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CONVENTION ON THE CONSERVATION OF EUROPEAN WILDLIFE
AND NATURAL HABITATS

Standing Committee

37th meeting
Strasbourg, 5-8 December 2017

REPORT

**ON THE SPOT EXPERT APPRAISAL OF THE
OKA NATIONAL BIOSPHERE RESERVE**

(RUSSIAN FEDERATION)

13-14 September 2017

*Document prepared
by Mrs Blanca Ramos (Spain)*

INTRODUCTION

Oka National Biosphere Reserve (Russian Federation) was awarded the European Diploma for Protected Areas category "A" by the Council of Europe in September the 5th, 1994. It was renewed in 1999, 2004 and 2010.

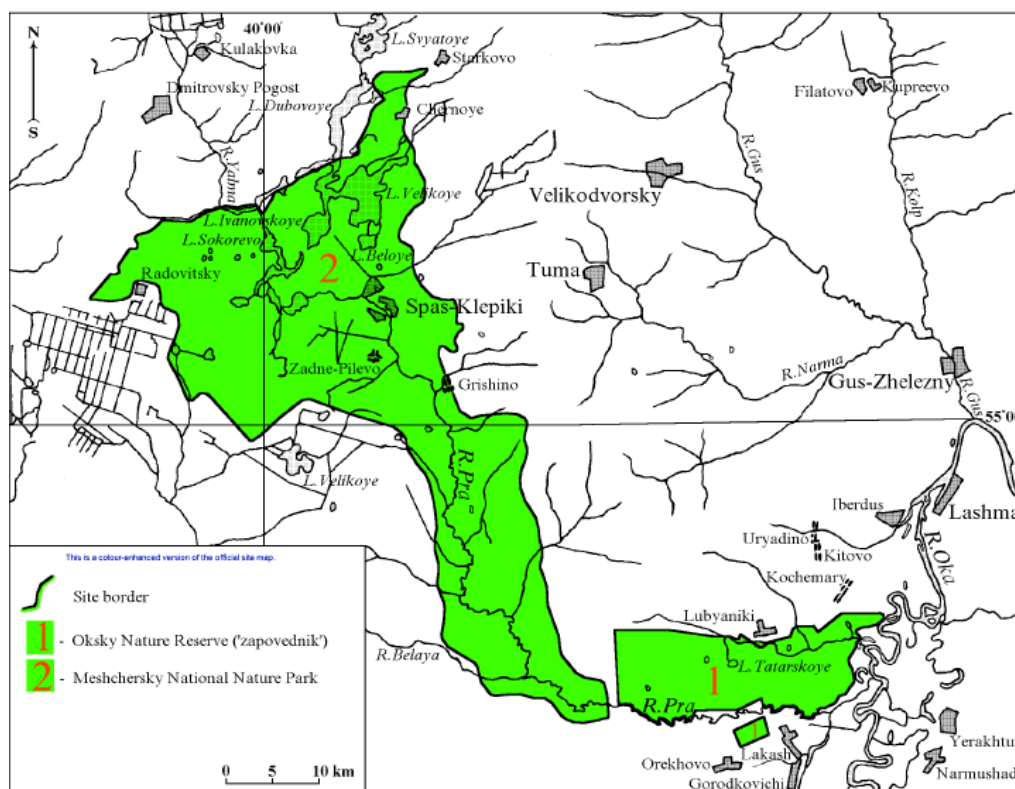
Having regard to the decision of the Group of Specialists on the European Diploma for Protected Areas at its meeting of 8 March 2017 to perform on-the-spot appraisal visits to areas subject to EDPA renewal in 2019, the undersigned expert was invited to carry out the visit to Oka Biosphere Reserve in the Russian Federation. The objective stated was "to assess whether the conservation of biological, geological or landscape diversity which was put forward at the time of the award of the European Diploma for Protected Areas is still of exceptional European interest and can, consequently, motivate the renewal of the European Diploma in 2019", following the provisions of the Terms of Reference stated in Appendix 3 of Resolution CM/ResDip(2008)1 on the revised regulations for the European Diploma for Protected Areas.

The visit took place from 13 to 14 September 2017. Some areas of the Reserve and surrounding areas were visited and some conversations took place with different staff members. A final meeting with some members of the local community was also held.

BRIEF DESCRIPTION OF OKA NATIONAL BIOSPHERE RESERVE

This protected area is located South of the Meshchera plain, about 250 km South-East to Moscow, in the province of Ryazan. When the site was awarded the European Diploma for Protected Areas the strict Reserve had a surface area of 22.916 hectares, the Biosphere Reserve 32.806 hectares and the Buffer Zone 21.449.

From a geo-morphological point of view, the site is part of the floodplain existing at the confluence of rivers Pra and Oka, both belonging to the Volga basin. The grounds are covered by fluvial-glacier sediments and recent quaternary alluvial deposits. One of the most relevant features of the site is that it maintains its original hydrological regime, since the catchment area has not been submitted to major changes and/or occupations of land and/or water resources. The water quality is excellent, partly because upstream lies the Meshchera National Park (see Map 1). The altitude ranges between 92 and 127 m.a.s.l.



Map 1. Protected areas at Floodplains of Oka and Pra Rivers

The climate is continental and some evidences of change are being recorded. The annual average temperature was 3,8 °C in the period between 1938 and 1950, rising to 5,0 °C in the period 1991-2000. During the same periods, the annual average rainfall rose from about 500 mm to 670 mm. The average duration of the spring flood and the water height have shown a decrease, according to the data provided by the hydro-meteorological station of Oka National Biosphere Reserve (see ONBR Annual Report 2009).

Strictly dependent upon the climatic features, the floodplain has a seasonal variation of water levels, with a maximum in spring, flooding one third of the surface area, and a minimum in late summer. The area has been included in 1994 in the Russian list of the Ramsar Convention as a Wetland of International Importance. Extensive fens in the central part of the Reserve and bogs in the northwest alternate with natural and planted mixed forests of Scots pine (*Pinus sylvestris*) and birch (*Betula spp.*). In more developed soils some Common Oaks (*Quercus robur*), some of them magnificent specimens, appear scattered or forming small forests with Alder (*Alnus glutinosa*, Lime (*Tilia cordata*) and Maple (*Acer platanoides*). Also some Spruce (*Picea sp.*) forests can be found.

The strict Reserve is a State property (22.916 hectares) and it is protected since 1935 by the Russian Government (Council of the People's Act) with a total prohibition of extractions of any kind, forestry included. Only minor activities, like mushrooms and berries collection are allowed in small amounts. In 1989 a Biosphere Reserve (32.806 hectares) has been declared in the surroundings, where all exploitation could only be made under strict controls to prevent damages to the site. Additionally a buffer zone (21.449 hectares) of 1 km outlining most of the Biosphere Reserve perimeter was also established.



Oka Reserve scale model

I. EUROPEAN INTEREST OF THE SITE

When awarded the European Diploma for Protected Areas, Oka National Biosphere Reserve was a highlighted site because there was a convergence of science and management that was quite unusual. From the very beginning, in 1935 a permanent scientific staff has been established in order to make a follow up of the ecological condition of the site and to provide scientific information for its conservation and as the basis for the management decision making. For that reason at the time of the European Diploma award there were nearly 60 years of scientifically based monitoring. The following natural values justified at that time the candidature for this award (according to M.P Hunkeler expert report PE-S-ZP (94) 40):

Hydrology:

- A practically intact floodplain with a natural hydrological regime
- Very good water quality

Vegetation and flora:

- A diverse mosaic of forest and wetland habitats thanks to the dynamic and active interactions and ecotones between aquatic and terrestrial grounds: mixed pine and broadleaved forests, alternating with small water courses, ponds and lakes, Sphagnum bogs and fens, oxbows and marshes, aquatic meadows and prairies all of them pretty diverse to each other.
- More than 800 species of vascular plants, with 69 rare taxa, like *Salvinia natans*, *Najas marina* and *Trapa natans*.

Fauna:

- Vertebrate fauna with 38 fish species, 10 amphibians, 6 reptiles, 240 birds (amongst them *Ciconia nigra*, *Haliaeetus albicilla*, *Tetrao urogallus* and *Grus grus*) and 50 mammals, with notable species like the Russian Desman (*Desmana moschata*), Wolf (*Canis lupus*), Otter (*Lutra lutra*), Moose (*Alces alces*), etc.
- Captive breeding centers for European Bison (*Bison bonasus*) and for the seven Russian species of Cranes, including the threatened Siberian Crane (*Grus leucogeranus*).

Exploitation of resources:

- Forest exploitation stopped at the strict Reserve when declared in 1935. Only small extensive cultures and some stockbreeding are allowed near the Warden's houses scattered throughout the Reserve. A few permits for mushroom and wild fruit collecting are also awarded. Out of the Reserve a small area is allowed for hay harvesting.
- In the Biosphere Reserve and the Buffer Zone the forest and agricultural exploitation are allowed but under strictly controlled conditions.

European Interest justifying the Diploma:

- Diversity and quality of the environment
- Importance as feeding and resting habitats for migratory bird species
- Large tradition of scientific research and large monitoring series of data



II. CONSERVATION MEASURES

According to the information collected during the two-day visit, complemented with the Annual Reports of the Reserve's authorities to the Council of Europe of the years 2013, 2014, 2015 and 2016, the following features can be reported:

II.1 - LEGAL PROTECTION STATUS

The Oka National Biosphere Reserve is 100 % a State property. It is under the authority of the Ministry of Natural Resources and Ecology of the Russian Federation, responsible for its conservation and management. No changes of the property regime have taken place since the site was first protected in 1935.

The area has a legal protection regime that prevents damages in the strict Reserve and a management regime in the Biosphere Reserve and the Buffer Zone allowing forestry and agricultural exploitation and other human activities under controlled conditions. According to the information provided by the current Director of the Reserve, the existing Law is good enough to protect the site and regulate the human use of the surrounding territories preventing environmental damage and allowing a sustainable development to the local population.

II.2 - BOUNDARIES/ZONING/BUFFER ZONES

The strict Reserve of 22.916 ha was declared Biosphere Reserve in 1978. In 1989 32.806 hectares of the surrounding territory was incorporated to the MaB Reserve as well as a buffer zone of one km contouring the latter, adding a surface area of 21.449 more hectares.

At this point it is necessary to clarify that the verification of the limits with new technologies of Geographic Information Systems (GIS) has allowed updating of the surface areas of these zones as follows:

- Oka strict Reserve: 22.749 hectares
- Oka Biosphere Reserve: 33.346 hectares
- Buffer Zone: 22.975 hectares



Map 2. The Oka National Reserve (Oksky Zapovednik) is marked in yellow. The Biosphere Reserve is marked in solid red line and the buffer zone is marked with a red broken line.

II.3 - SUPERVISION AND WARDING

In 2017 the Reserve has a permanent staff of Wardens formed of 43 members. Their basic task is the survey of the human activity in the Reserve and its surroundings. They put a particular emphasis on the prosecution of poaching fishermen, since the presence of big specimens of freshwater native fishes is greatly attractive. Illegal hunting is also a priority matter of attention.

Some of the Wardens have an excellent background in flora and fauna and their involvement in scientific activities is very relevant.

The warding service is organized throughout the territory by the so-called "cordons" or sectors under the supervision of one Warden living on the spot. Their houses are located basically at the periphery and close to them they are allowed to have a small number of cattle and other domestic animals.

II.4 - STATE OF CONSERVATION OF THE MAIN SPECIES AND THEIR HABITATS

According to the information obtained, the situation of the wild species of flora and fauna and their habitats has not suffered from significant changes since the last renewal of the European Diploma for Protected Areas in 2010. Having regard the specific mention of the Russian Desman stated in the attached recommendations to the Resolution CM/ResDip(2010)2 some comments on this species can be relevant.

The Russian Desman has the highest densities in the floodplains of rivers Oka and Pra, this being one of the major reasons to declare the Oka Reserve. This species has received specific attention from the scientific and the management team, as proven by the following:

1. The Monitoring programme has specific plots for the follow up of their densities;
2. Study of the negative factors affecting the conservation of the Russian Desman, as a specific working line;
3. Works for the restoration of the Russian Desman habitat, performed by the management authorities. In 2012-13 with the participation and finance of WWF, the depth of 8 lakes was increased, enlarging the number of wintering ponds for the Desmans.
4. Publication in 2016 of the monograph "The Russian Desman in the Oka basin", covering the current state of knowledge on this relevant species.
5. A new project for the restoration of the Desman habitat is being drafted to be implemented in the coming years by the management authorities. It is to be implemented in the area where some decades ago a channel was built for agricultural reasons, which later was deactivated by the action of Beavers (*Castor fiber*).

The area is of great importance for migratory bird species. At the moment of the visit great flocks of common cranes were gathering across the agricultural grounds (mostly cereal crops) before their migration to their southern wintering sites.

II.5 - LAND USE PLANNING

Some changes of land use planning have recently occurred. See the section III.1 Management Plan.

III. MANAGEMENT

III.1 - MANAGEMENT PLAN

Some specific conversations on this matter were held with the managers of the Reserve. In principle, Management Plans as known in some protected areas of Europe and other parts of the world don't seem to be very common in the Russian Federation. They normally implement conservation and management measures insofar as the budget allows them.

The planning process at Oka National Biosphere Reserve starts every year with the proposal of activities for the different Departments: Science, Environmental Education, Protection and Economic Activities. This proposal is sent to the Ministry, eventually modified, and approved. The approval

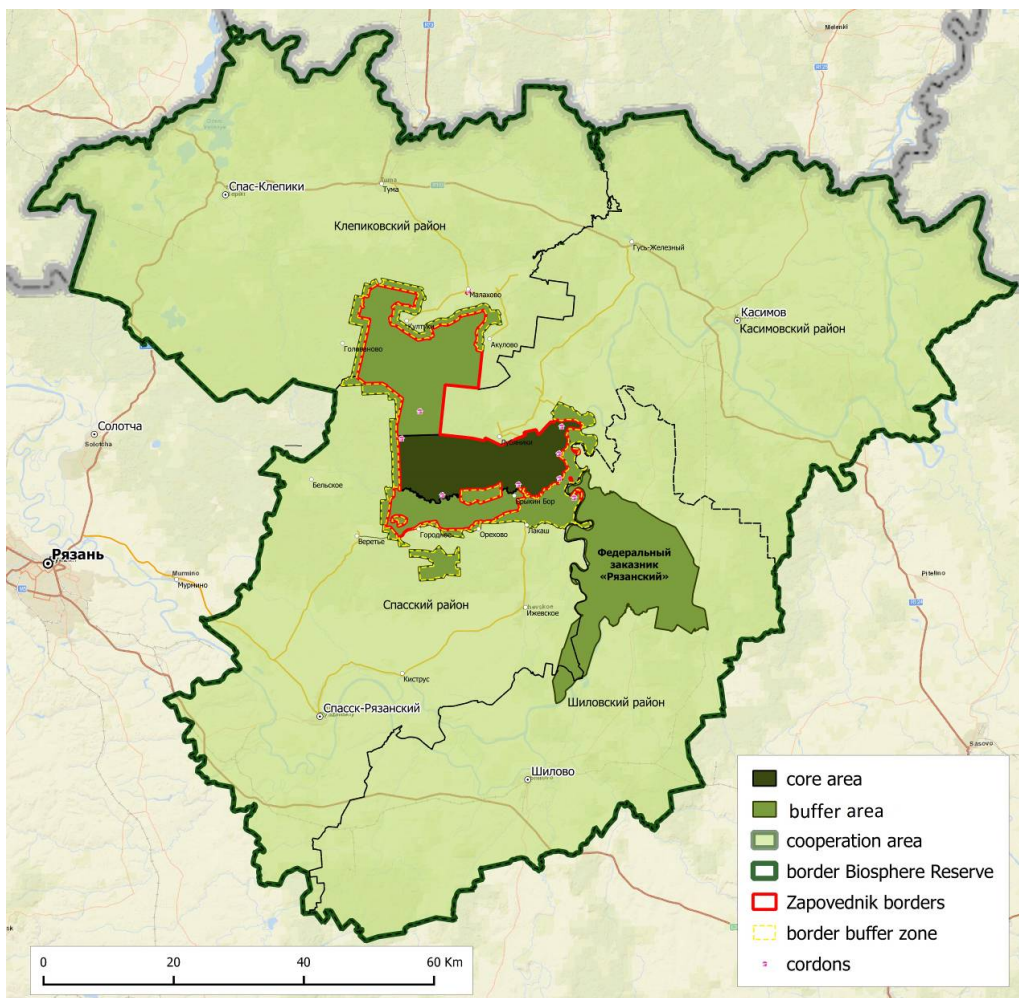
encompasses the allocation of financial resources established for each action.

Nevertheless, having regard to the different occasions on which the Council of Europe has drawn the attention of the authorities to the importance of adopting a Management Plan, a new initiative in this direction has been set up.

In the Annual Report of 2016, the Director of the Reserve mentions that an Agreement of Cooperation between the Administration of the Reserve and the Heads of the Municipalities of Spassky, Shilovsky, Klepikovsky and Kasimovsky districts, adjacent to the Reserve, has been signed in order to cooperate and work together on sustainable development in Oka Biosphere Reserve. Following the recommendations of the Ministry of Natural Resources and Environmental Protection of the Russian Federation, the spatial zoning has been modified. Three areas have been outlined (see Map 2):

- Core area: 22.604 ha, that remains the same under the Cooperation Agreement.
- Buffer zone: from the previous 33.346 ha, it increases up to 91.950 ha under the Cooperation Agreement.
- Zone of Cooperation: from the previous 22.975 ha, it increases up to 1.011.541 ha under the Cooperation Agreement.

As a consequence of the enlargement of the boundaries of the biosphere reserve, it is foreseen to elaborate a new Management Plan, which will reflect not only the objectives of the strict Reserve (under the responsibility of the National authorities), but also the tasks of the entire Biosphere Reserve. The Plan will be focused on harmonizing the interests of the local population and the conservation of this natural area, within a framework of cooperation and for the benefit all stakeholders.



Map 3. New zoning assigned under the Cooperation Agreement

III.2 - INSTITUTIONAL RESPONSIBILITY

As stated in other sections, the Ministry of Natural Resources and Ecology of the Russian Federation is the responsible body for the conservation and management of the Oka National Biosphere Reserve. The central offices are in Moscow and there is a Delegation in Ryazan Oblast. The Reserve has a Director (Mr. Yuriy Markin) and three Deputy Directors. Most of the staff live in a small village, Brikin Bor, near the strict Reserve boundary.

III.3 - CAPACITIES

The permanent staff at Oka National Biosphere Reserve is not constant throughout the time, basically due to financial constraints. At present (2017) 127 members compose the staff:

- Administration and legal issues: 13 persons
- Security (Wardens): 43 persons
- Scientific Department: 37 persons
- Environmental Education Department: 7 persons
- Economic support Department: 22 persons
- Others (kindergarten): 5 persons

III.4 - BUDGET

The global budget during the last 5 years has been as follows (data provided by the Direction):

- 2012: 740.880 €(51.861.621 Rubles)
- 2013: 1.271.035 €(88.972.482 Rubles)
- 2014: 877.067 €(61.394.707 Rubles)
- 2015: 1.026.382 €(71.846.765 Rubles)
- 2016: 999.001 €(69.930.096 Rubles)

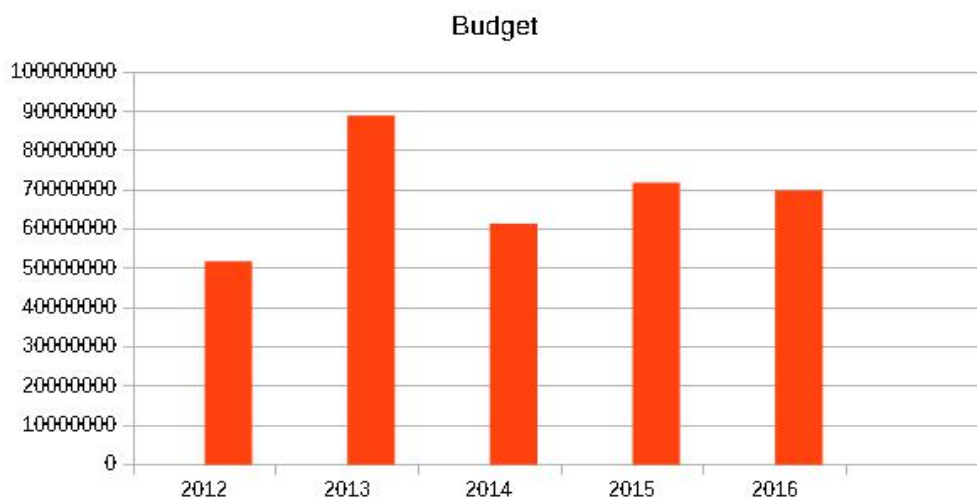


Fig. 1. Global budget in Rubles at Oka National Biosphere Reserve during the last 5 years

If compared to the global budget mentioned by the expert Mr. H. Lethier in his Renewal Report of 2010 (approximately 360.000 € or 16.400.000 Rubles for 2009), there has been a significant increase of the global budget of the Oka National Biosphere Reserve.

III.5 - RESEARCH AND MONITORING PROGRAMMES

There is no doubt that this is one of the main strengths of the Oka National Biosphere Reserve. From its designation as a protected area, the scientific research and Monitoring Programme conducted

by a permanent staff has been the basic source of information for the decision making process on management and conservation. During 2017 the scientific staff is formed by a total of 37 persons.

The constant discovery of new species can be a good indicator of the high level of the scientific team. According to the Annual Reports, since the last Appraisal Report in 2010, more new species of fauna and flora have been found by the scientists:

2013, 33 new species:

- Vascular plants: 1
- Lichens: 1
- Fungi: 2
- Insects: 16
- Mollusks: 7
- Oligochaeta: 3
- Hirudinea: 2
- Hidrachnida: 1

2014, 8 new species:

- Fungi: 2
- Insects: 3
- Aquatic invertebrates: 3

2015, 3 new species:

- Agaric fungi: 1
- Moss: 1
- Hemiptera: 1

2016, 14 new species:

- Basidiomycetes: 5
- Coleoptera: 6
- Mollusks: 1
- Odonata: 1
- Hirudinea: 1

The scientific activity has been transferred to high level publications. Most of them have been published in the Annals of Nature (which started in 1936) and other journals that basically circulate within the Russian scope. There is a close relationship with other scientific institutions, like the famous Russian Academy of Sciences and the University of Moscow.

As a result of the scientific activity in Oka National Biosphere Reserve some monographs and special publications have also been delivered:

2013: 2 monographs with no more detail

2014: 3 monographs:

- Flora of the Oka Reserve
- Amphibians and Reptiles of the Ryazan region
- Structure and dynamics of water vegetation in Oka National Biosphere Reserve

2015:

- 1 monograph on the 80 anniversary of the Oka National Biosphere Reserve
- 2 volumes of the Annals of Nature

2016: 2 new monographs

- The Russian Desman in Oka basin
- Ecology of the Kingfisher in the Southern Meshchera

Under this chapter dealing with the scientific activity it is worth mentioning the results of the two captive breeding centers, since far from being just a management measure, they are an important part of the scientific and monitoring programmes.

EUROPEAN BISON (*BISON BONACHUS*) CAPTIVE BREEDING CENTER

This Centre was created in 1959, to produce under controlled conditions specimens to be released into the wild in areas where the species had dropped or disappeared. The breeding technique is well developed and provides very good results. Their managers are currently involved in Veterinarian studies related to emergent diseases, which seem to be an important issue for the conservation of the species.

The species doesn't occur in the Oka Reserve area. The animals raised are released in other Russian areas with good percentage of individuals adapted to their new conditions. During the last 5 years a total of 21 animals have been released:

Year	Young		Adults		Total	Place of transfer
	♂	♀	♂	♀		
2012	1	2	3	2	8	Teberdinsky Reserve, Arkhyz
	-	1	1	3	5	Reserve "Bryansk Forest" Bryansk region
2015	-	-	1	-	1	Private nursery "Zubr", Tula region
2016	-	-	1	-	1	Private nursery "Zubr", Tula region.
2017	-	1	2	3	6	Ust-Kubensky hunting farm Vologda region

CRANE CAPTIVE BREEDING CENTER

This Centre was created in 1979. At present, all the 7 species of Cranes inhabiting Russia are raised in captivity, including the heavily threatened Siberian crane (*Grus leucogeranus*), white naped crane (*Grus vipio*), hooded crane (*Grus monacha*) and red crowned Crane (*Grus japonensis*).

In this area a small number of crane chicks are imprinted with humans in order to use them in studies on behavior or for other purposes. There was the opportunity to see how new specific experimental devices for GPS monitoring during Crane migrations are being tested. An Israeli expert (Sasha Pekarskaya), from the University of Jerusalem, was checking a new very light design to be placed on the tibia of youngsters, as part of her PhD Thesis that seems to be producing good results.

There are two infrastructures for Crane captive breeding. One is restricted to the staff and the other facility contains a few couples of different species of cranes. This one can be visited by the public and scholars as a part of the Reserve's offer on environmental education.

During the last five years the total of animals produced has been as follows (data provided by the Reserve's Direction):

Year	Species of crane	Number of cranes	Method	Place of transfer	Goal
2013	Demoiselle	1	hand-raising	Samara zoo	Ecological education
	Siberian (after unsuccessful release)	1	costume-raising	Ivanovo zoo	Ecological education and breeding
	Common	1	parents-raising	Penza zoo	Ecological education
	Siberian	6	costume-raising	Tyumenskaya oblast	Release to the wild
	Common	1	costume-raising	Tyumenskaya oblast	Release to the wild
	Demoiselle	1	hand-	Moscow zoo	Ecological education

			raising		
	Siberian	5	parents, costume	Astrakhansky nature reserve	Release to the wild
	Red-crowned	6	eggs	Reintroduction Station of Rare Birds of Khingansky State Nature Reserve	For raising in the nature and release to wild
2015	Siberian	10	parents, costume	Astrakhansky nature reserve	Release to the wild
	Demoiselle	1	hand- raising	Novolipetsk zoo	Ecological education
	Common	1	hand- raising	Ivanovsky zoo	Ecological education
	Common	1	parents- raising	Oksky Nature Reserve	Release to the wild
	Red-crowned	1	parents- raising	Yaroslavsky zoo	Ecological education
	Red-crowned	1	eggs	Reintroduction Station of Rare Birds of Khingansky State Nature Reserve	For raising in the nature and release to wild
2014	Siberian	1	costume- raising	Ivanovo zoo	Ecological education and breeding
	Siberian (after unsuccessful release)	1	costume- raising	Limpopo zoo	Ecological education and breeding
	Siberian	1	costume- raising	Limpopo zoo	Ecological education and breeding
	Common	1	costume- raising	Limpopo zoo	Ecological education
	Siberian	8	parents, costume	Astrakhansky nature reserve	Release to the wild
	Red-crowned	3	eggs	Reintroduction Station of Rare Birds of Khingansky State Nature Reserve	For raising in the nature and release to wild
	Demoiselle	1	hand- raising	Novolipetsk zoo	Ecological education
2015	Siberian	10	parents, costume	Astrakhansky nature reserve	Release to the wild
	Demoiselle	1	hand- raising	Novolipetsk zoo	Ecological education
	Common	1	hand- raising	Ivanovsky zoo	Ecological education
	Common	1	parents- raising	Oksky Nature Reserve	Release to the wild
	Red-crowned	1	parents- raising	Yaroslavsky zoo	Ecological education
	Red-crowned	1	eggs	Reintroduction Station of Rare Birds of	For raising in the nature and release to wild

				Khingansky State Nature Reserve	
2016	Siberian	9	parents, costume	Astrakhansky nature reserve	Release to the wild
	Red-crowned	1	parents-raising	Yaroslavsky zoo	Ecological education
	Siberian (trauma of the wing)	1	costume-raising	Moscow zoo	Ecological education
	Red-crowned	2	eggs	Reintroduction Station of Rare Birds of Khingansky State Nature Reserve	For raising in the nature and release to wild
2017	Siberian	6	parents-raising	Astrakhansky State Nature Reserve	Release to the wild
	Siberian (trauma of the wing)	1	parents-raising	Ecological found "Sterkh", Tyumenskaya oblast	Ecological education
	Common	1	hand-raising	Ecological found "Sterkh", Tyumenskaya oblast	Ecological education
	Red-crowned	4	eggs	Reintroduction Station of Rare Birds of Khingansky State Nature Reserve	For raising in the nature and release to wild

The Monitoring Programme is under the responsibility of the scientific staff. For that purpose there is a meteorological station in the village of Brikin Bor, which takes since 1938 handwritten measures of the usual meteorological and hydrological parameters, being therefore a series of data of great importance. More recently (2011) an automatic hydro-meteorological station has been installed. The data are transmitted to a central station located in Ryazan.

Water samples are also regularly collected in rivers and wetlands to be analyzed, in order to monitor its quality.

The Monitoring programme measures periodically the values of a number of natural resources, like:

- Structure and function of ecosystems and its components;
- Monitoring of European Birds, both residents and migratory and/or accidental;
- Russian Desman densities, ecology, habitat restoration and impact of negative factors;
- Ecology of predators;
- Ecology and natural dynamic of ungulates;
- Freshwater fish populations and the influence of new exotic invasive species;
- Detailed monitoring of selected species considered as indicators: 4 species of invertebrates, 21 species of birds, 1 species of fish and 4 species of mammals;
- Estimation of abundance of amphibian and reptile populations;
- Estimations of annual productivity of mushrooms and berries;

- Ecology and evolution of the forests: primary production, etc.;
- Phenological dynamics of vegetation and selected flora species;
- Bird ringing campaigns.

Just to provide an idea on the magnitude of the Monitoring Programme, it may be worth mentioning that there are more than 90 permanent monitoring plots distributed across the Oka National Biosphere Reserve and surrounding areas.

III.6 - RELATIONSHIP BETWEEN THE RESERVE ADMINISTRATION AND OTHER STAKEHOLDERS

During the visit there was no opportunity to meet stakeholders other than two Deputy Directors of a local school (Lakash), a farmer from Orekhovo and the Head of Administration of the village Lakash, all of them participating at the final meeting. The information obtained on this issue is limited and only refers to information transmitted by the Director of the Reserve. The relationship with the local population is good and there are not major conflicts with local communities.

The agriculture in the surrounding areas of the Oka National Biosphere Reserve is fully compatible with the conservation of the natural areas. Some farming grounds are used by wild species which often find food and shelter in them, being bird migratory species worth of particular mention. The agriculture is carried out with limited use of chemicals: cereal crops, hay harvesting, forestry, etc.

As a result of the concerns expressed by the Group of Specialists on the European Diploma for Protected Areas of the Council of Europe (stated in Annual Report 2016), the Reserve authorities and the adjacent Municipalities have signed an Agreement of Cooperation aiming at collaborating and working together in the field of the sustainable development. See also the section "III.1 - Management Plan" above.

Within this Agreement more opportunities for a wider participation of the local population have been open. The following issues have been included:

- Incorporation of new members from the surroundings in the Coordinating Council of the Biosphere Reserve
- Activities to jointly promote the sustainable development such as the following:
 - supporting the solution to conservation and recovery problems of lost species within the Reserve;
 - providing help to the organisation and development of scientific works dealing with environmental protection and sustainable natural resources in interaction with the Russian Academy of Sciences;
 - Creation of unified databases and information systems;
 - Integration of the results of scientific studies and incorporation of the recommendations;
 - promoting environmental education using new technologies, for instance use of distance training;
 - promoting professional orientation to young people at schools and higher levels by means of scientific conferences, competitions, excursions, forums, etc. ;

III.7 - PUBLIC SERVICES INCLUDING WASTE MANAGEMENT

No information on this issue has been obtained.

III.8 - USE OF RENEWABLE ENERGY SYSTEMS

No information on this issue has been obtained.



IV. USES AND SOCIO-ECONOMIC ACTIVITIES

IV.1 - EXPLOITATION OF NATURAL RESOURCES

Within the core area of the Oka National Biosphere Reserve no exploitation of natural resources is allowed. Only Wardens living at the "Cordons" have some domestic cattle in the immediate proximity of their houses. A very limited number of authorisations to collect mushrooms and berries are awarded each year, according to the results of the productivity monitoring performed each year.

Extensive farming is carried out in the Biosphere Reserve and the Buffer Zone.

IV.2 - TOURISM AND LEISURE ACTIVITIES

The Oka National Biosphere Reserve is becoming increasingly known by the Russian public and consequently the interest for visiting the area also rises year after year. The Administration of the Reserve makes big efforts to prepare more activities and materials to promote a better knowledge of its ecological features (see section IV.3), although the tourism facilities are still limited.

IV.3 - EDUCATION AND AWARENESS RAISING

This issue is one of the most actively developed in Oka National Biosphere Reserve. The recommendations of the Council of Europe in relation to increasing efforts to reinforce environmental education and strengthen the dissemination of scientific activities made over many years, have driven the organisation of a lot of awareness raising activities, painting and literature competitions, events, exhibitions, etc. The most significant for that purpose are the following:

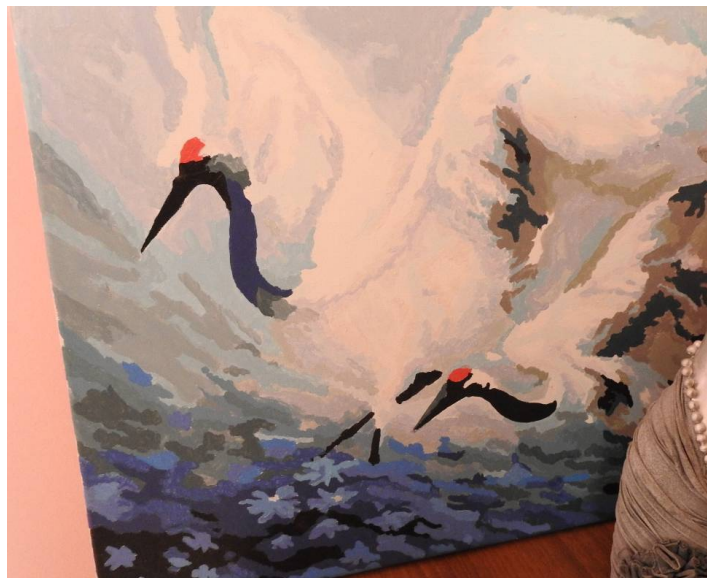
- **Guided tour "Meet the Reserve"**. During one hour and half, the visitors can see facilities on the history of the site, the captive breeding centers (European Bison and Cranes), the pier, the glass factory, the Museum and the Visitor Center with its backyard.
- The Reserve receives about 12.000 visitors and organizes 500 excursions (some of them thematic) per year.
- **Museum of the Oka National Biosphere Reserve**. It was created in 1937 and remodeled in 1998 and 2004. In 2011 a **Visitor Center** was opened besides the Museum and it includes a conference hall and service rooms for different activities with children. They receive more than 4.000 visitors per year.

- Participation in different events, like:
 - **Parks March**, since 1995. It includes drawing, sculpture, photography and literature competitions.
 - **Bird Day**, on 1st April.
 - **Crane Day**, on mid-September
- Recovering traditions with children and local population, like making Russian clay toys, or traditional recipes in specific festivals, like Pancake Day at Christmas.
- Club Glinka: photography exhibitions among staff and children of the Reserve
- Participation in the different competitions and events with the local population. For example, the farmers help to transport children with their horses, supply honey and cakes to the collective meals, etc.
- Folk theater "Bluebird of happiness"

During the visit the undersigning had the chance to see the content of the Museum and the Visitor Center. The Museum has a small but interesting collection of naturalised animals of local fauna, with really notable species like Wolf (*Canis lupus*), Eurasian lynx (*Lynx lynx*), European Bison (*Bison bonasus*), Snowy owl (*Bubo scandiacus*), Capercaillie (*Tetrao urogallus*), Russian desman (*Desmana moschata*), some raptor species, etc.

A great number of paintings and small clay sculptures made by the visitors and the scholars were exhibited in the different rooms. They represent the local fauna and most of them reveal undeniable artistic skills, deep knowledge of the species and command of techniques. A great number of Diplomas have been obtained in the different competitions with all these works, as many of them were true masterpieces.

The Reserve also cooperates very actively in education and training activities with different schools and Universities of the Russian Federation, especially with the Moscow University.



IV.4 CAR TRAFFIC AND PUBLIC ACCESS

The existing roads of access to the Oka Reserve allow the neighboring villages and Brikin Bor, the area where most of the workers live and where the Museum and the Visitor Center are located, to be accessed.

At some moments in the past some concerns were raised in relation to the possible impact of the road linking the localities of Lubyanski and Brykin Bor, since it crosses the strict Reserve from North to South. The current situation has not been modified since the last renewal in 2010, and consequently this is not a matter of concern. The road is a track with no solid external material like pavement. There

are barriers at the two entrances of the road, in such a way that nobody can enter the Reserve without permission. In intermediate sections there are additional barriers with padlocks.

This road has been provided with measures to prevent the propagation of fires caused by accidental sparks when circulating heavy vehicles, like tractors. Two parallel grooves at both sides of the road have been excavated to break the continuity of the vegetation cover, hindering the spread of possible fires.



IV.5 - HUNTING/FISHING

Hunting and fishing are forbidden in the Oka strict Reserve. In the surrounding Biosphere Reserve some permits are allowed and the activity is performed under controlled conditions.

IV.6 - HUMAN OCCUPATION

Within the new limits of the recently enlarged Biosphere Reserve, there are a total of nearly 116.300 people living in the area. There are not villages in the core area.

IV.7 - CULTURAL HERITAGE

In the XIXth century a glass factory was built for the commercial exploitation of the siliceous sandy soil naturally existing all around the area. It was an important infrastructure and it was functioning until early XXth Century. The old building has been demolished, the rubble extracted and the foundation with tunnels and rooms existing below the surface have been consolidated. Some wildlife species, like Badger (*Meles meles*) and Grass snake (*Natrix natrix*) have occupied the site and it seems to play an important role during their life cycle.

When the factory was fully operative, a train transported the products to one of the Pra meanders which provided a transport route for the glass products through the rivers Pra, Oka and Volga. Nowadays the boarding pier can still be visited and very often it is used for special events or as a

viewpoint over the strict Reserve.

V. CONNECTIVITY OF THE AREA

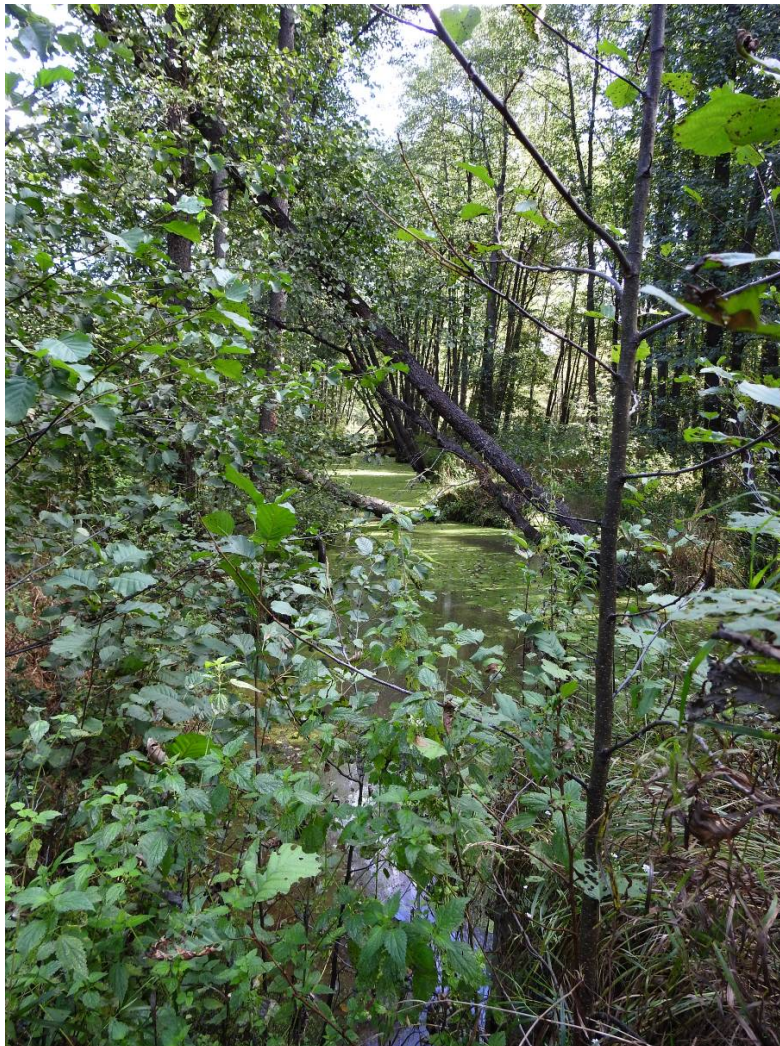
V.1 - ECOLOGICAL CONNECTIVITY WITH OTHER AREAS

As mentioned in the description of the area, the Meshchersky National Park covers a significant part of the Pra basin, upstream of Oka National Biosphere Reserve. Both borders are very close and, therefore, the water quality is very high.

V.2 - OTHER FORMS OF RECOGNITION AWARDED

In 1978 the strict Reserve was declared as UNESCO Biosphere Reserve and in 1989 the territory covered under this designation was enlarged.

In 1994 the Oka National Biosphere Reserve has been designated as Wetland of International Importance of the Ramsar Convention



VI. IMPLEMENTATION OF THE CONDITIONS AND RECOMMENDATIONS

The current report is aimed at the assessment of the European interest of the protected area and the fulfillment of one condition and five recommendations stated in the last renewal of 2010 (Resolution CM/ResDip(2010)2). These are as follows:

CONDITION: Any regionalization or privatization measures must not affect the reserve's current protected status.

RECOMMENDATIONS:

- 1. To continue the efforts made over the last five years to provide the awarded area with*

sufficient resources to ensure the proper conduct of scientific research;

2. *To conserve habitats of the Desman population:*
 - *the reserve should be extended south-eastwards in the Lopata zone, as far as the river Pra, in order to include some typical water meadow habitats not yet represented in the reserve, a number of oxbow lakes and a portion of the Oka river bank;*
 - *the prime Desman habitats, currently located near but outside the diploma-holding area, should also be incorporated into the diploma site. Furthermore, efforts should be made to encourage the handover to the Oka National Biosphere Reserve of the hay meadows located on the left bank of the Pra, to the south of grid squares 169 to 171 in the central forest section;*
3. *Adequate resources should be provided for the purpose of raising the level of public education and information and developing links with local communities, while making full use of the reserve's assets and the large amount of available scientific data. Additional efforts should be made by the authorities with a view to making suitable educational material available, particularly to a young audience;*
4. *The measures to regenerate habitats of the Desman in the Oka plain should be continued;*
5. *A management plan for the reserve should be produced and implemented as soon as possible.*

Assessment of the CONDITION:

The Oka National Biosphere Reserve is 100 % a State property. It is under the authority of the Ministry of Natural Resources and Ecology of the Russian Federation, responsible for its conservation and management.

No changes of the property regime have taken place since the site was firstly protected in 1935. The area has a legal protection regime that prevents damages in the strict Reserve and a management regime in the Biosphere Reserve and the Buffer Zone allowing forestry and agricultural exploitation, within certain limits.

According to the information collected during the visit, the condition is being fulfilled.

Assessment of the RECOMMENDATION 1

Having regard to the global financing allocated by the National authorities for the functioning of the Oka National Biosphere Reserve (as described in section III.4 - Budget) and the scientific productivity recorded during these years, this recommendation is being satisfactorily fulfilled. With regard to the possible renewal in 2019, it should also be maintained.

Assessment of RECOMMENDATION 2

Land purchase is extremely difficult for the Reserve managers. The territories recommended to be incorporated to the Reserve are private-owned and the authorities do not find chances to purchase the ownership of these plots. Nevertheless, the Oka Reserve authorities consider that the existing legislation provides sufficient instruments to avoid any deterioration or change if the owners decide to perform activities other than the current agricultural use, basically hay harvesting.

Considering that Recommendation 2 has not been fulfilled, the undersigned recommends maintaining it in the same terms, in view of opportunities that may appear in the future to incorporate the plots to the Reserve's territory.

Assessment of RECOMMENDATION 3

As described in section "IV.3 - Education and awareness raising", an important effort has been made in recent years by the Reserve authorities to make accessible a lot of materials to the general public and particularly to children. The activities organised have the added value of encouraging the artistic skills while motivating empathic feelings towards nature values.

The Agreement of Cooperation with neighboring villages, as described in section "III.6 - Relationship between the Administration and other stakeholders" is also of great interest for successful

implementation of this recommendation.

The undersigning expert considers that this recommendation has been satisfactorily fulfilled. With regard to the possible renewal in 2019, it should also be maintained.

Assessment of RECOMMENDATION 4

During the last years, a lot of efforts have been made to improve the habitat quality of the Russian Desman in Oka Biosphere Reserve. More actions are in preparation, such as a restoration project for the area affected by the old channel mentioned in section "II.4 - State of conservation of the main species and their habitats".

The undersigning expert considers that this recommendation has been fulfilled. With regard to the possible renewal in 2019, it should also be maintained.

Assessment of RECOMMENDATION 5

The fulfillment of this Recommendation is underway. As mentioned in section III.1 - Management Plan" the area covered by the Agreement of Cooperation with the neighboring villages has been considerably enlarged. Consequently to this Agreement a Management Plan has been foreseen for the near future.

With regard to the possible renewal in 2019, it should also be maintained.

FINAL APPRAISAL

The undersigned expert recommends the renewal in September 2019 of the European Diploma for Protected Areas to Oka National Biosphere Reserve, since the area is of exceptional European interest and it is managed in an exemplary way and attaches the following six recommendations to the renewal of the European Diploma:

1. To continue the efforts made over the last five years to provide the awarded area with sufficient resources to ensure the proper conduct of scientific research;
2. To conserve habitats of the Desman population:
 - the reserve should be extended south-eastwards in the Lopata zone, as far as the river Pra, in order to include some typical water meadow habitats not yet represented in the reserve, a number of oxbow lakes and a portion of the Oka river bank;
 - the prime Desman habitats, currently located near but outside the diploma-holding area, should also be incorporated into the diploma site. Furthermore, efforts should be made to encourage the handover to the Oka National Biosphere Reserve of the hay meadows located on the left bank of the Pra, to the south of grid squares 169 to 171 in the central forest section;
3. Adequate resources should be provided for the purpose of raising the level of public education and information and developing links with local communities, while making full use of the reserve's assets and the large amount of available scientific data. Additional efforts should be made by the authorities with a view to making suitable educational material available, particularly to a young audience;
4. Authorities should explore the feasibility of making the significant collections of scientific research available to the international scientific community by translating highlights of their findings in English.
5. The measures to regenerate habitats of the Desman in the Oka plain should be continued;
6. A management plan for the long term conservation of the area consistent with the duration of the renewal of the European Diploma should be produced and implemented as soon as possible. This management plan should include strategic aims, goals and targets, an estimated budget and a timeframe for its full implementation as well as a monitoring mechanism for the assessment of the implemented management measures. Adequate resources, both financial and human, need to be deployed.

FINAL COMMENT

With reference to the above recommendation 4, an extensive body of scientific knowledge has been accumulated during eight decades in the Oka natural area, but it is only accessible to Russian speakers. In this case not only the language, but also the different alphabet are strong obstacles to preventing the spread of the scientific findings amongst the international scientific community and interested professionals on nature conservation. Consequently, some efforts should be made to translate and disseminate some monographs and scientific articles recently published, which are of a great interest. Cooperation with the Russian authorities to learn from their experience would also be welcome.

ACKNOWLEDGMENTS:

First of all, the undersigned expert wants to state her warmest thanks to the Director of the Reserve, Yuri Markin, who organised the visit and made it possible and successful. All his arrangements have been pertinent, useful and clarifying. Special thanks for his availability at any time, for the abundant and detailed information provided for this mission, for the interesting talks shared and for his effort to make this expert feel at ease.

A special mention is deserved by the charming ladies in charge of the Museum and Visitor Centre and of the Environmental Education Programme, Mrs. Marina Didorchuk and Olga Shirinya. Their work with scholars and visitors is greatly praiseworthy.

To Elena Ivancheva, Tatyana Postelnykh and Viktor Ivanchev, who showed the most beautiful and pristine habitats of the Oka Reserve and explained their values with great professionalism and passion.

To the scientists in charge of the Crane Breeding Centre, in particular the Director Mrs. Tatyana Kashentseva who kindly explained the main characteristics of the conservation project. Special thanks to Sasha Pekarskaya (Jerusalem University) and Kristina Kondrakova, who explained the project of crane migration monitoring with GPS devices.

Finally, it is worth mentioning the excellent working atmosphere within the staff of the Oka State Biosphere Reserve. They live in a small village, Brykin Bor, in conditions of relative isolation and limited resources. Their devotion to their work and to the conservation of the Reserve deserves special recognition.

To all of them, thanks a lot **спасибо**.