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THE INTEGRATED MANAGMENT PLAN FOR THE WORLD HERITAGE PROPERTY "CENTRAL SIKHOTE-ALIN" (2019–2023)

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1. Brief Characteristics of the Central Sikhote-Alin World Heritage Property

In 2001, the decision of the 25th session of the UNESCO World Heritage Committee dated December 16, inscribed the Sikhote-Alinsky State Nature Biosphere Reserve and the Goraliy State Nature Biological (Zoological) Sanctuary of Regional Significance on the UNESCO World Heritage List as parts of the Central Sikhote-Alin Property. The territories had been nominated according to the criterion (**X**) — as a region that includes the most important and significant natural habitat for conserving the biological diversity in it, including threatened species of the outstanding universal value from the viewpoint of science and protection, characterized by a high biodiversity, a large number of rare, relict and endemic species of plants and animals, unique communities of pine-broadleaf and pine-spruce forests. The uniqueness and global significance of the natural complex named the Central Sikhote-Alin and its richness in relic, endemic species are connected with the specificity of its geological evolution and, first of all, with the fact that the glaciation epoch did not have catastrophic consequences here and only favored the growth of the species diversity. The territory is also a most important natural habitat of threatened species, including the Amur tiger (EN) and long-tailed goral (VU).

In 2018, by the decision of the 42nd session of UNESCO, the area of the World Heritage Property "Central Sikhote-Alin" was extended by virtue of having included the Bikin National Park in it.

At present, the Central Sikhote-Alin property comprises two plots of the Sikhote-Alinsky State Nature Biosphere Reserve (with a total area of 401,600 ha, including 2,900 ha of the waters of the Sea of Japan), Goraliy State Nature Biological (Zoological) Sanctuary of regional significance (4,749 ha) and Bikin National Park (1,160,469 ha) (Appendix 1, Fig. 1.). The total area of the territory that has obtained the World Heritage status is 1,566,818 ha.

At present, the Central Sikhote-Alin property includes three separate Specially Protected Natural Areas of different categories and subordination; general information about them is set forth below.

Sikhote-Alinsky State Nature Biosphere Reserve occupies the eastern and western slopes of the central Sikhote-Alin. The reserve consists of two clusters. The first main cluster is located in the territory of Terneysky and Krasnoarmeysky municipal districts as well as Dalnegorsky Urban Okrug of Primorsky Krai (397,400 ha, including the waters 1,500 ha in area). The second cluster (Abrek Rocks) is located in the territory of Terneysky municipal district of Primorsky Krai (4,200 ha, including 1,400 ha of the waters). The reserve has a buffer zone that covers a total area of 67,660 ha and is contiguous with the projected buffer zone of the Udegeyskaya Legenda National Park in the west and Goraliy State Nature Biological Sanctuary in the north. The main territory of the reserve is located 10 km away from the district center Terney, the distance from the Abrek Rocks to the settlement of Terney is 5 km.

The reserve was organized in 1935. On February 19, 1979, the Decision No. 576 of the International Co-ordinating Council of the Man and the Biosphere Program conferred the status of a biosphere reserve on it. In 2015, the Sikhote-Alinsky Reserve became the first Russian and the second global specially protected natural territory that successfully passed the CA|TS (Conservation assured tiger standards) tiger habitat certification by the TAI — Tigers Alive Initiative, which is an international tiger preservation program of the World Wide Fund for Nature (WWF).

According to the IUCN international classification, the reserve conforms to the category **Ia**: a **strict nature reserve** — a plot with intact nature, full protection. The lands of the reserve are federally owned.

The reserve's territory is a complex system of interweaving mountain ranges and elevations, where the average heights reach 600–800 m above sea-level (Appendix 1, Fig. 2.). Four altitudinal levels are distinctly marked out in the modern relief of the reserve. The main watershed range Sikhote-Alin is an arch of an asymmetric structure. Its central part is uplifted mainly to 1000–1200 m above sea-level, and some summits exceed 1500 m. The eastern and western slopes of the main watershed differ. The eastern slope is less extensive, but steeper with abruptly outlined watershed crests and deeply cleft by a transversal network of river valleys. The western slope of the Sikhote-Alin has no distinctly outlined ridges. It is gentle and wide, with massive forms of the relief. The average height of the watersheds is in the range of 600–650 m above sea-level.

The coast of the Sea of Japan runs parallel to the Sikhote-Alin mountain range. The Primorsky watershed ends abruptly through high (up to 100 m and more) rocky ledges that alternate with steep talus glens, the feet of which end with sand-pebble or large-stone beaches. There are rocks projecting from the sea in some places not far from the coast.

The mountainous relief of the territory exerts a great influence on the distribution and character of the reserve's river network, the Sea of Japan being its erosion basis. The rivers form a dense and ramified network, which covers the territory evenly. The average density of the river network is 0.9 km per 1 km² in the reserve.

Together with the relief and soil, the climate is a most important factor that determines the zonal type of the vegetation and forms its floristic composition. For the reserve territory located in the Pacific region of the temperate zone of the Far East, the Coastal climatic district is characterized by a pronounced monsoon climate with a cold dry winter, rainy cool summer and seasonal changes in the prevalent winds. The climate of the region is determined by its position at the eastern border of the huge Eurasian continent and its proximity to the cold Sea of Okhotsk and Sea of Japan. The climatic models are greatly influenced by the cold sea current in the Sea of Japan. The climate differs greatly in some parts of the reserve, which is conditioned by the complexity of the relief, remoteness from the sea coast and other physicogeographic peculiarities of the region.

The soil cover of the Sikhote-Alinsky Reserve reflects the regularities of soil formation of the entire Sikhote-Alin. Here one can find soils characteristic of the northern and southern fringes of the Sikhote-Alin. The spatial distribution of the reserve soils complies with, first of all, the altitudinal and expositional bioclimatic changes.

The geographical position of the territory of the Sikhote-Alinsky Reserve, which is located at the fringe of the Asian continent, which is washed by the waters of the non-freezing Sea of Japan; its rather significant differences in the geomorphologic and climatic conditions; its long historical path of evolution have predetermined a great heterogeneity and diversity of the vegetation. Forest, which occupies about 97% of its area, is the predominant type of the reserve's vegetative cover. Non-forest types of vegetation — meadows, swamps, mari, vegetative communities on the stony deposits, rocky precipices and sea coasts — occupy an insignificant area of about 2%.

The Korean pine (*Pinus koraiensis*), Yezo spruce (*Picea ajanensis*) and Mongolian oak (*Quercus mongolica*) are the main engineers of the ecosystem and, at the stage of ripeness, dominants of the forest ecosystems. The area that they occupy is 35.0%, 24.3% and 13.1% of the

forest-covered area respectively. The dwarf Siberian pine (*Pinus pumila*) and rockbirch (*Betula lanata*), which occupy 2.0% and 0.6% of the forest-covered area respectively, are the main dominants and ecosystem engineers in the ecosystems of the zone under the bald mountains. Broadleaf species of trees — Japanese poplar (*Populus maximowiczii)*, Chosenia (*Chosenia arbutifolia*) and Manchurian ash (*Fraxinus mandshurica*) are often abundant in the composition of the ecosystems of the valley forests. The Siberian silver birch (*Betula platyphylla*), aspen (*Populus tremula*), *Larix* (larch) *cajanderi* and Mongolian oak are prevalent in the after-fire groupings. Peculiarities of the altitudinal belts in various parts of the reserve's territory were mentioned by all the researchers who studied the vegetation of the region. There are pronounced altitudinal belts in the territory of the reserve.

The same factors as in the case of the vegetative cover have conditioned the richness of the reserve's animal world. The leading positions in the reserve's fauna are occupied by species whose habitats extend in the temperate and subtropical latitudes of the East Asia or the whole Eurasia. The species of this near-Amur complex divide into two groupings: 1) typically forest animals (nemoral grouping): the large mole, Asiatic black bear, Manchurian deer and 2) forest-meadow animals: the Manchurian hare, racoon dog and roe. The Sikhote-Alin is occupied by rather a large group of species (wild boar, tiger, goral, etc.) whose natural habitats extend across the entire East and South Asia to equatorial rain forests. The territorial distribution of the reserve's animal groupings is subordinate to the altitudinal belts.

By now 4,156 species of plants (among which 1,320 species of fungi, 817 species of algae, 630 species of lichens, 295 species of bryophytes and 1,094 species of vascular plants) have been detected in the reserve. East-Asian species make up the basis (more than 50%) of the flora. The territory of the reserve is the habitat for 34 species that are narrowly endemic in the Sikhote-Alin, which makes up a third of the endemic species of the Ussuriysky floristic district.

The reserve's fauna is not less rich in species. It includes 95 species of fish and cyclostomes, 5 species of amphibia, 9 species of reptiles, 318 species of birds and 59 species of mammals. The invertebrate fauna has not been studied well yet, but by now about 3,000 species of arthropods, 94 species of ground, freshwater and marine mollusks, 5 species of ground and 22 species of marine annelids have already been detected in the territory of the reserve.

Among 56 species of the animals that inhabit the reserve's territory and are inscribed on the Red List of the International Union for Conservation of Nature (IUCN), 6 species are categorized as endangered (EN): the tiger, Blakiston's fish-owl, scaly-sided merganser, Far Eastern curlew, Oriental stork, and sei whale; 8 species are categorized as vulnerable (VU) — the long-tailed goral, Steller's sea-eagle, white-naped and hooded cranes being among them. 47 species of animals have been included in the Red Book of the Russian Federation, 66 species of fauna with a various status of being in the reserve's territory have been included in the Red Book of Primorsky Krai. Among the flora that grows in the reserve's territory, 6 species have been inscribed on the Red List of the International Union for Conservation of Nature (IUCN), 52 species have been included in the Red Book of the Russian Federation, 116 species have been included in the Red Book of Primorsky Krai; algae, fungi, lichens and vascular plants being among them.

The reserve has 80 employees, 30 of them work at the security service. The central office of the reserve is situated in the settlement of Terney of Primorsky Krai.

The main spheres of the reserve's activities are determined by the Federal Law "On the Specially Protected Natural Areas" and include:

1) taking measures for conserving the natural complexes in their natural state;

2) detecting and suppressing violations of the established regime or other rules of protection and use of the environment and natural resources;

3) doing ecologo-educational work;

4) performing scientific-research works;

5) doing works in the sphere of environmental monitoring.

The first two spheres are the responsibility of the security department. The inspectors who guard the reserve's territory are entrusted with taking nature-protective measures, doing reserve-regime and forestry works (prevention and suppression of poaching, precautions against and extinguishment of the forest fires, making paths, building log huts, cordons, equipping the reserve's territory with banners, information boards and many other things). The territory of the Sikhote-Alinsky Reserve and its buffer zones is guarded by the state inspectors' walking, driving as well as skiing and snowmobiling in winter. When patrolling, they check the condition of the roads, fire-fighting paths, bridges and passages across the watercourses, the condition of the log huts and cordons of the reserve. In the territory of the reserve and its buffer zones, forest fires are extinguished directly by the state inspectors and/or with involving specialized organizations. The state inspectors have been organized into two operational groups who work in the security divisions: Terneysky-Kolumbeysky and Coastal-Kuruminsky.

To perform the tasks entrusted to the reserve, a well-developed infrastructure has been created during its existence: 67 cordons and log huts, 122 km of fire-fighting roads, 500 km of paths, 16 bridges and pedestrian passages across the rivers, helicopter pads.

In the reserve, the ecologo-educational activities are conducted in order to ensure a wide public support for the reserve ideas, to facilitate the solution of regional environmental problems, to participate in forming the ecological awareness and to develop the environmental culture of people. The work is done both by the staff of the environmental education department and by the staff of other departments of the reserve as well as by other organizations and people on a contractual basis. The department personnel' tasks include working with mass-media, advertising and publishing activities, creating cinema and video products, museology and working at the reserve's Information Center, working with schoolchildren, interacting with teachers and educational authorities, organizing and conducting environmental festivals and events, excursion and touristic activities.

5 environmental itineraries — Lake Blagodatnoye, Northern Cape, Golubichnaya Bight, Kabaniy Spring Urochishche, and Arsyenyev's Path — with a total length of more than 100 km exist now in the reserve as educational touristic objects. They are mostly comfortable and esthetically equipped itineraries: wooden decks have been installed on the wet plots, bridges have been made over the brooks, the hazardous slopes have been equipped with log stairs, entrance groups have been decorated, watchtowers and viewing platforms have been mounted.

On average, about 4 thousand people visit the reserve annually for educational purposes.

In the reserve, the scientific-research activities are aimed at studying the natural complexes and watching over the dynamics of the natural processes for a long time (environmental monitoring) in order to assess and prognosticate the ecological situation, develop scientific fundamentals of nature protection, preserve the biological diversity. The work is done both by the staff of the reserve's scientific department and by workers of RAS institutes and higher educational establishments according to cooperation contracts. Years-long complex researches into the ecosystems and their components at stationary sites and itineraries marked on the ground have been and remain the priorities in the scientific-research work of the Sikhote-

Alinsky Reserve. There are 460 km of itineraries for recording the animals in winter, snow-taking itineraries and 6 topoecological profiles in the reserve. 45 permanent sample plots (PSPs), which occupy almost 15 ha, have been laid in the territory of the reserve in 16 various formations. Since 1953, the dynamics of the indigenous and derivative forest communities have been monitored on the PSPs; this includes conducting regular inspections with recording all the standing trees, understorey, undergrowth and grassy cover, recording the regeneration of the trees. The animal populations have been monitored in the reserve's territory since 1946. Since 1971, on the picketed permanent itineraries, which extend over the entire territory of the reserve, the relative quantities of the animals have been recorded in winter in compliance with standard methods. At present, the total length of the itineraries is about 460 km in the reserve and approximately 120 km in the adjacent territory.

Since 1992, Russian-American research within the framework of the Amur Tiger project have been conducted in the reserve's and adjacent territory; the research permits watching over the condition of the Amur tiger population, its competitors and hunting objects.

Since 1951, mouse-like rodents have been recorded at the permanent trap lines. The initial recorded data have been stored in the reserve's archive.

Since 1993, the scientific archives have been converted into electronic databases.

A Geographic Information System (GIS) is being formed. At present, it contains 14 catalogs, 82 layers and 421 fields.

The results of the scientific researches are used in organizing the reserve's main activities and preparing documents submitted to authorities for them to make decisions about taking nature-protective measures, such as protection of rare species of plants and animals, creation of new Specially Protected Natural Areas (SPNTs), environmental expert examinations, implementation of economic projects.

Main threats to the conservation of the biological diversity in the reserve's territory are connected with both natural and anthropogenic factors.

The first ones include the climate change: the growth of the average annual temperature since mid 1980th at a rate from 0.17°C/10 years to 0.27°C/10 years on the different slopes of the Sikhote-Alin, the increasing frequency of spring-summer droughts, early disappearance of the snow cover, especially in the coastal part of the reserve. Together with the growing quantity of dry thunderstorms, all these can increase the quantity and intensity of the forest fires. Heavy precipitation that sharply raises the rivers and brooks; more frequent winds with a speed of more than $\geq$ 34 m/s, especially during the vegetation period, are capable of causing mass blowdown and slash phenomena; heavy snowfalls and snowstorms that hinder the animals' moving and foraging; the tropical cyclones or typhoons that catastrophically change almost all the ecosystems may also be categorized as the climatic factors that can damage the reserve's ecosystems and their components substantially.

The climate change, warming in particular, makes species (birds, insects, plants) not typical of the reserve appear in its territory, leads to outbreaks of leaf-eating insects, gypsy moth and rosy gypsy moth in particular, the growth of nidi of fungal diseases of the trees, the unlimited growth of the quantity of the sika deer in the coastal part of the reserve, which results in competition with the other hoofed animals for the food and habitat.

Poaching and forest fires dominate among the anthropogenic factors that substantially influence the reserve's ecosystems and the conservation of its biodiversity. The ring of roads along the entire border of the reserve and Rudnaya Pristan — Terney highway that crosses it are the place where people penetrate into its territory for the purpose of illegal hunting, gathering

pine nuts, berries and other wild fruits and herbs. Spring agricultural burning and careless handling of fire during leisure time often cause forest fires both in the reserve's buffer zone and their passage directly to its territory.

The reserve is surrounded by territories rented by Terneyles OJSC and other timber enterprises, whose activities make the forests of the 2nd and 3rd fire safety categories belong to the 1st category, which increases the risk of fires and their passage to the reserve's territory.

Unrestricted and uncontrolled excursion-touristic activities can also become a hazardous factor for the reserve's ecosystems and cause degradation of the recreational resources.

Goraliy State Nature Biological (Zoological) Sanctuary of regional significance was created on April 14, 1976, on an area of 4,749.0 ha for preserving and increasing the quantity of the long-tailed goral as well as other rare and threatened species of animals. Its territory is contiguous with the Abrek Rocks of the Sikhote-Alinsky State Nature Reserve in its northern part and extends along the coast of the Sea of Japan from Upolnomochennaya Bight to Mount Zheleznyak. The sanctuary is located on lands of the state forest fund as well as on agricultural and stock lands. Administratively, it is located within Terneysky Municipal District of Primorsky Krai.

According to the IUCN international classification, the sanctuary conforms to category ***IV*****: habitat/species management area** — conservation of habitats and species through active management.

The sanctuary is located within two altitudinal vegetation belts. A broadleaf-oak xeromesophilic forest belt occupies mainly the western slopes. A crooked oak forest of the coastal terraces and slopes forms under the conditions of strong sea winds and mists. The maximal height of the oaks under these conditions is 2.5–3 m. The *Rhododendron sichotense*, often pillow-shaped, is prevalent in the understorey. The *Lespedeza bicolor* and *Duschekia manshurica* are rare here. The grass cover is rather homogenous with participation of xerophytes and xeromesophytes. The belt of the coastal-marine vegetation includes the following complexes: halophytic grass groupings on the sand-pebble beaches, steppificated subshrub-grass communities on the coastal terraces and precipices, *Rosa rugosa* thickets, the vegetation of the coastal rocks. The coastal rocks have their specific set of species that have adapted to the sharp fluctuations of the day and night temperatures, increased exposure to the sea splashes and strong winds.

The Krai State Budgetary Establishment "Directorate for Protecting the Fauna and Specially protected areas" is the state body responsible for ensuring the protection and functioning of the specially protected natural territory.

The Sanctuary has been entrusted with the following tasks:

- Protecting the primeval habitats of the long-tailed goral
- Constantly observing the changes in the sanctuary's natural complex
- Studying the possibility of the long-tailed gorals' naturally colonizing the territory of the sanctuary by virtue of the goral population of the Sikhote-Alinsky Reserve
- Recording the quantity of the animals annually
- Increasing the forage capacity of the lands
- Selecting and regulating the quantity of the animals, controlling diseases of the animals depending on the condition of the populations
- Taking measures in order to prevent the forest fires, detect them in time and fight them

- Facilitating scientific-research works of scientific-research organizations without infringement of the sanctuary's established regime
- Promoting advanced nature- and fauna-protective experience, increasing the environmental awareness of people

The main threats to the conservation of the biological diversity in the Goraliy Sanctuary's territory are the same as the ones for the reserve — they are connected with both natural and anthropogenic factors.

The deep snows and strong storms capable of influencing both the rock vegetation and the rock formations proper are the most hazardous among the climatic factors to the goral.

The sika deer, whose forage base widely overlaps the one of the goral, especially in winter, can also exert a significant influence on the latter, if the quantity of the former rises unlimitedly.

But it is the anthropogenic factors that are the most hazardous. First of all, it is illegally shooting the gorals from the sea, where they can be easily seen, disturbing the animals by the flow of the small-size marine vessels that go along the rocks, polluting the bights and coast with household waste as a result of the increasing unregulated tourism. Farms situated in the Russkaya Bight and River Tayozhnaya outfall (near Mount Zheleznyak), the uncontrolled pasturage of the domestic animals, who can become a source of diseases and parasites for the wild hoofed animals, influence negatively, too.

The ***Bikin National Park*** occupies the western slopes of the central Sikhote-Alin. It was formed in 2015 on an area of 1,160,469 ha by a Decree of the RF Government; the Verkhnebikinsky (Upper Bikin) State Nature Sanctuary of regional significance and a part of Bikinskaya territory of regional significance for the traditional use of nature have been included in its territory. The area of the park's projected buffer zone is 129,509 ha. The territory of the park occupies practically the entire eastern part of Pozharsky Municipal District of Primorsky Krai (51% of the district territory) and is contiguous with Terneysky and Krasnoarmeysky districts of Primorye as well as the district named after Lazo of Khabarovsky Krai; it includes the middle and upper parts of the Bikin River's drainage basin (the basin of the Sea of Okhotsk).

According to the IUCN international classification, the Bikin National Park conforms to category **II** — **national parks** — protected natural territories intended for safeguarding the ecosystems and for recreation.

In compliance with the existing Russian legislation, "on the territories of the national parks, it is forbidden to conduct any activities that can damage the natural complexes, flora and fauna beings, cultural and historical objects and that contradict the goals and missions of the national park" (the Law "On the Specially Protected Natural Areas" No. 33-FZ adopted in 1995, Article 15, Subclause 2).

The system of the functional zones of the protected territory is built on the data about distribution of the indigenous forest cover and populations of the rare animals. Approximately 1/3 of the entire Bikin National Park's territory has been defined as a "reserved zone" (about 22% of the total area) and a "special protection zone" (about 10%) (Fig. 3). This is an obvious evidence that the purely nature-protective tasks, along with the recreational and educational ones, conservation of the cultural heritage objects and the support for the traditional forms of using the nature play a most important role here.

Representatives of small-numbered indigenous peoples — Udege and Nanai — reside compactly on the territory of the national park; they need to be ensured the possibility of using

the natural resources on the principle of sustainable consumption. Preservation of the mode of life, traditions and customs of the small-numbered peoples of the North is one of the main tasks of the Bikin National Park, its most important specifics. According to the functional zonation scheme of the Bikin National Park, the traditional economy is allowed on approximately 2/3 of its total territory. Practically the whole territory (99.9%) is the lands of the forest fund and is federally owned.

However, the guarantees of a reliable conservation of this locality consist not only in the recently obtained federal protective status, unified governance and management by the single Directorate. The conservation of the national park's territory depends much on the peculiarities of its territory and geographical position, first of all, such as: a difficult access to it as well as the large size and compactness of the tract, which fully fits in the boundaries of the drainage basin of the Bikin River and is limited by natural borders.

The main features of the relief of the territory under consideration have been formed through volcanism, neotectonic movements and related erosion.

Most of the territory of the Upper and Middle Bikin is occupied by medium-altitude mountains with height marks up to 1600–1700 m above sea-level and mountain plateaus. The relief indentation is very intense, slopes of a more than average and big steepness are prevalent. The valley slopes with a steepness of up to 35–40° are often covered with scree; rocky crests are usual on the watersheds. In the river valleys, which split the basaltic plateaus, often form rocky precipices up to 100–150 m high with landslides, and the valleys proper are shaped as canyons.

The relief is intensely broken up by rather large valleys of the rivers and their numerous tributaries. The density of the river network is 1.4–1.8 km/km². Most of the territory's area is composed of the basins of orders I–VI, where the bulk of the drainage is regulated on the slopes. The beds of such water flows fall greatly (0.05–0.19 m/m), projections of bedrocks and rapids are frequent here.

The territory covers the altitudinal range from 200 to 1900 m above sea-level, with including the full spectrum of valley, mountain-taiga and bald mountain complexes of the region. Most of the territory — more than 95% — is covered with forests, trees have never been felled here on an industrial scale; only 1 thousand people live here permanently and have always been hunting, fishing, gathering wild plants, pine nuts and other gifts of the forest.

For the national park's territory located in the southern subregion of the monsoon forest region of the Pacific region of the temperate zone of the Far East, the peculiarities of exposure to the main climate-forming factors and processes — radiation and circulation ones — have determined the formation of continental climate proper with monsoon features here. For example, the winter meteoregime is influenced by an Asian anticyclone, against the general background of relatively "dry" western continental winds, and is characterized by a cold winter; the summer meteoregime includes characteristic cyclonic activities, with prevalence of winds of southern rhumbs and frequent entrance of wet air masses as well as formation of situations of increased cloudiness. The influence of the relief (the differences in the exposures, altitudinal drops, the barrier role of the crests) and vegetation (coverage with forests, their type, density, etc.) significantly differentiates and transforms the climate in some locations.

According to the soil-geographic regionalization, the district under research is a part of the Eastern brownsoil-forest region (Dobrovolskiy, Urusevskaya, 1984). The altitudinal factor is determinative and conditions marking out soils of the mountain, plain and floodplain territories within the basin under consideration. The dependence on the position in the relief, on the degree

and character of humidification is clearly apparent in the distribution of the types and differences of the soils in the territory. The relatively small thickness of the soils, their significant stoniness, presence of permanent frozen patches of the soils, low resistance of the soils to mechanical destruction and washout are the common features of the soils in this territory. The combination of these factors with the monsoon climate of the district determines the general high erosive instability of the soils in the territory.

The territory of the Middle and Upper Bikin has unique landscape and biogeographic characteristics. A true gold standard of the nature of the Russian Far East, it is one of the largest, most integral and intact tracts of mixed forests in the entire Northern Hemisphere. Being a variation of East-Asian mixed forests, the local "Ussuriyskaya taiga" includes practically undisturbed broadleaf and pine-broadleaf plantations notable for their richness in the floristic composition, biogeocenotical variety, abundance of relict and endemic, rare and threatened species, arboreal and shrubby stocks. The altitudinal zonation of the vegetative cover is well developed within the considered part of the basin. The following altitudinal belts may be marked out: mountain tundra belt — higher than 1500–1600 m; the belt of creeping forests of the dwarf Siberian pine — 1450 (1500)–1600 m; crooked Erman's birch forest belt — 1300–1450 m; fir-spruce forest belt — 800–1300 m; spruce-pine forest belt — 600–800 m; pine-broadleaf forest belt 200–550(600) m. In the upper part of the basin, a significant part of the dark coniferous forests was replaced by larch, larch-birch and spruce-larch forests as a result of extensive fires at the end of the 19th — the first third of the 20th century. Larch forests occupy also the overwet terraces above the flood plains on the extended plots of the river valleys. The middle levels of the low flood plains are occupied by willow and chosenia thickets, pure and mixed ones. Chosenia-poplar forests with the lobed elm (*Ulmus laciniata*), Japanese elm (*Ulmus propinqua/ Ulmus japonica*) and Manchurian ash (*Fráxinus mandshurica*) grow on the higher levels. Standing broadleaf-poplar and ash-elm forests are associated with the high flood plain plots. The terraces above the flood plains are occupied by various spruce-pine-broadleaf forests. Indigenous larch forests and larch maris are typical of the weakly-drained lowered plots of the terraces above the flood plains.

Combinations of arboreous plants — the pine and oak arboreous pair in the first case and the spruce, fir and (or) larch triad in the second case — are the main environment-forming components and, at the same time, indicators of the contacting floristic and faunistic complexes in the mountainous Sikhote-Alin.

No special floristic researches have been conducted at the middle and upper Bikin; but taking into account the diversity of the physicogeographic conditions, the junction of the different floristic regions and, by analogy with the Sikhote-Alinsky Biosphere Reserve, the total list of the higher vascular plants of the Bikin National Park has to contain about 1,000 species (40% of Primorye's flora). 47 species of vascular plants, mosses and lichens that grow in the park's territory have been included in the IUCN Red List, Russia and Primorsky Krai Red Books.

In the territory of the Middle and Upper Bikin, the character of the relief, the variety of the vegetation and climatic conditions determine the specific and ecological diversity of the district's fauna and the peculiarities of its distribution. From among mammals, here live the Manchurian deer, elk, musk deer, wild boar, roe, brown and Asiatic black bears, tiger, yellow-throated marten, wolverine, sable, acclimatized American mink, badger, Manchurian squirrel and Arsenyev's flying squirrel, Siberian weasel, several species of shrews and mouse-like rodents.

241 species of birds, 7 species of amphibians and 10 species of reptiles can be found in the park's territory. The fish fauna of the upper and middle Bikin consists of various species within 7 families. The salmonids (5 species) and carp (10–12 species) are the families that are the richest in species here. The lampreys (1 species), graylings (2 species), cottids (2 species), freshwater sleepers (1 species), and true loaches (2 species) do not include many species here.

2 species of vascular plants and 5 species of vertebrate animals have been inscribed on the IUCN Red List: the Amur tiger (*Panthera tigris altaica*), hooded crane (*Grus monachus*), scaly-sided merganser (*Mergus squamatus*), Blakiston's fish-owl (*Ketupa blakistoni*) and white-tailed sea-eagle (*Haliaeetus albicilla*). 22 species of plants (including 17 species of vascular plants, including ginseng (*Pánax ginseng*), mountain peony (*Paeonia oreogeton*) and Chinese herbaceous peony (*Paeonia laktiflora*), as well as 5 species of fungi and lichens) and 26 species of animals, including 11 species of vertebrates, 10 of which are birds (for example, the black stork (*Ciconia nigra*), mandarin duck (*Aix galericulata*), osprey (*Pandion haliaetus*), grey-faced buzzard (*Butastur indicus*), Siberian grouse (*Falcipennis falcipennis*), long-billed plover (*Charadrius placidus*), and 15 species of invertebrates have appeared in the Red Book of the Russian Federation.

The Bikin Park has 117 employees, 64 of them work at the security service. The central office of the park is situated in Krasny Yar village of Primorsky Krai.

The main spheres of the national park's activities are determined by the Federal Law "On the Specially Protected Natural Areas" and include:

1) conserving the natural complexes, the unique and gold standard natural plots and objects;

2) conserving the historico-cultural objects, supporting the culture and traditional mode of life of the indigenous small-numbered peoples of the North and Far East;

3) increasing the environmental awareness of the public;

4) creating conditions for regular tourism and rest;

5) devising and implementing scientific methods for nature protection and environmental education;

6) environmental monitoring;

7) restoring disturbed natural complexes and objects.

In the territory, the local indigenous small-numbered peoples are permitted to conduct their traditional economic activities and traditional way of life. The indigenous humans use those kinds of the natural resources that have historically (traditionally) been used for personal purposes and for sale, on their traditionally formed ancestral plots. The traditional economic activities are carried out in compliance with the effective federal legislation of the Russian Federation and the Regulations on the Bikin National Park.

To conduct the traditional way of life in the territory of the National Park, a Council of the Indigenous Small-Numbered Peoples has been created; the Council is intended to guarantee their participation in preparing and making decisions on the issues of protection of their native habitation environment and to coordinate the programs and projects the implementation of which can influence their traditional mode of life (Appendix 2).

In the national park's territory, the state supervision in the sphere of protecting and using the national park's territory is performed by the park's officials who are state inspectors in the sphere of environmental protection. Workers of law-enforcement authorities may be involved in

guarding the national park's territory, their raids in the national park's territory are conducted jointly with the state inspectors in the sphere of environmental protection. In the national park's territory, in order to protect the native habitation environment, the traditional mode of life, economy and production of the indigenous small-numbered peoples of the Russian Federation, persons who belong to the indigenous small-numbered peoples of the North, Siberia and Far East of the Russian Federation are involved in taking measures for the preservation of the natural complexes and objects of the national park.

For performing the environmental education of the public as well as for developing regular tourism and rest, in Krasny Yar village situated in the vicinity of the NP, for receiving guests, there are a stone building of the office of the Territorial-Neighbor Community of the Indigenous Small-Numbered Peoples (TSO KMN) "The Tiger" as well as an ethno-ecological center two-storeyed beam building that belongs to the TSO KMN "The Tiger" and accommodates an ethno-natural museum, souvenir workshop and guest rooms for 4 people. The center is situated in the recreational park at a bank of the Bikin, where an ethnographic village has been created as well as an open stage for concerts and pavilions have been equipped. Also, a guest-receiving complex "Olon" with rooms for 10 people has been built at the lake 2 km away from Krasny Yar settlement. 13 touristic (hunting) bases of different capacities and levels of comfort, with a total capacity for 76 people, are used in the national park's territory (including Okhotnichiy settlement).

At present, several touristic itineraries function in the territory under consideration:

1. "The natural sights of the Bikin River" is a water-pedestrian one with the ethnocultural bias — 240 km

2. "Along the primordial Zeva River" is a water-pedestrian one from Svetlaya settlement to Krasny Yar settlement – 310 km

3. "The ornithological tour. Natural sights of the Alchan River basin" is an automobile-pedestrian one — 45 km

4. "The ornithological tour. Natural sights of the Ulitka River basin" is an automobile-pedestrian one — 50 km

5. "Where the legend lives" is an ethnographic automobile-water itinerary — 180 km.

In general, several thousand Russian tourists and not more than 5–10 groups of foreign tourists (4–12 people in each) visit the entire territory annually. The Bikin banks are much more intensely visited by fishermen in summertime, as well as for holidays and weekends. The educational and advertising activities are conducted by publishing and distributing brochures, booklets, guide-books, calendars, and through the informational centers; by delivering lectures, conducting excursions with schoolchildren, organizing school forestries; using publications in mass media (radio, television, newspapers).

In the national park's territory, the environmental monitoring is conducted by the park personnel jointly with workers of other organizations in the following spheres: the quantity of Amur tigers at the permanent monitoring sites; the quantity of the wild hoofed animals, bears and main bird species; the quantity and area of the forest fires; keeping the Nature Chronicle Book, etc.

The main threats to the conservation of the biological diversity of the national park's territory are connected with both natural and anthropogenic factors. They are practically the same as in the reserve.

As in any SPNT where forests occupy significant areas, fires — both of natural (because of dry thunderstorms) and anthropogenic origin — are the main factor capable of disturbing the natural complexes.

The people who reside in the park's territory in Okhotnichiy settlement remain a potential threat (poaching, unregulated collection of the wild fruits and herbs, unauthorized cutting when logging firewood, etc.).

An unorganized amateur tourism is a significant threat to the park's ecosystems. There are no staging posts with utilities, places for tent camps and other infrastructure at the Bikin River's banks. The rafters usually make their tents on the spits. The tourists use the natural resources at their discretion, which harms the nature of the park.

When masses of fishermen visit the territory uncontrollably, the amounts of the river fish can somewhat decrease in the large rivers.

2. The Goals and Tasks of the World Natural Heritage Properties

Protection and management of World Heritage properties must ensure the conservation of the global value and integrity of a property. According to the Operational Guidelines for the Implementation of the World Heritage Convention, all World Heritage properties must have long-term legislative, regulatory, institutional and/or traditional mechanisms to ensure their safeguarding, and this protection should include adequately delineated boundaries. The legislative and regulatory measures have to ensure protection of the territories against changes and economic activities that can exert a negative influence on the conservation of the property. The boundaries of the Natural Heritage properties should conform to the spatial configuration of the habitats, natural processes or phenomena. The area of the territory has to be sufficient for preserving its universal natural value, and adjacent plots (buffer zones) may be included within its boundaries in order to protect their value against direct and indirect anthropogenic influences.

Popularizing the universal value of the World Heritage sites and ensuring public support for them are an important task. Besides that, various kinds of ecologically sustainable activities may develop at World Heritage properties. But it is necessary to make sure that these activities damage neither the universal value nor the integrity of the properties. Tourism performed on the principles of sustainability, id est the balance between the conservation of the natural and cultural environment and the socioeconomic development at a high degree of the local people's participation, is among the most widespread activities of such kind.

3. Managing the Central Sikhote-Alin Property

All the plots of the Central Sikhote-Alin Property are specially protected areas and are regulated by the Federal Law "On the Specially Protected Natural Areas" and the Law of Primorsky Krai "On the Specially Protected Natural Areas and Properties".

The Sikhote-Alinsky State Reserve and the Bikin National Park are Specially Protected Natural Areas of federal significance and are governed directly by the Ministry of Natural Resources and Environment of the Russian Federation, which performs the general management of these SPNTs and is responsible for the issues related to the state policy in the sphere of SPNTs and international cooperation. The activities and regime of these territories are regulated

by the Federal Law "On the Specially Protected Natural Areas" and are determined by their respective Regulations.

The Goraliy Sanctuary is a specially protected area of regional significance and is governed by the Directorate for Protecting the Fauna and Specially protected areas of Primorsky Krai.

The different levels of governance over the SPNTs that form the unified World Natural Heritage Property "Central Sikhote-Alin" complicate the process of its management.

4. Strengths and Weaknesses of the Plots of the Central Sikhote-Alin World Heritage Property in Conformity with the World Heritage Convention

An analysis of the strengths and weaknesses, opportunities and threats (SWOT Analysis) of the plots of the Central Sikhote-Alin property has been made according to materials of the assessment of effectiveness of activities of the SPNTs located in the Amur tiger's natural habitat performed within the framework of a project of the GEF in 2014, as well as according to materials of the assessment of the Sikhote-Alinsky Reserve for obtainment of the CATS certificate (2015). The Table 1 below presents the results of this analysis.

Table 1

SWOT analysis of the plots of the Central Sikhote-Alin property within the framework of the World Heritage Convention

Plot	***Sikhote-Alinsky Reserve***	***Bikin National Park***	***Goraliy Sanctuary***
Strengths	Effectively guarding the territory. Monitoring the condition of the reserve's ecosystems and environmental education	Significant territories not exposed to anthropogenic factors because of difficult access	
Weaknesses	High fire hazard to the territory caused by significant littering after blowdowns and climate change. Firefighting is complicated by the difficult access to the territory.	Insufficient utilities in the national park's infrastructure for the purposes of developing the organized ecological tourism.	The territory is not guarded effectively and there is no system of control over the touristic activities
Opportunities	Cooperation with the Bikin National Park in order to conserve the populations and natural habitats of the flag species, first of all, the Amur tiger, and maintain the territory regime. Development of cooperation with the local people, first of all, when developing the educational tourism.	Creation of a buffer zone for the national park in order to decrease its exposure to anthropogenic factors from the adjacent territory. Creation of an infrastructure for the educational tourism.	Replacement of the regional status by the federal one with subsequent transfer under the control of the Sikhote-Alinsky Reserve
Threats	Climate change, forest fires	Uncontrolled tourism, poaching.	Uncontrolled tourism, poaching, forest fires, climate change

5. The Joint Action Plan for Managing the Central Sikhote-Alin World Heritage Property

The following may be the main spheres of the joint activities:

1. Improving the WNH property management system
2. Guarding the WNH property more effectively (including firefighting)
3. Developing the ecotourism
4. Improving forms and methods for environmental education of the local people
5. Broadening the themes of the scientific researches and monitoring

Task 1. Improving the management system

The separate management of the plots of the Central Sikhote-Alin World Heritage property is among the main problems that decrease the effectiveness of the activities of these territories. Creation of a coordinative body for managing all the plots becomes especially topical.

The low qualification of the personnel is another important problem. To solve it, it is proposed to elaborate a series of seminars for refresher training of workers of the SPNTs that form the Central Sikhote-Alin UNESCO World Heritage property.

No.	Measures	Time frames	Participants*	Expense*
1.1	Creation of the Coordinative Council for managing the property	2019	SAR, BNP, GS	B
1.2	Signing a trilateral agreement on interaction when managing the UNESCO World Heritage property	2019	SAR, BNP, GS	B
1.3	Obtaining support from authorized executive authorities, international projects and programs, local communities.	During the whole term of the Plan	SAR, BNP, GS	
1.4	Seeking for additional budgetary and extrabudgetary funds in order to take the Management Plan measures	During the whole term of the Plan	SAR, BNP, GS	
1.5	Enhancing the material and technical supplies of the SPNT specialists	During the whole term of the Plan	SAR, BNP, GS	B, exB, I
1.6	Preparing an application for the Bikin National Parks's obtainment of the CATS certificate	2020	SAR, BNP	I
1.7	Refresher training for the specialists, participation in trainings, including international ones, for exchange of experience	Annually	SAR, BNP, GS	B, exB, I
1.8	Organization of meetings in order to correct, if necessary, the Plan for Managing the World Heritage property	Annually	SAR, BNP, GS	I

1.9	Preparing periodical reports about the World Heritage property	As necessary	SAR, BNP, GS	B
1.10	Transfer of Goraliy Sanctuary from the regional subordination to the federal one with its further transfer to be managed by the Sikhote-Alinsky Reserve	2022	SAR, GS	B
1.11	Creating a buffer zone of the Bikin National Park (Appendix 4)	2020	BNP	B, exB, I

*Note:

B — at the expense of the budget finances
exB — at the expense of extrabudgetary funds, projects, grants
I — funds of involved organizations and establishments
SAR — Sikhote-Alinsky State Reserve
BNP — Bikin National Park
GS — Goraliy Sanctuary
POs — partner organizations

Task 2. Guarding the territory more effectively

No.	Action plan	Time frames	Participants	Expense
2.1	Creating joint operational groups to guard the SPNTs	2019	SAR, BNP, GS	B
2.2	Conducting joint raids in order to guard the territory	As necessary	SAR, BNP, GS	B, exB, I
2.3	Interacting with specially authorized executive authorities of the regions, with the police, Hunting Supervision Department, etc.	As necessary	SAR, BNP, GS	
2.4	Equipping checkpoints (inspector cordons)	As necessary	SAR, BNP	B, exB, I
2.5	Devising and implementing measures to encourage the inspectors	2020	SAR, BNP	B, exB, I
2.6	Increasing the reserve's territory	2020	SAR	B
2.7	Enhancing the material and technical supplies of the reserve security services	Annually	SAR, BNP, GS	B, exB, I
2.8	Making and mounting banners, indicators and information signs at the boundaries of the clusters and buffer zones	Annually	SAR, BNP, GS	B
2.9	Organizing and conducting instructional seminars among the SPNT security workers			
2.9.1	- occupational safety, field work	Annually	SAR, BNP, GS	B, exB, I
2.9.2	- drawing up minutes and other documents	Annually	SAR, BNP, GS	B, exB, I
2.9.3	- work with SMART information collection software	Annually	SAR, BNP, GS	B, exB, I
2.10	Creating an SPNTs' unified database about breaches and violators of the nature-	2019	SAR, BNP, GS	B

	protective legislation			
2.11	Preparing for the fire-hazardous period	March, August annually	BNP, GS SAR* Appendix No. 3	B, exB, I

Task 3. Developing the ecotourism with involving the local communities. Increasing the level of living of the local people, supporting the development zones, increasing the incomes from the ecotourism

п/п	Action plan	Time frames	Participants	Expense
3.1	Conducting scientific researches on the ecotourism (estimating the recreational capacities and existing loads)	2020	SAR, BNP	B
3.2	Promoting ecological itineraries in the SPNTs that are parts of the WNH	Since 2019	SAR, BNP	
3.3	Conducting a series of seminars for the local people about the SPNT tourism income opportunities	Since 2019	SAR, BNP	B, exB, I
3.4	Creating/ reconstructing visit centers:			
3.4.1	- Sikhote-Alinsky Reserve	2020	SAR	B
3.4.2	- Bikin National Park	2021	BNP	B, exB, I
3.5	Joint participation in the tourist exhibitions	Annually	SAR, BNP	B
3.6	Organizing and conducting a seminar-meeting about the development of ecotourism in the SPNTs that form the WNH	2019	SAR	I
3.7	Conducting instructional seminars for the personnel of the touristic organizations (tour operators) who perform their activities in the SPNTs	Annually	SAR	I
3.8	Organizing media events (press tours) across all the SPNTs that form the WNH	Annually	SAR, BNP	B, exB
3.9	Joint organization of festivals and other events aimed at attracting tourists to the WNH territory	Annually	SAR, BNP	B, exB, I
3.10	Researching and inventorying the cultural-historical heritage properties	Annually	SAR, BNP	B

Task 4. Improving forms and methods for environmental education, first of all, of the local people

No.	Action plan	Time frames	Participants	Expense
4.1	Placing information about the SPNTs that form the WNH onto Internet sites and into	2019	SAR, BNP	B

	social networks			
4.2	Publishing and distributing nature-protective brochures, booklets and other educational materials	Annually	SAR, BNP	B, exB, I
4.3	Publishing the brochure “How to Behave if you Meet a Tiger?”	2020	SAR, BNP	B
4.4	Methodological and practical support for youth environmental clubs (Club of WWF’s Friends, school interest groups, etc.)	Annually	SAR, BNP	B, exB, I
4.5	Methodological assistance to school teachers	Annually	SAR, BNP	
4.6	Devising methodical materials to teach schoolchildren the program: “The Amur tiger is our neighbor”	2020	SAR, BNP	B
4.7	Conducting events “The Bird Day”, “The Parks Marching”, etc.	Annually	SAR, BNP	B
4.8	Creating video pieces about the WNH property	2020	SAR, BNP	B
4.9	Participating in the work of conferences, meetings and seminars dedicated to the development of the environmental education on the SPNTs.	Annually	SAR, BNP	B, exB, I

Task 5. Conducting joint scientific researches and monitoring

п/п	Action plan	Time frames	Participants	Expense
5.1	Devising and implementing unified methods for the scientific researches	2019	SAR	B
5.2	Devising and implementing joint scientific research programs	During the Plan implement ation term	SAR, BNP, GS	B, exB, I
5.3	Organizing and participating in seminars to record the Amur tiger and process the obtained data	Annually	SAR, BNP	B
5.4	Recording the Amur tiger (through photographs and traces)	Annually	SAR, BNP, GS	B
5.5	Creating unified databases with the results of recording the Amur tiger	2019 with further annual additions	SAR, BNP	B
5.6	Devising and implementing programs of biotechnical measures	Annually	SAR, BNP, GS	B, exB, I

5.7	Publishing books, monographs, proceedings of scientific conferences, seminars, etc.	As necessary	SAR, BNP	B, exB, I

The measures enumerated in the Action Plan will be financed at the expense of the federal budget funds allocated for the functioning of the establishments that manage the SPNTs as well as at the expense of their own and granted funds.

The measures enumerated in the WNH Property Management Plan are taken in account when drawing up the annual operational management plans (state assignments) of the neighboring reserves, in compliance with the legislation of the Parties.

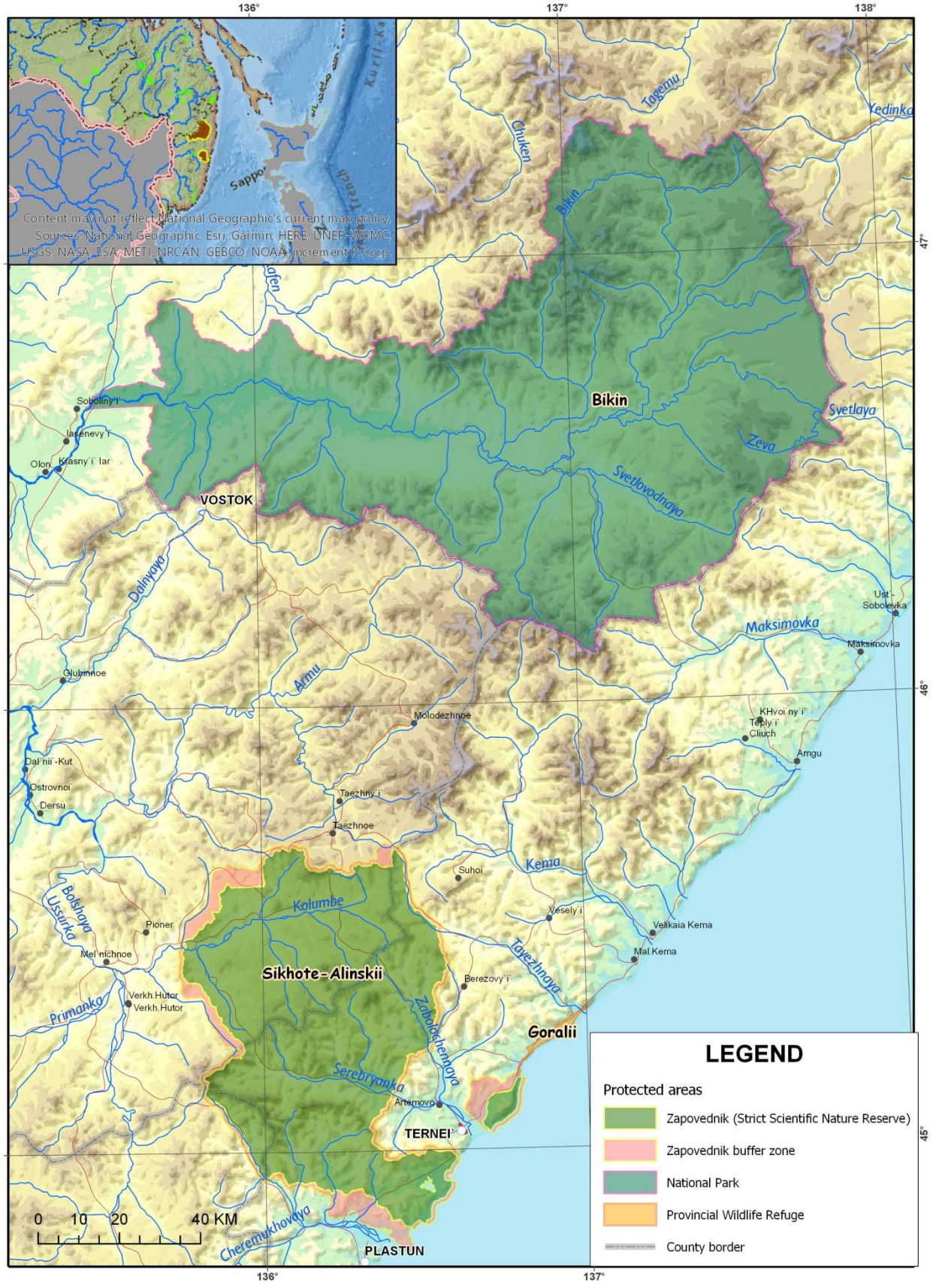

Figure 1. A schematic map of the Central Sikhote-Alin World Heritage Property.

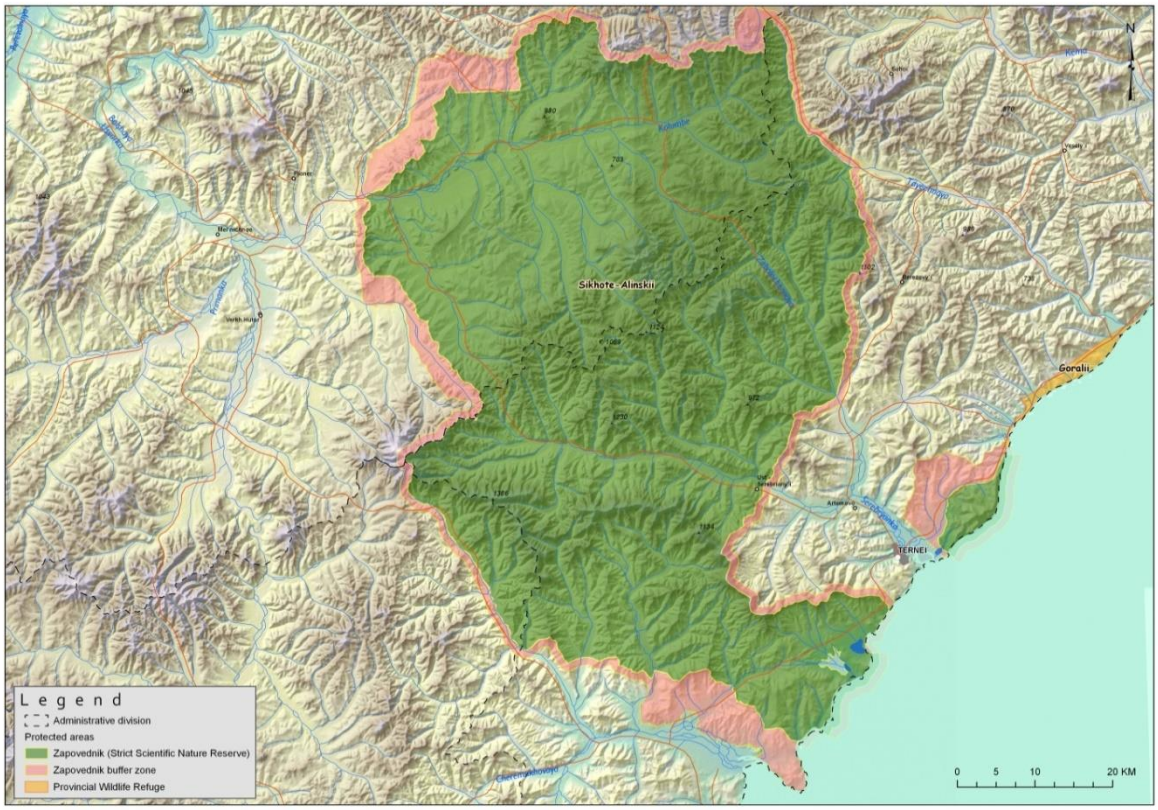

Figure 2. A schematic map of the Sikhote-Alinsky Reserve and Goraliy Sanctuary

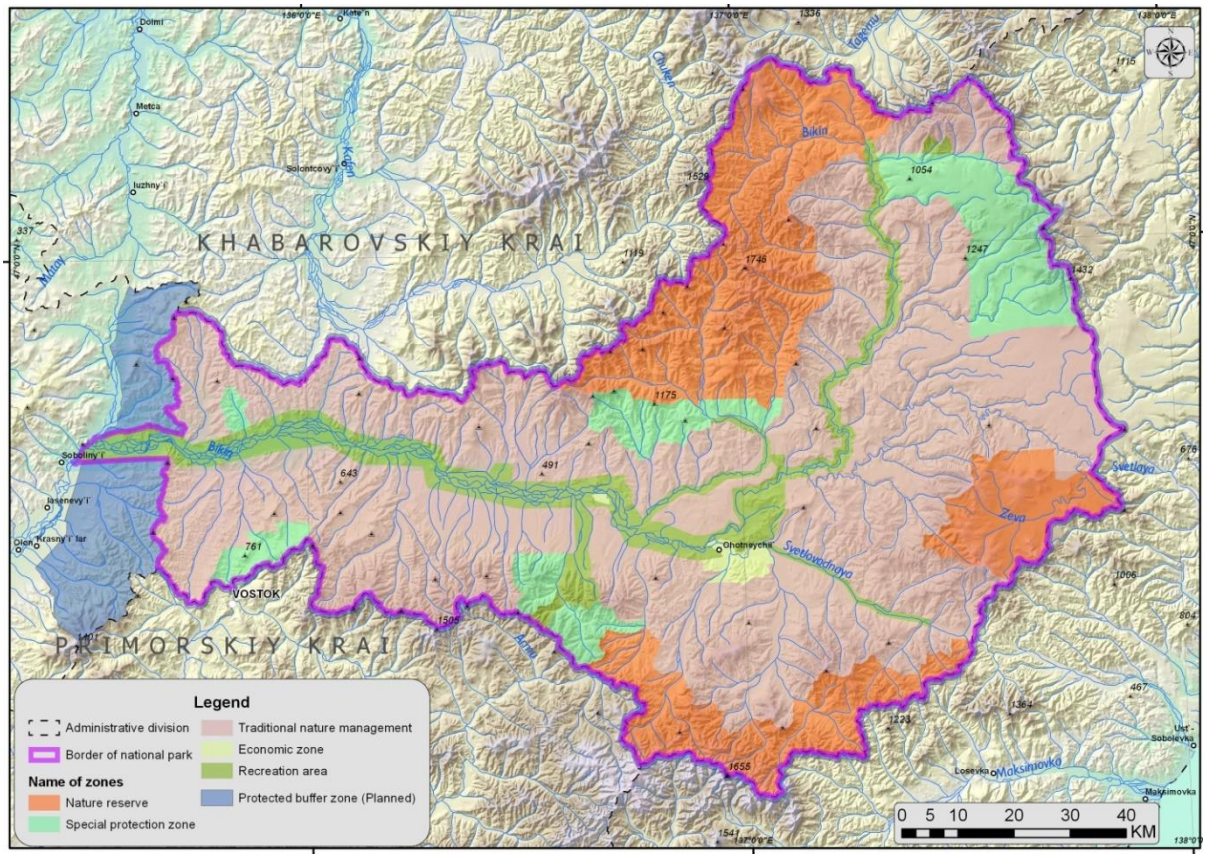

Figure 3. A schematic map of the Bikin National Park's territory zonation.

Appendix 2

Creation of the Bikin National Park's Buffer Zone

The national park's territory had been demarcated, the land lot had been registered in the cadaster with a total area of 1,159,287 hectares. The necessary package of documents had been prepared, on the grounds of which on September 8, 2018, the RF Government adopted its Resolution No. 1898-r on transferring the lands located in the territory of the created Bikin National Park from the category of the forest fund lands to the category of the lands of Specially Protected Natural Areas (Fig. 1). Thus, the boundaries of the national park were finally approved, which permitted starting to create a protective (buffer) zone around it.

ПРАВИТЕЛЬСТВО РОССИЙСКОЙ ФЕДЕРАЦИИ

РАСПОРЯЖЕНИЕ

от 8 сентября 2018 г. № 1898-р

МОСКВА

Перевести земли лесного фонда площадью 1159287 гектаров (Приморский край, Верхне-Перевальненское лесничество, кадастровый номер земельного участка 25:15:000000:6122) в категорию земель особо охраняемых территорий и объектов для организации национального парка "Бикин".

Председатель Правительства
Российской Федерации Д.Медведев

3842136

/State Emblem of the Russian Federation/
GOVERNMENT OF THE RUSSIAN FEDERATION

RESOLUTION
dated September 8, 2018, No. 1898-r
MOSCOW

Transfer the forest fund lands with an area of 1,159,287 hectares (Primorsky Krai, Verkhne-Perevalninskoye forestry, cadaster number of the land lot 25:15:000000:6122) to the category of lands of specially protected areas and properties for organizing the Bikin National Park.

Prime Minister of the Russian Federation **/Round seal:/** D. Medvedev

Figure 1. RF Government's Resolution No. 1898-r dated September 8, 2018.

In conformity with the Ecologo-Economic Substantiation, a set of proposals about the creation of the Bikin National Park's buffer zone with a total area of 129,509 ha around all its boundaries has been prepared (Fig. 2).

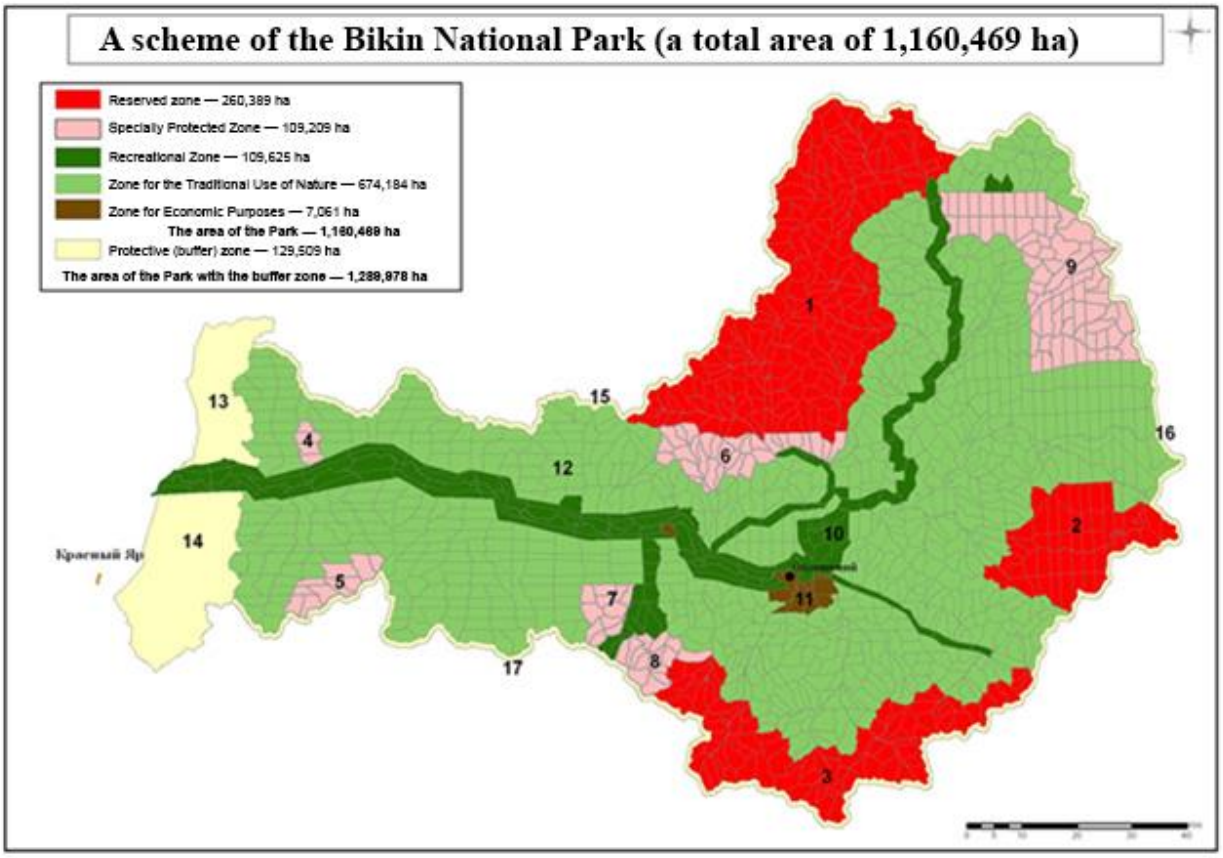

Figure 2. The approved boundaries and zonation of the Bikin National Park with the projected plots of the buffer zone (plots 13–17).

Description of the Boundaries of the Projected Buffer Zone

The northern boundary. From Khabarovsk-Nakhodka road crossing the border between Khabarovsky and Primorsky Krais at the watershed between the River Takhalo and River Matay, then to the east along the border between Khabarovsky and Primorsky Krais (the main watershed between the Rivers Bikin and Khor) to the head of the River Takhalo and further to Mount Zelta (mark 1003). From Mount Zelta across the upper reaches of the River Kabibyla one kilometer away from the watershed across the territory of Khabarovsky Krai via Mount Anik (mark 1932) to Mount Golets (mark 1668) on the watershed between the River Jakhari (a tributary of the River Taghemu), River Kyu (the head of the River Bikin) and River Levaya (Left) Yedinka. (No. 15).

The eastern boundary. From Mount Golets (mark 1668) further to the south-east along the border between Pozharsky and Terneysky Municipal Districts one kilometer away across the territory of Terneysky District (along the main watershed of the Sikhote-Alin mountain range between the River Bikin and the Rivers Yedinka, Kabanya, Dagdy, Bolshaya (Big) Peya, Svetlaya, Kuznetsovka, Sobolinka, Maksimovka, Kema) to mark 1482 on the watershed between the River Kema and River Malaya (Small) Svetlovodnaya (a left tributary of the Bikin). (No. 16).

The southern boundary. From mark 1482 further to the north-west and west along the border between Pozharsky and Krasnoarmeysky Districts one kilometer away across the territory of Krasnoarmeysky District (the main watershed between the River Bikin and Rivers Valinku, Dalnyaya) to Mount Vodorazdel (mark 847) and further along the watershed between the River Burnaya (a tributary of the River Dalnyaya) and the River B. Mom-Biosani (a tributary of the River Bikin) to Mount Predok (mark 1401). (No. 17).

The western boundary. From Mount Predok (mark 1401 m) at the head of the Brook Mom-Biosani to the north-west along the watershed between the Springs Mom-Biosani and Ostrovnaya along the western boundary of quarters 161, 159, 151 to the junction with qu. 99, further to the north-east along the western boundary of quarters 151, 137, 138 and then along the boundary of the land lot allocated for Khabarovsk-Nakhodka motorway (A375), including the eastern parts of quarters 126, 127, 120, 121 (of Krasnoyarovskoye plot forestry) to the Takhalinsky Bridge across the River Bikin. From the Takhalinsky Bridge across the Bikin further to the north along the eastern boundary of the land lot allocated for Nakhodka-Khabarovsk motorway, including the eastern parts of quarters 64, 55, 51, 50, 45 to the junction with qu. 9 and then to the north-east up the River Takhalo along the northern boundary of qu. 9, 11, 10, 12 (Sobolinoye plot forestry) to the way to the watershed between the River Takhalo and River Matay to the border with Khabarovsky Krai. (Nos. 13–14).

Substantiation of the Boundaries and Regimes of the Buffer Zone

Taking into account the low danger of direct exposure to anthropogenic activities around the boundaries of the national park, which go along the natural crests of the ranges from 800 to 1400 m above sea-level, it is proposed to make the buffer zone one kilometer wide on these plots (Fig. 2, plots 15, 16 and 17). Here the regime will permit preserving the forest strips against felling from the outside of the watersheds along which goes the national park's boundary. These plots are mostly protective watershed forests and must not be included in the lessees' felling plans according to the Forest Code and Felling Rules.

The forest is used the most actively on two plots adjacent to the western boundary of the national park (Fig. 2, plots 13 and 14). Here a network of timber-carrying roads is developing, which permit going directly to the territory of the SPNT. A kilometer buffer zone is not enough here, this is why it is proposed to delineate its boundary along the alienation strip of Khabarovsk-Nakhodka motorway (A375) from its crossing the border of Khabarovsky and Primorsky Krais to the Takhalinsky Bridge across the Bikin and further along the part that is being built to the River Mom-Biosani.

On the north-western plot (No. 13) of the River Takhalo's left bank, timber has already been harvested for many years. The plot is leased for a long term by OJSC "Roshchinsky KLPKH" ("Complex Timber Industrial Entity", a part of Terneyles (Terney Forest) Holding). These are quarters 9–12, 45–53 and 55–67 of Sobolinoye plot forestry of Verkhne-Perevalninskoye forestry (an area of 41,812 ha, lease until year 2023), as well as quarters 8 and 13 of Sobolinoye plot forestry of the water-protective zone of the River Takhalo leased by Terneyles. Moreover, a part of quarter 3 of Sobolinoye plot forestry leased by Bikin LLC (until 2016) gets into the buffer zone. Here the trees may be felled in compliance with the lessees' approved Development Plans, but their conformity to the Felling Rules and the fulfilment quality will be controlled by inspectors of the national park in order to prevent harming the adjacent territories of the national park.

The south-western plot (No. 14) includes the basins of the Brooks Sokolikha, Vesennyaya and Mom-Biosani and is leased for a long term by the Territorial-Neighbor Community of Indigenous Small-Numbered Peoples (TSO KMN) "The Tiger" for harvesting non-timber products of the forest. These are quarters 120–164 of Krasnoyarovskoye plot forestry of Verkhne-Perevalninskoye forestry (an area of 48,365 ha, leased until year 2058). The territory is a part of Verkhne-Perevalninskaya pine nut production zone with rather a strict regime of using the forests. Here the trees may be felled according to assignments of the Forestry Department in the case of fighting forest pests or the necessity of improving the quality of the standing trees. The suitability of any felling and the quality of performing it will also be controlled by inspectors of the national park.

The existing regimes of hunting and harvesting non-timber forest resources as well as visiting the territory and recreation will be preserved here, too. The road construction will be planned under the control of the administration of the national park in order to guard the SPNT effectively.

Using the Nature in the Territory of the Projected Buffer Zone

The whole territory of the projected buffer zone is a part of the forest fund lands and is owned by the State, which allocates subventions to forestry authorities of Khabarovsky and Primorsky Krais, which operate these forests.

For preparing the substantiation of the creation of the buffer zone, the planners have collected all necessary information about the users who are leasing the lands around the boundaries of the national park, including the lease contracts, forest management data and cartographic materials. Most of these forests are leased for long terms by 12 companies in order to harvest timber. A plot of Verkhne-Perevalninskaya nut production zone (No. 13 in Fig. 2) has been leased for gathering food resources of the forest and medicinal plants. Within the framework of the secondary use of the forest, all the plots have also been allocated with long-term licenses to 11 hunting users, who use fauna in this territory.

The total area of the forests leased to harvest timber within the planned buffer zone is 72,312.7 ha (56% of the total area of the buffer zone). A significant part of the buffer zone in Primorsky Krai — 41,948.4 ha — is located in the territory that belongs to the forest plots leased by the Group of Companies "Terneyles" ("Terney Forest"), which comprises Terneyles OJSC, Amgu OJSC and the OJSC "Roshchinsky KLPKH" (Complex Timber Industrial Entity). In Khabarovsky Krai, most of the buffer zone — 12,100.8 ha — is located in the territory of Rimbunan Hijau MDF LLC (Fig. 3).

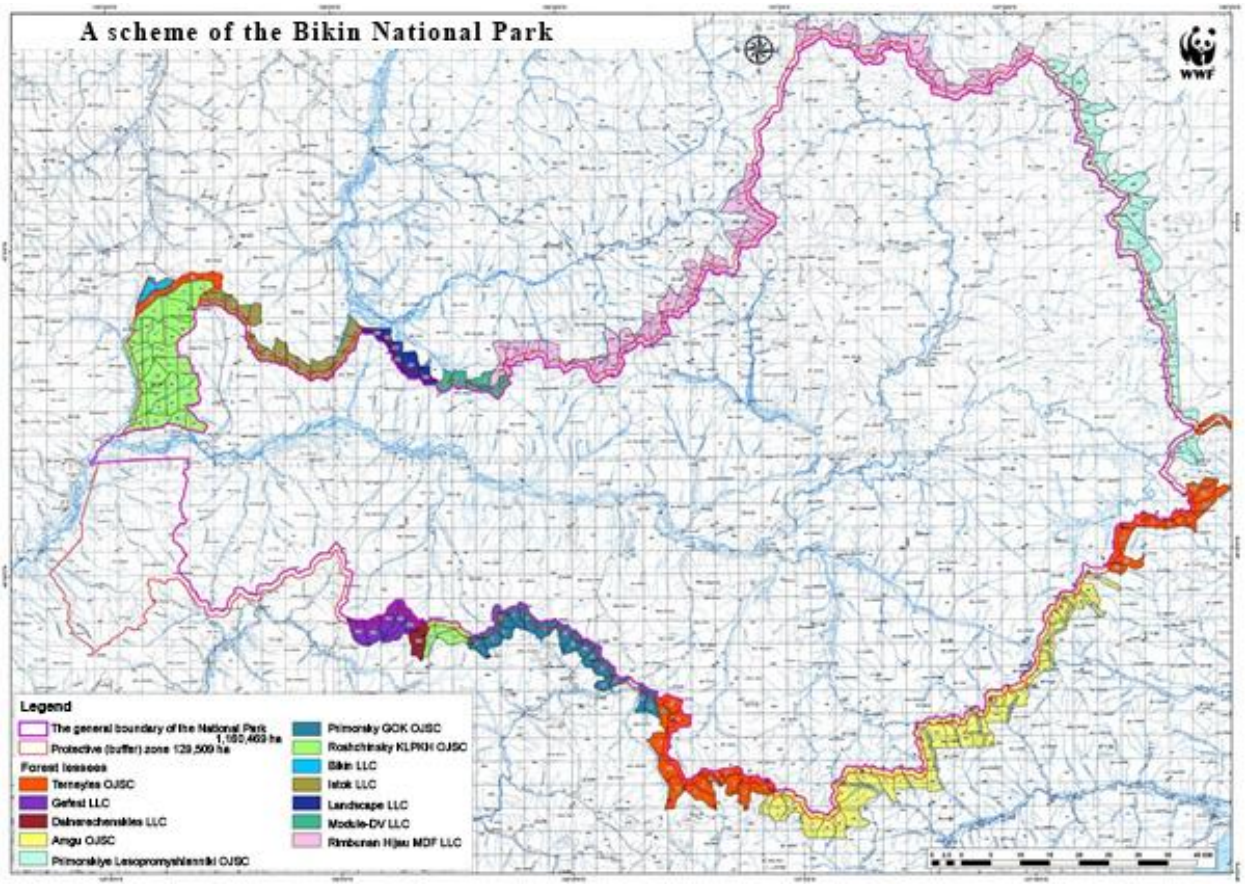

Figure 3. The lessees of the forest fund for harvesting timber within the projected buffer zone of the Bikin National Park (all the quarters adjacent to the national park's boundary are shown).

The plot of Verkhne-Perevalninskaya pine nut production zone (No. 13 in Fig. 2), which is leased for a long term by the Territorial-Neighbor Community of Indigenous Small-Numbered Peoples (TSO KMN) "The Tiger" for harvesting food resources of the forest and medicinal plants (Table 1), is fully included in the territory of the projected protective (buffer) zone of the Bikin National Park.

Table 1. The overlap of the territory of the projected buffer zone and the plots leased for harvesting food resources of the forest and medicinal plants

Company	Area of the buffer zone, ha	Overlap of the buffer zone territory and the leased forest plot
TSO KMN "The Tiger"	48,365	**lease contract**: No. 193/29 dated December 01, 2008 (for 49 years) **forestry**: Verkhne-Perevalninskoye

		plot forestry: Krasnoyarovskoye **quarters**: 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164

Within the projected buffer zone of the Bikin National Park, there are plots of hunting lands allocated to hunting users according to long-term licenses with the right to use the fauna (Table 2, Fig. 4).

Table 2. The overlap of the territory of the projected buffer zone and the forest plots allocated to hunting users for procuring fauna

Name of the hunting user	Area (ha)
Primorsky Krai	
Territorial-Neighbor Community of Indigenous Small-Numbered Peoples “The Tiger”	48,528.52
Territorial-Neighbor Community of Indigenous Small-Numbered Peoples “The Tiger”	25,865.06
Non-Governmental Organization “Sable Club of Hunters”	6,224
Limited Liability Company “Krasnoarmeysky Rayzagotokhotprom”	895.12
Non-Governmental Organization of Hunters and Fishermen “Okhotnichya”	6,133.69
Limited Liability Company “Primorokhota”	15,485.73
Non-Governmental Organization of Hunters and Fishermen “Vostochny Bereg” (“Eastern Coast”)	5,461.01
Khabarovsky Krai	
Territorial-Neighbor Community of Small-Numbered Peoples “Ude”	4,972.92
State Nature Sanctuary of Krai Significance “Chukensky”	1,828.85
Khabarovsky Krai Consumers’ Union — Lazovsky Branch	5,656.01
Municipal Unitary Enterprise “Lazovskoye Production Entity”	8,460.15

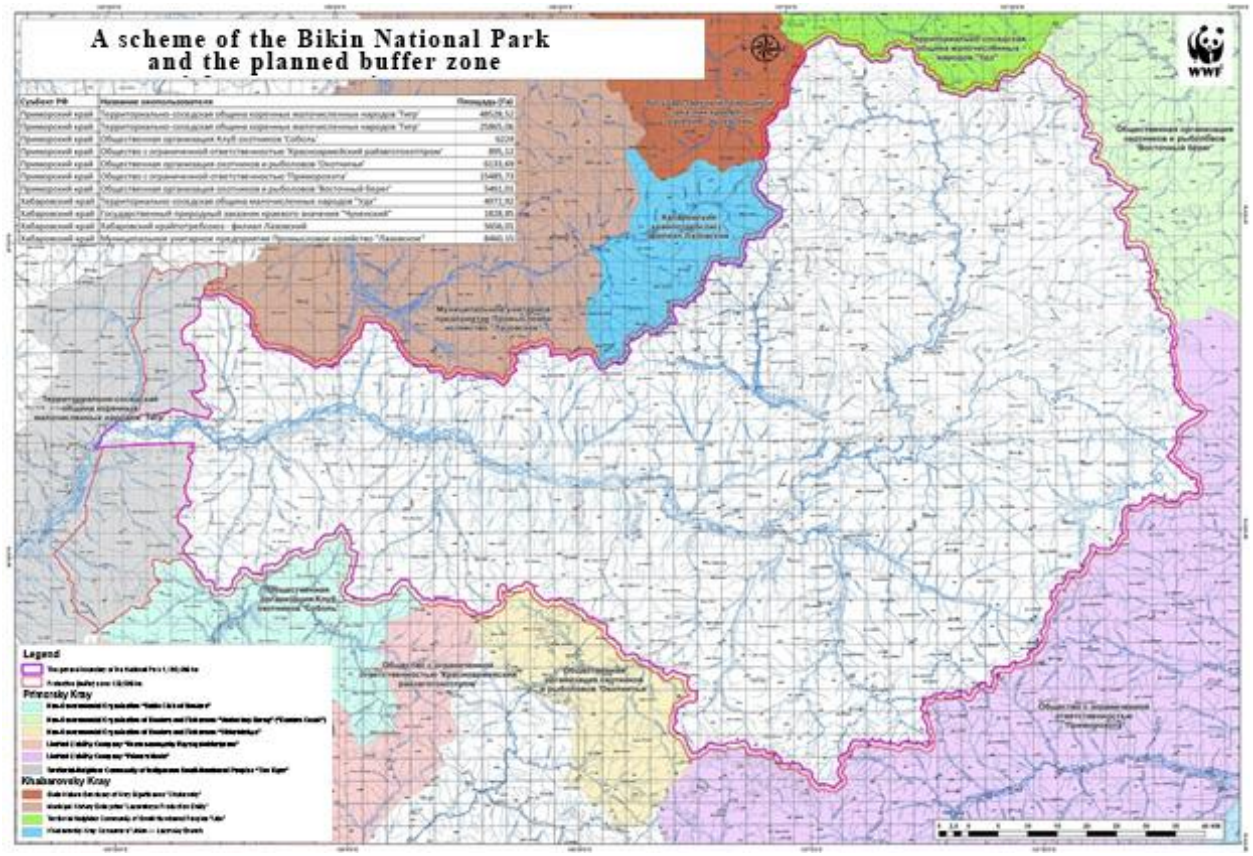

Fig. 4. A map of the hunting users who have the allocated hunting lands adjacent to the boundaries of the Bikin National Park and included in the territory of the planned buffer zone.

At present, a special work group of experts is being formed; the group includes representatives of the Ministry of Natural Resources and Environment (Minprirody) of Russia, the FSBE “Bikin National Park”, Administration of Primorsky Krai and Government of Khabarovsky Krai, representatives of nature-protective and scientific organizations. The work group will harmonize the boundaries and regimes of the created protective (buffer) zone of the Bikin National Park with the hunting users and forest users in compliance with the Russian legislation and RF President V. V. Putin’s Assignments.

Appendix 3

Spheres of the Bikin National Park's Work for Respecting the Legitimate Rights and Interests of the Local Indigenous Small-Numbered Peoples

In compliance with the RF President's assignments dated November 7, 2013, (No. Pr-2624) and April 22, 2015, (No. Pr-729) as well as the RF Government's Decree dated November 3, 2015, (No. 1187), the specially protected natural territory of federal significance "Bikin National Park" has been created.

The Regulations on the Bikin National Park (hereinafter referred to as the Regulations) were approved by the Russian Ministry of Natural Resources and Environment's (Minprirody's) Order No. 429 dated August 12, 2016, registered at the RF Ministry of Justice on September 08, 2016, No. 43605. They entered into force on September 20, 2016.

On the grounds of Clause 1 of Chapter I, the Regulations had been elaborated, among others, in compliance with the requirements of the Federal Law dated April 30, 1999, No. 82-FZ "On the Guarantees of the Rights of the Indigenous Small-Numbered Peoples of the Russian Federation" and the Russian Federation Government's Resolution dated May 8, 2009, No. 631-r "On Approving the Enumeration of the Places of Traditional Habitation and Traditional Economic Activities of the Indigenous Small-Numbered Peoples of the Russian Federation and the Enumeration of the Traditional Economic Activities of the Indigenous Small-Numbered Peoples of the Russian Federation", which had permitted supplementing the Regulations with clauses that touch upon the rights and interests of the indigenous small-numbered peoples (hereinafter referred to as the ISNPs) and are aimed at protecting them.

The Regulations provide for the following in order to respect and protect the legitimate rights and interests of the ISNPs.

According to Clause 9, Subclause 8, the Bikin National Park is the first SPNT of federal significance in Russia entrusted with the task of protecting the ISNPs' habitation environment and traditional mode of life. In compliance with this, an addition that permits the Federal State Budgetary Establishment "Bikin National Park" (hereinafter referred to as the Establishment) to take measures for protecting the habitation environment and traditional mode of life of the ISNPs has been introduced by Minprirody's Order dated August 12, 2016, No. 427, to the list of the main activities contained in the Charter of the Establishment. In order to do that, the state assignment will provide for specially aimed events at the Establishment and budgetary funds will be allocated. Also, to realize this assignment effectively, the Establishment's Charter provides for creation of a special local people's council under the Director of the Establishment. This is also a substantial advantage of the Bikin National Park (created at places of the traditional residence and traditional economic activities of the ISNPs) over other SPNTs in districts inhabited by ISNPs.

In compliance with Clause 12, the local people who live in the settlements situated within the boundaries of the national park (Okhotnichiy settlement) as well as the citizens who live in the villages Krasny Yar, Olon, Sobolinoye, Yasenevoye and their near relatives (spouses, parents, children, adopters, adopted, full-blooded and half-blooded siblings, grandparents, grandchildren, guardians, custodians, wards) are allowed to stay in the national park's territory (except the reserved and specially protected zones) without any permit and for free.

Other natural persons who are not the Establishment workers or officials of Russia's Ministry of Natural Resources and Environment are allowed to stay in the national park's territory only if they have the permission of the Establishment or Russia's Ministry of Natural Resources and Environment. Also, according to the federal law "On the SPNTs", people may stay here for the purposes of rest, recreation and tourism for a fee.

In conformity with the functional regime, the ISNPs may conduct their traditional economic activities and their traditional mode of life in allocated zones such as a zone for the traditional extensive use of nature, a recreational zone and a zone for economic purposes. According to Appendix 2 to the Regulations on the Bikin National Park, they occupy 68.2% of the total area of the park.

In compliance with the Regulations about these zones, the ISNPs may perform their traditional production activities — hunting, fishing, harvesting wild fruits and herbs, etc. — freely and without hindrance; with the Establishment's concurrence, they may also construct buildings and facilities, log huts, barracks, trap routes, and procure wood here for these purposes. Their movement, stops and overnight stays are limited neither (Clauses 10, 11.3, 11.4 and 11.5).

With the Establishment's concurrence, the hunters may create an infrastructure on their plots for receiving and accommodating tourists and other visitors, taking into account the compliance with the fire safety, nature protection and other requirements.

The visitors of the territory must stay (stop, make fires, stay for the night) only at places specially determined by the Establishment — specially prepared by the ISNPs jointly with the Establishment on their plots. They will be used only with the consent and under the control of the plot host.

Also, only the ISNPs are allowed to use mechanical vehicles for movement in order to conduct the traditional economic activities and traditional mode of life. Other visitors may take transport only along commonly used roads (there are no such roads in the park's territory) and along specially allocated itineraries (Subclause 24, Clause 10). That is, the territory visitors will use the services of the local people or park workers, which will permit organizing an efficacious control.

Reducing the area of the traditional extensive nature use zone is not allowed (Subclause 11.5).

In the national park's territory, persons who belong to the ISNPs may be involved (Clause 24) in order to protect the native habitation environment, traditional way of life, economy and production of the ISNPs and to take measures aimed at preserving the natural complexes and objects of the national park. That is, the local people may participate in guarding their hunting plots — with the corresponding activities and self-organization.

In conformity to Appendix 3 to the Regulations, the position of the reserved and specially protected zones does not overlap the places of the historically positioned plots where the ISNPs traditionally conduct their economic activities.

Taking the aforesaid into account, the representatives of the local ISNPs as well as citizens of other nationalities who reside in Krasnoyarovskoye and Sobolinskoye rural settlements may continue conducting the activities that they have been conducting earlier in the territories of their plots located within the boundaries of the national park. These activities will be conducted for free, the products obtained may be used for personal purposes or may be legally sold, at the hosts' discretion, both to individuals and to a purveying network.

Many human settlements permit both the Establishment and the ISNPs to control and regulate the flow of the visitors of the national park's territory and their activities.

According to the adopted manning table, the Establishment should have 131 employees. At present, there are 119 employees, 74 of them are representatives of the indigenous peoples (47 of them conduct their traditional economic activities in the park's territory and 2 work as the Deputy Directors).

At present, there are 26 historically positioned (ancestral) hunting plots in the national park's territory. More than 60 representatives of the indigenous small-numbered peoples conduct their traditional economic activities on them.

Proceeding from the existing staff situation (in the national park's territory, the traditional activities are conducted mainly by people of 50 years of age and more who do not have a secondary special or higher education), the Establishment's manning table provides for the position of a "security department specialist". The availability of such a position has permitted employing local people. While continuing to conduct their traditional economic activities and now being employees of the Establishment, the local people perform tasks for guarding and controlling the territory, environmental monitoring.

Thus, the Establishment's territory guarding work is built as follows:

By involving the local people — representatives of the indigenous peoples — in guarding the territory.

The territory is mainly patrolled along the itineraries used by the indigenous peoples for conducting their traditional activities. The "hunters' winter huts" serve as places for the state inspectors to stop and stay when patrolling.

The territory is patrolled by the operational groups and state inspectors accompanied by the security department specialists; the hunters' own vehicles are mainly used for the work.

The Establishment teaches the indigenous people modern technologies of nature-protective activities (work with phototraps for observing animals and guarding the territory, modern navigation devices, unmanned aerial vehicles), since young people are actively involved in the work.

Participation of the indigenous small-numbered peoples in managing the territory

The Establishment's Charter stipulates (Subclause 21 of Clause 33) that the Director forms deliberative bodies for the local people to conduct their traditional economic activities in the national park's territory without harming the natural complexes of the territory.

In compliance with this norm of the Charter, a Council of the Indigenous Small-Numbered Peoples has been created under the Establishment; the Council aims at guaranteeing their participation in preparing and taking managerial decisions by the park directorate as to the issues of protection of the primeval habitation environment, coordinating the plans, programs and projects the implementation of which may influence the traditional way of life of the local people who conduct their activities in the territory of the park.

The General Meeting of the Indigenous Small-Numbered Peoples who conduct their traditional economic activities in the territory of the park has adopted the Regulations on the Council and has submitted them for approval to the park directorate; has elected 11 members of the Council. The Council Members have elected the President of the Council.

The position of the Council President is the position of the Deputy Director of the Establishment responsible for conducting the traditional use of the nature.

For the purposes of preserving the culture, customs and traditions of the indigenous peoples, a decorative and applied arts workshop has been equipped under the national park;

exclusively for the Establishment, the manning table provides for the positions of cottage industry masters.

A dance team with a children's and adults' groups has been created in the park. For the first year of its work, the team participated in district and Krai cultural events.

Appendix 4

Enhancing the Prevention and Extinguishment of the Forest Fires

At present, fires are among the main hazards to the territory of the Sikhote-Alinsky Reserve.

As a result of exposure to hurricane wind when the Lionrock typhoon went across the Sikhote-Alinsky Reserve's territory (in September 2016), blowdown phenomena covered about 15% of the forest ecosystems (about 50 th. ha). From 20 to 90% of the trees of all the levels were uprooted or broken. No catastrophes of such a scale and character as the Lionrock typhoon had occurred for at least the previous 800 years.

The blowdown phenomena have made from 10 to 35 t/ha of branches and leaves and up to 250–300 t/ha of trunk wood appear simultaneously on the surface of the soil, which has increased the stock of the combustible materials by a factor of 10–30 in the pine forests that have suffered. For the next several years, together with the growing cereals and other various herbage, due to the sharp change in the illumination, this will lead to a highest fire hazard in the reserve's forests, especially taking into account that similar phenomena have taken place in the territory adjacent to the reserve and actively visited by people.

In total, the area of the forests of hazard class I (very high) has increased from 18.8% of the reserve's territory to 35%.

In connection with the increased fire hazard class, it is necessary to take measures aimed at excluding or promptly preventing forest fires in the reserve's territory, namely, to clear the fallen trees from the existing roads and mineralized strips and restore the road parts washed away by the flood in order to ensure an unhampered access to the reserve's territory.

To solve the issue, additional finances are necessary for the reserve to acquire such machinery as well as for taking a complex of measures to prevent fires in the territory of the SPNT.

Figure 1. Logjams on roads of the reserve

Figure 2. Clearing the paths and roads of the reserve

At present, the reserve is actively clearing its roads and paths both by its workers and by involving other organizations. Regular work is done to prepare for the fire-hazardous periods: fire extinguishment contracts are concluded, the territory is air-patrolled, the workers are instructed.