MINISTRY OF NATURAL RESOURCES AND ECOLOGY
RUSSIAN FEDERATION

FEDERAL STATE BUDGETARY INSTITUTION "BIKIN" NATIONAL PARK"

Bikin River Valley UNESCO Heritage Site Status Report for 2018-2019

On July 2, 2018, the Intergovernmental Committee for Protection of the World Cultural and Natural Heritage officially announced inclusion of the Bikin River Valley within the Central Sikhote-Alin UNESCO World Heritage Site.

The Bikin River Valley was included in the preliminary list of UNESCO World Heritage Sites as early as 2010. But according to the strict rules of UNESCO, the country had to guarantee the long-term preservation of this territory. And only the strict regime of the federal protected areas meets these requirements.

The UNESCO World Heritage Site, the Bikin River Valley, is located within the boundaries of the «Bikin" National Park" , a specially protected natural area of federal significance.

The federal state budgetary institution "«Bikin" National Park" (hereinafter referred to as the "Bikin" National Park", FSBI) maintains an array of untouched forests on the western slope of the Sikhote-Alin ridge, where the key habitats of Amur tiger are located.

As at December 1, 2019, the total area of the "Bikin River Valley" World Heritage Site and the "Bikin" National Park of specially protected natural area of the federal significance is 1,160,469 ha. Actual boundaries haven't been changed during the reporting period.

As at December 1, 2019, a number of employees of the Federal State Budgetary Institution "Bikin" National Park" is 99 people.

In accordance with the plan of research department of the Federal State Budgetary Institution "Bikin" National Park", it monitors the state of the environment and the Amur tiger population in the national park.

The Bikin River Basin is characterized with a high concentration of rare and relict plant species. Only in its upper part is noted t a growth of more than 20 species of plants, listed in the Red Book of the Russian Federation. In accordance with a

magnificent set of plant associations, very favorable biotopes were formed for the inhabitation of Amur tiger, white-breasted

bear and the Far Eastern forest cat, which inhabit the territory almost everywhere, that is very important for maintaining the state of their populations in the Far East. Favorable conditions for rare animals such as fish owl and scaly merganser have also been preserved.

The Amur tiger population is being preserved annually. Thanks to photomonitoring, the database on the registration of Amur tiger in the territory of the national park is growing.

The following monitoring and research activities are carried out annually on the territory of the "Bikin" National Park": meteorological observations, monitoring of the main species of animals and birds, monitoring of the Amur tiger population, research the flora and vegetation of the "Bikin" National Park", bird watching (counting the scaly merganser), inventory of species and accounting the small mammals, studies of the complex of predatory vertebrates in the reference ecosystems of the Bikin river basin.

To strengthen the protection of the World Heritage Site, in particular, from poaching, there has been significantly improved material and technical support for the activities of state inspectors. Every year, the quantity of raids to patrol the territory has been increasing. As at December 1, 2019, there are three cordons in action in the territory of the national park (Tahalo checkpoint, Omorochka, Khomyakovo checkpoint), and it is planned to set another 5 cordons in the territory.

To strengthen the protection of the territory of the "Bikin" National Park", identify the violations against the special protection regime and conduct the research activities, were purchased two UAZ vehicles, four snowmobiles and twelve boat engines.

In addition to the efforts of state inspectors to protect and guard the protected areas, there was organized an operational detachment, a special working group to combat poaching, which is working round year.

«Bikin" National Park" is the first national park in Russia that fully takes into account the interests of the indigenous peoples living here (hereinafter referred to as KMN).

There are 790 thousand hectares are allotted for their traditional occupations - hunting and fishing. Since the ancient times, the banks of Bikin have been inhabited mainly by Udege people. Most of the representatives of this people live in the village of Krasny Yar, Olon, Sobolinoe, Yasenevoe.

Today in Russia, the "Bikin" National Park" is the one and only, officially facing the task of preserving the traditional way of life of indigenous peoples on the territory.

All the problems and issues of current life, whether it is hunting or fishing, tourism or social sphere of settlements, which are located in the immediate vicinity from the protected areas, are a subject to discuss at the Council of Indigenous Minorities, which was created and acting within the administration of the national park, and then submitted to a general meeting of the village hunters.

Currently, in order to increase the socio-economic benefits for a local population from the development of tourism in the protected areas, the «Bikin" National Park", together with the KMN, is working to create an integrated network of tourist routes, passing through the national park and visitor's stopping places, which are located in areas of the traditional lifestyle of indigenous peoples in the territory of the "Bikin" National Park". Also, in order to increase the professional competence of KMN guides and residents of nearby villages, the trainings classes are held.

By the moment, there are 4 tourist routes and 38 stop grounds for visitors in the "Bikin" National Park". The number of visitors to the World Heritage Site for the period of 2018-2019 is amounted about 3,000 people.

To reduce the impact of tourism on the natural complexes of the World Heritage Site is being conducted an annual monitoring of the state of natural complexes along the tourist routes (impact on the soil, vegetation cover, wildlife habituation, etc.), and counted the recreational load on a particular area.

Educational activities play a huge role in preventing a poaching and educating the local population, as well as in informing the public about a value of the UNESCO World Heritage Site.

In 2018 – 2019, FSBI "Bikin" National Park" conducted the following events dedicated to the environmental and educational activities:

1. March - the ecological festival "Va: kchay ni", dedicated to the closure of the hunting season among the indigenous peoples of the Primorsky Territory and the day of foundation of the Federal State Budgetary Institution **"**Bikin**"** National Park" ". The event was colorful and spectacular due to the competitions in national sports: skiing, jumping over sledges, archery and air rifle shooting. Also at this day, local and invited national groups set a performance. This day, not only residents of the

village of Krasny Yar and employees of the "Bikin" National Park" compete in agility and retirement, but also representatives of the indigenous minorities (Chukchi, Eskimos, Nanai) who are representing the other regions.

2. The first weekend of August - is the "Bikin Day" environmental festival, dedicated to the International Day of Indigenous Peoples of the World. The festival, annually gathering more than 300 representatives of indigenous peoples, is not disregarded by foreign guests. During this festival, one not only can enjoy the beauty of national dances, music with national instruments, but also try their strength in the national sports. Playing "Zelighe", jumping over sledges, javelin throwing, archery and air rifle shooting would not leave anyone untouched. The same day, according to tradition, is held a Round table, dedicated to organization of the activity of protected areas and interaction with local residents.

3. October - the ecological festival "Va: kchay ni", is dedicated to the opening of a hunting season with the indigenous peoples of the Primorsky Territory and a day of creation of the specially protected natural area "Bikin" National Park". In 2018, the festival organizers involved a younger generation and for the first time, schoolchildren from 12 to 18 years old took part in sports on a par with adults.

4. Environmental educators are constantly working with the local schools. Environmental lessons are conducted for the different age groups; as a game for the smallest (1-4 grades) about the inhabitants of Bikin and people who have preserved the pristine taiga - Udege, for 5-7 grades - about the structure of trees, birds, forests, climate and animals living in the Bikin Valley, for the high school students-career guidance lessons, acquaintance with the peculiarities of the territory, ecology and environment-saving lessons. Besides the work with children over environmental lessons for pre-school and primary age, constantly are held the contests (drawings, posters, poems, fairy tales and short stories) throughout the year, the results of which are later used by the department to popularize the "Bikin" National Park". For example, more than 200 children's works were chosen for a district children's art competition "Let's Save the Forest from the Fire". Winners received well-deserved awards. The inter-regional ecological and educational project "Letters to Animals" was attended by children, parents of educational institutions of the region, in total more than 200 people.
   In addition to a current exhibition, presented in the visit center of the

"Bikin" National Park", it also participates in exhibitions and museum displays at the district, regional, and international level. Photographs, showing a life of the inhabitants of the national village of Krasny Yar and a work of the employees of the Federal State Budgetary Institution "Bikin" National Park" are exhibited in Vladivostok, as well as China, Japan and South Korea. Display with the exhibition, dedicated to the traditional life of representatives of indigenous minorities of the Primorsky Territory, as well as household items and arts and crafts, participate in such a large exhibitions as PITE, WEF, the Congress of the Peoples of the Primorsky Territory, and also in thematic exhibitions and events.

6. In 2018, members of Club of Friends of the "Bikin" National Park", living in the village of Krasny Yar developed and created the ethno-ecological trail "Nyadiga Hokto". There were conducted the field studies on the trail for children, resulted in the children decided to tell the guests on the trail about trees, plants and animals found on the trail. The trail was loved by the travelers and became one of the sights of the Krasniy Yar village, recommended for visiting to all the guests of the village.
7. At the visit center of the «Bikin" National Park", located in Krasny Yar village, are engaged the children, who are members of the park friend's club. As part of the classes, the children have not only the ecology, but also the hospitality lessons in English, and in the future, club children want to become guides for the village guests.
8. FSBI National Park "Bikin" tries to attract young people and craftsmen who work at home, to participate in every event. And embrace with attention as much as possible, the residents of Krasny Yar village and show the prospects of the village, that can be revealed with the creation of a national park.
9. In order to preserve the culture, traditions and customs of indigenous minorities, at the national park in Krasny Yar village, a workshop of decorative and applied art is equipped, where produced the souvenir and tailoring workshops. Exclusively for the Federal State Budget Institution "Bikin" National Park", the staff table includes positions for masters of folk crafts and crafts: master of a wood carving, master of bone carving, master of national clothes sewing and souvenirs manufacture. There are also craftsmen, working at home, provided with the necessary materials. Upon having manufactured the work, they hand over the products to the gift shop.
10. Worth to note, that national park, due to its natural attractiveness and

ethno-cultural features, is popular with the various mass media.

2. Information on other current issues related to the conservation of the UNESCO World Heritage Site

Bikin River Valley is a territory of the " Bikin" National Park", it is included in the List of the World Heritage Sites, and is badly impacted with the sites located within the national park boundary.

Potential threats from a such neighboring sites are as follows:

1. Transport accessibility from the Terney district;
2. An increase in number of all-terrain vehicles, owned by the local population;
3. Increased recreational impact on certain sections of the national park.

In general, the condition and conservation of the UNESCO World Heritage Site "Bikin River Valley" is good and does not cause concerns. No negative irreversible changes in the natural landscapes and their components were found.

Significant changes in the World Heritage property boundaries are not expected.

MINISTRY OF NATURAL RESOURCES AND ECOLOGY
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FEDERAL STATE BUDGETARY INSTITUTION "SIKHOTE-ALIN STATE NATURAL BIOSPHERE RESERVE NAMED AFTER K.G. ABRAMOV"

Report on the status of the UNESCO World Heritage Site "Central Sikhote-Alin"

"Central Sikhote-Alin" was included in the list of UNESCO World Heritage Sites in 2001. The main part of this object is located within the Sikhote-Alin Nature Reserve - a specially protected natural area (SPNA) of federal significance, managed by the Federal State Budgetary Institution "Sikhote- Alin State Natural Biosphere Reserve named after K.G. Abramov" (FSBI" Sikhote-Alin State Reserve".

FSBI "Sikhote-Alin State Reserve" is an environmental, research and eco-educational institution. The main goal of it's activity is the conservation and natural (without human intervention) reproduction of wildlife of the Central Sikhote-Alin and the natural complexes of the Sea of Japan.

The richness and diversity of the reserve's ecosystems is due to the fact that its territory includes both macro-slopes of the Sikhote-Alin ridge, which are different in natural conditions and in elevations that determine vertical zonality. It has got a direct access to the sea. This reserve is one of the few in Russia having a marine area.

Area of the reserve: The total area of the reserve is 401,600 ha. The reserve consists of two sites. The main territory of the reserve area is 394500 ha and is located on the eastern and western macro-slopes of the Sikhote-Alin ridge and in it's southeastern part extends to the coast of the Sea of Japan. On the coast of the Sea of Japan, 4 km north from the village of Terney, is located a separate section of the reserve, with an area of 4200 hectares. Protected area: on land 62,550 ha, in the waters of the Sea of Japan - 5 110 ha. The length of the reserve's border by land is 403.3 km, by sea - 31.8 km.

Territorial arrangement

Since June 2005, in order to make a better use of the reserve's available forces and assets, for a better organization of the department for protection and implementation of conservation regimes and forestry activities, the reserve's territory has been divided into four protection departments according to the forest inventory: Terneysky, with an area of 125556 ha; Kuruminsky - 83,498 ha; Colombian - 173,130 ha; Coastal - 16344 hectares, including the sea water area of 2900 hectares.

Protective zone

The protective zone of the reserve was established and approved in accordance with the Decree of the Governor of Primorsky Territory No. 93 dated 03/05/1997 "About protection zone of the

Sikhote-Alin Biosphere State Nature Reserve." The protected area is 65,250 hectares on land and 5,110 hectares of the coastal waters of the Sea of Japan.

Marine coastal area

The Sea of Japan coastal water area was included in the Sikhote-Alin Reserve by Order of the Council of Ministers of the RSFSR of July 9, 1991 No. 725-r.

The water area of the Sikhote-Alin Reserve consists of two sections - the main area of 1,500 hectares and the Abrek tract section with an area of 1,400 hectares, so the total area of the marine area of the reserve is 2,900 hectares.

N**umber of pilot sites:** Two. The main territory - 397,228 hectares and a separate territory - Abrek tract - 4,200 hectares.

Administrative affiliation: In administrative terms, the reserve is located in the territory of Terney and Krasnoarmeysky districts and Dalnegorsky urban district.

The main objects of protection: Primary (6.5% of the reserve's forest area) and natural (30.3%) cedar, cedar-spruce, fir-spruce forests, cedar shrub thickets and stone birch forests with associations of rare, endemic and relic plants, among which spiky yew, Fori rhododendron, Asian midwife, Jesuit primrose, wolfberry, Abelia korea and others. Representatives of the animal kingdom: Amur tiger, Amur goral, sika deer, Far Eastern forest cat, Himalayan bear; birds: mandarin duck, scaly merganser, white-tailed eagle, Steller's sea eagle, fish owl, osprey, black stork, wild boar, etc.

Significance: The reserve in a vast area preserves in its natural development the unique natural complexes of coniferous-deciduous forests, as well as the coast of the Sea of Japan. 1094 species of vascular plants were noted here (this is more than 55% of the flora of Primorye and Amur, 21 species are listed in the Red Book of Russia and 45 in the Red Book of Primorsky Territory); 295 species of bryophytes; 630 species of lichens; 817 species of algae; 59 species of terrestrial mammals (this is about 75% of the fauna of the south of the Far East of Russia and 27% of the fauna of Russia, 12 of them are listed in the International Red Book, 7 are in the Red Book of Russia, and 11 species of marine mammals (8 are listed in the International Red Book , 3 - in the Red Book of Russia and 6 - in the Red Book of Primorsky Krai); 389 species of birds (52% of the fauna of the region, of which 46 are listed in the International Red Book, 33 - in the Red Book of Russia and 52 - in the Red Book of Primorsky Krai) ; 9 species of reptiles (12% of the species composition of the region), 5 species of amphibians (16% of amphibians on), 93 species of fish (including marine), 334 species of marine invertebrates and about 5 thousand species of terrestrial invertebrates.

Historical and cultural objects (archeology): There are numerous monuments of different archaeological cultures in the territory of the reserve and adjacent territory. The oldest, related to them, is the settlement of the Terney enclave of Ustinov's culture (Mesolithic, 8-7 millennium BC). The settlement is located in the middle course of the Tayozhnaia River. The second oldest

settlement, Blagodatnoye, is located on a terrace, 600 meters far from the seashore and belongs to the Lydian culture (the era of the paleo metal, the end of the second and the beginning of the first millennium BC). In a river basin of the Dzhigitovka river, are located the settlements: Kunaleyskoye, Red Lake and the Celestial, belonging to the medieval monuments of the Mohe, Bohai and Jurchen cultures (the first and beginning of the second millennium A.D.).

The socio-economic situation of the region: The reserve is located in the north of Primorsky Krai, where the population number is low. In the immediate vicinity of the reserve there are 3 large settlements: urban villages: Terney, settlement Plastun, s. Melnichnoe, with a total population of about 7-8 thousand people. Biggest part of the reserve is located within the Terney administrative district, the total population of which is about 11 thousand people. The economy of the region is defined by forestry, woodworking, food industry. All large enterprises in this sector of the economy - Terneyles OJSC, Amgu OJSC, CTC Teknovood CJSC, PTS Hardwood CJSC, Svetlaya Branch of Primorsklesprom JSC are focused on exporting products to Japan, China and Korea. The main kinds of products manufactured in the territory of Terney municipal district are commercial wood, veneer, wood chips, and lumber.

According to the statistics for 2018, the population number, employed in the economy was 7.2 thousand people, which is 69.19% of the total population of the region. The registered unemployment rate is 2.18% of the total working-age population of the region.

Existing factors and potential threats, negatively affecting the nature reserve complexes.

Anthropogenic: The main negative anthropogenic factors are conditioned by the main industry of the region - logging.
By the end of the eighties of the last century, all cedar forests in the territories adjacent to the reserve were a subject of industrial forestry. But only some parts of the reserve's borders the forest-cut areas advanced close to the borders of its protection zones. By 2019, all forest plantations along the perimeter of the reserve's borders have been felled or affected with the forest fires, with the exception of a small forested area in the Tayozhnaya river basin. In these lands, a dense network of the forest roads has been laid, many of which have become the public roads.

Clear and selective cuttings in close proximity to the borders of the reserve led to a significant decrease in the suitability in these territories for the living of ungulates, as well as for predators, including Amur tiger. Despite the reliable protection of forests on the territory of the reserve itself, the high level of disturbance of forest ecosystems beyond its borders creates the threat of isolation of individual animal groups within the reserve.

The indirect effect of logging activities is associated with the laying of forest roads, the network of which has been increasing every year. Such roads, even after the cessation of timber harvesting, significantly facilitate the access of people even to remote areas of forests. In this regard, both the level of forest fires due to human

faults (with the possibility of fire transition to the reserve territory) and the level of poaching in the territory adjacent to the reserve increase, which in turn negatively affects the animal populations living in the reserve.

Natural:

Fires caused by the natural reasons are the main negative factor of natural origin, which negatively affects the nature complexes of the reserve. As shown by the data analysis conducted by the scientists of the reserve's scientific department - there is a direct correlation between the number of fires that resulted after natural reasons and the climate change, that has been observed for the latest 30 years (analysis of data from weather stations in Terney and Melinichnoye).

Typhoons - are species of tropical cyclone that is typical for the northwestern Pacific Ocean. The season of typhoons in Primorsky Territory usually begins in the second half of July and ends in the first half of September, the peak of typhoon activity occurs in August. The frequency of occurrence and the power of mega-storms in a tropical zone has been increased significantly over the latest 50 years and may increase even more in the future due to the global climate changes.

The repeatability of tropical cyclone passing in temperate and boreal forests of the monsoon zone has been increased over the latest 100 years.

The main negative impacts of typhoon are associated with their consequences in the form of floods and windfalls. The most catastrophic impact on the forest ecosystems of the reserve was exerted by typhoon Lion rock that passed through the territory in August 31, 2016 and caused extensive wind phenomena, the area ofwhich in the territory of the reserve was about 30 thousand hectares. One of the main consequences of these windfalls is a significant raise of the fire hazard class of the reserve forests and an increase of a highest fire hazard level in the forest area.

Drying of oak forests is a potential threat in the oak forest strip of the coastal reserve. For the first time, the drying of Mongolian oak in the territory of the reserve was recorded in 1979. At that time, the area of the affected oak forests was 16 hectares. Currently, the known area of dead oak standings, resulted after impact of the fungi *Biscogniauxia maritima* (Xylariaceae, Ascomycota) in the coastal zone of the reserve is 112.2 hectares. According to the result of monitoring, the growth rate of affected areas of the forest has been increasing recently. As a result of drying, firstly, the productivity of the affected ecosystems is significantly reduced, they become less attractive for ungulates, and secondly, the fire hazard class increases due to the increase of the volume of dry wood.

Organizational structure

There are following departments in the reserve structure - management, territory protection department, accounting, economics and planning department, scientific department, environmental education department, main activity support department. The approved staff is 79 units, the actual number of the employees is 63 people.

Protection of natural complexes and objects.

The protective functions of the reserve territory and its protection zone are realized by the department of protection of the territory of the Sikhote-Alin Reserve.

The activity of Sikhote-Alin Reserve protection department is carried out in the following main directions:
1. The actual protection of the territory (identification and suppression of violations of the reserve's regime and its protection zone; fires)

2. Forestry activities and fire prevention (clearing trails and roads, harvesting firewood, regime haying, prevention and suppression of the forest fires).

In 2014, there were formed 2 operational groups in the reserve, which equipped with the transporting vehicles and all the necessary equipment for autonomous work during a long time. By June 1, 2019, 7 state inspectors had been working working in these groups. They are the most experienced inspectors with extensive skills of work in the field, work with violators and compiling the primary administrative documents when identifying violations of the reserve's regime and its security zone.

Currently, the work of the territory protection department is being structured in such a way that the main protection efforts are distributed taking into account the most vulnerable and most depending on the time of a year, and natural factors (for example, pine nut harvest or berry harvest). This approach allows to effectively preventing the violations of the reserve regime in conditions of a low number of inspectors.

During the period of permitted navigation for small crafts, protection department staffs regularly patrol the marine area of the reserve in order to detect and suppress violations of the reserve regime. Sea raids are carried out jointly with employees of the Primorsky State Marine Inspectorate (PSMI) and the State Inspectorate for Small Boats (GIMS).

Besides that, in order to control the marine area during the period of active fishery of the marine biological resources, in the reserve is organized the watch of inspectors in the huts and observation posts, located on shore of the Sea of Japan. Also, in the tract Blagodatnoye, round-the-clock video surveillance for the sea was organized with the usage of a webcam, having the possibility of remote online viewing.

Since 2012, with the support of ANO "Wildlife Conservation Society" and Phoenix Foundation, the SMART program has been operating in the Sikhote-Alin Reserve.
The purpose of this program is to increase the effectiveness of anti-poaching activities by monitoring raids (duration, territory coverage) using the SMART computer program and adaptive raid management based on the results of this monitoring (re-distributing raid activities in less covered areas, strengthening of anti-poaching activities in places with the highest number of identified violations, etc.).

An important part of the SMART program is the data collecting on the traces of the tiger's life (as one of the main indicators of the effective work of protection department).

An indicator of the effectiveness of the protection department and the effectiveness of the chosen strategy for planning the department's work is an increase in number of ungulates, the main objects of illegal hunting.

Forestry and fire-fighting activities.

Every year, the Sikhote-Alin State Reserve Federal State Budgetary Institution develops and timely submits a Forest Fire Extinguishing Plan and Forestry Regulations to the Ministry of Natural Resources of Russia for approval.

A patrol of the borders of the reserve in order to locate the fire origin points is carried out daily, especially in areas with the highest risk of fire.

In the reserve is used a system of satellite monitoring for thermal anomalies, this increases the effectiveness of fire-fighting measures and allows fire-fighting groups arriving to the fire site in the shortest possible time after the fire began.

Regular patrol and the use of modern techniques (space monitoring, the usage of the drones) allow timely locating the fires in the territory adjacent to the reserve and promptly taking actions to prevent the fire transfer to the territory of the reserve.

In recent years, the number of fires in the conservation area is insignificant (less than 10); the areas impacted by fire are not significant, while the forest ecosystems, the most valuable of all ecosystems in the reserve, were not affected. The reason of fires in the reserve territory is dry thunderstorms.

Organization of research activities.

Scientific research in the reserve is carried out by both the full-time employees and by the third-party specialists on the basis of agreements on the scientific and technical cooperation.

The staff of the scientific department consists of 9 employees, of which 8 employees have a higher education.

Since the moment the reserve was set, a scientific research has been a priority direction of the reserve's activity, along with the protection of this unique territory.

Scientific work in the reserve is carried out in accordance with the Research Plan, which is to be approved annually at a meeting of the Scientific and Technical Council. The annual research plan is compiled in accordance with the long-term plan of research work, which is approved by the Ministry of Natural Resources of Russia.

The main directions of scientific research in the reserve:

- Changes of the climate
- Natural dynamics of the primary and derivative ecosystems
- Transformation of vegetation under the influence of extreme factors
- Dynamics of populations of background species of plants and animals
- Study of rare species of plants and animals

A chronicle of nature has been kept in the reserve since 1936 and has 94 volumes. This form of presenting the results of observations remains the only unified system for all reserves. The annual volume of the Chronicle of Nature is a continuation of previous studies and, in most cases, and the continuity of observations from year to year from observer to observer is maintained.

Also, as part of the monitoring work, a constant inventory of animals and plants living in the reserve is being carried out. Lists of species are constantly updated.

The Sikhote-Alin reserve is forest-related (more than 97% of its territory is covered by various types of forests), and therefore, more attention in the scientific research is paid to monitor the forest ecosystems: the dynamics of natural ecosystems is observed, and work is underway to study the transformation and restoration of vegetation under the influence of various factors (fires, clearings, windfalls, etc.) For these purposes, in the reserve were laid 45 permanent probe sites in the native ecosystems and 22 in the secondary ones. In addition, were run 6 topo-ecological profiles. Audits in areas and profiles are carried out regularly.

Maintaining of the state cadastre, as well as monitoring the number of animals and birds in winter route counts, is also an annual work that is carried out by the scientific department of the reserve. To account the number of animals in the reserve, a dense network of routes was laid to cover the entire territory of the reserve, including the central inaccessible area. The total length of the accounting routes is about 500 km.

Individual topics of research work are developed and implemented depending on the relevance of the work and the specialization of researchers.

The employees of the scientific department annually publish the results of their research in the foreign journals and collections, and also annually participate in foreign and international meetings and conferences.

Keeping fulfilled the necessary requirement for UNESCO biosphere reserves; the reserve's scientists conduct research not only in the reserve's territory, but also within the so-called cooperation zone, i.e. in the territory adjacent to the reserve. First of all, this is work on hydro biological monitoring of watercourses in the transit zones of the reserve, which are located in areas of mining, and therefore, undergoing a strong negative anthropogenic load. Work on the study of rare species - the Amur goral and Amur tiger is also carried out in the territory adjacent to the reserve, which allows obtaining the most complete information about the status of groups of these Red Book species.

Based on the results of scientific research, the employees of the reserve annually develop recommendations on the conservation of certain species or on the rational use of biological resources.

Since 2019, the Sikhote-Alin Nature Reserve has been participating in the Global Mushroom Spore Collection Project. This is an international project designed for several years, the Sikhote-Alin Reserve was chosen as one of the sites for participation in this project, after a strict selection by the project organizers.

To conduct the scientific research, reserve employees use the modern methods and equipment: the results of satellite tracking of vegetation, camera traps, radio and GPS collars / transmitters, etc.

Sikhote-Alin Nature Reserve has a unique extensive scientific archive including reports and diaries of the first nature researchers of Sikhote-Alin (Abramov, Salmin, Kaplanov, etc.), the volume of the Chronicle of Nature since 1936, as well as scientific reports of the reserve's staff and third-party specialists, who conducted research in the reserve (totally about 1000 units).

Since 2013, a continuous work has been ongoing on digitizing of this unique archive.

All scientists of the reserve have working experience with GIS and actively use these skills in their scientific work. There were created 118 thematic layers and constantly replenished in the reserve.

Since 2006, photo-camera traps have been used for scientific research in the reserve (primarily monitoring Amur tiger group). Since 2014, the reserve has completely introduced the digital models of camera traps.

Therefore, the electronic databases of the reserve contain hundreds of thousands of photographs and videos of great scientific value.

Scientific monitoring of the reserve's ecosystems and their individual components indicates a stable state, no disturbances and no degradation or threats were found. Thus, the reserve effectively performs its main function - the preservation of unique natural complexes.

In the reserve, are constantly monitored two species of animals listed in the International Red Book and the Red Book of Russia - Amur tiger and Amur goral. The results of observations of groups of these rare animals show that their condition is stable with an upward trend, which is an indicator of the effective fulfillment of the main objective of the reserve - the preservation of unique natural complexes and their individual components.

Environmental education and community outreach.

Department of Environmental Education - is the youngest department of the reserve, it was established in 1998.

Currently, there are 6 employees work in the department: deputy director for environmental education and 5 specialists in environmental education. All employees have a higher education.

In a territory of the central estate of the reserve there is an information center, a Nature museum of 649.5 square meters. The information center building was built in 2000, commissioned in 2012. Then, was started a work to organize the Museum of Nature, and were mounted 5 dioramas.

In 2016, a folk art workshop was set in the information center; a cinema hall of the information center was re-equipped. In 2016, the reconstruction of dioramas was begun in the hall of the Museum of Nature, and museum hall stopped working.

In 2018, with the help of invited specialists, was developed a design-project for the exposure of the central hall of the information center. Based on this design project, there have been drawn up the design-construction documents for the repair, as a preparatory stage for the installation of a new exhibition.

Repair work was begun in 2019. The completion of the repair was planned in the fall of 2019, after which it was expected to start work on the manufacture and installation of the exposition. These works are planned to be completed in 2020 and to coincide with the opening to celebrate the 85th anniversary of the reserve.

The reserve has been regularly conducting the photo and art exhibitions in the reserve's information center and at the regional library as well. In 2017, there was held a photo exhibition at «Druzhba» cinema, in Dalnegorsk city.

Since 2015, a specialist-photographer has been working in the department, due to which the level of photography of the reserve has been an order of magnitude higher. In this regard, there is growing interest to the photos of the reserve, both in the form of requests for placing photos in different publications, and to organize the photo exhibitions.

In 2019, was begun a work to prepare the mobile photo exhibition with a number of more than 50 photographs, as part of the preparation for the celebration of the 85th anniversary of the reserve in 2020. Demonstration of the exhibition is to be held in the halls and galleries of Vladivostok and Moscow.

Work with the schoolchildren in the Sikhote-Alin Reserve has always been active. Coverage of students is on average about 2 thousand people per year.

The reserve has 7 approved ecological routes with a length of 3.2 to 29 km (by automobile). The total length of ecological routes is 122.4 km.

Active improvement of eco-trails in the reserve was begun in 2014 thanks to the support of the ANO "Center" Amur Tiger" in the form of student teams, that work annually for 1.5 months in the territory of the reserve for equipping and landscaping the trails: to build the flooring, stairs in difficult places, construction of arbors and observation towers for observing wild animals, etc.

The sharp increase in number of tourists to the reserve in 2015 is resulted after the development of a small aircraft, which made Terney to be more accessible: the journey from Vladivostok to Terney takes 14-16 hours by bus and 2 hours by plane.

The dynamics of the travelers flow in the Sikhote-Alin reserve:
2010 - 190 people
2011 - 288 people
2012 - 340 people
2013 - 546 people
2014 - 690 people
2015 - 2,694 people
2016 - 2661 people.
2017 - 3960 people
2018 - 2929 people

We are currently practicing the ecological and educational excursions. Since 2017, for conducting excursions at the peak of the tourist season, the reserve invites guides from among local residents who attended the so-called Guide School: they attended courses lectured by the employees of the scientific and environmental department of the reserve, and got the practical exercises to run excursions.

In 2013-2014 the reserve has had the experience of cruise tourism, but by the reason of the economic crisis, it was not repeated for the moment. There is a demand for bird watching and all the conditions to develop this kind of tourism are available.

The reserve actively cooperates with the travel agencies (mainly from the city of Vladivostok) to host tourist groups and individual tourists, on a contractual basis.

CONCLUSIONS

The situation of the Central Sikhote-Alin World Heritage Site is in good condition and does not raise concerns. Indicators of effective work to preserve a unique natural object are the growth in number of ungulates, Red Book animals (Amur tiger, Amur goral), as well as the stable state of all ecosystems in the reserve, thus reflecting the data of constant scientific monitoring.

No negative irreversible changes in the natural landscapes and their components were found.

Significant changes within the boundaries of the World Heritage property are not expected.