protecting the Specially Protected Natural Territory	24	Stationary service (cordons and shifts)
Fire watchmen	25	Seasonal work
Total:	92	

Department for Ensuring the Basic Activities		
Deputy Director for General Issues, Head of Department	1	
Deputy Director for Building	1	Building and repairing the infrastructure objects
Engineer for Labor Protection and Occupational Safety	1	Responsible for the arms room and radio communication devices
Legal Advisor	1	Responsible for electronic public sales and state purchase quotations
Chief of the Garage	1	Chief Mechanic
Mechanic	2	Motor mechanic
Superintendent	3	of the Central Office; 2 Visit Centers
Keeper of the scientific station	2	Ulma and Laukha
Chief of the Central Warehouse	1	
Chief Power Engineer	1	
Metalworker-electrician for repairing the electric equipment	1	
Driver	24	
Tractor driver	4	
Metalworker-plumber	1	
Joiner	1	
Carpenter	1	
Auxiliary worker	14	Temporary work
Yard cleaner	3	
Stoker	4	Seasonal work
Watchman	4	
Cleaner of the service rooms	4	
Total:	75	