United Nations Educational, Scientific and Cultural Organization

Man and the Biosphere Programme

PERIODIC REVIEW FOR DESNIANSKYI BIOSPHERE RESERVE

[July 2020]

INTRODUCTION

The UNESCO General Conference, at its 28th session, adopted Resolution 28 C/2.4 on the Statutory Framework of the World Network of Biosphere Reserves. This text defines in particular the criteria for an area to be qualified for designation as a biosphere reserve (Article 4). In addition, Article 9 foresees a periodic review every ten years, based on a report prepared by the concerned authority, on the basis of the criteria of Article 4 and forwarded to the secretariat by the State concerned. The text of the Statutory Framework is given in the third annex.

The form which follows is provided to help States to prepare their national reports in accordance with Article 9 and to update the data available to the Secretariat on the biosphere reserve concerned. This report should enable the International Coordinating Council (ICC) of the MAB Programme to review how each biosphere reserve is fulfilling the criteria of Article 4 of the Statutory Framework and in particular the three functions. It should be noted that it is requested, in the last part of the form (Criteria and Progress Made), to indicate how the biosphere reserve fulfills each of these criteria.

The information presented on this periodic review will be used in a number of ways by UNESCO:

(a) for examination of the biosphere reserve by the International Advisory Committee for Biosphere Reserves and by the Bureau of the MAB International Coordinating Council;

(b) for use in a world-wide accessible information system, notably for the UNESCO-MABnet and publications, facilitating communication and interaction amongst persons interested in biosphere reserves throughout the world.

Kindly indicate if any part of this report should remain confidential.

The form consists of three parts:

- Part one is a summary highlighting the main changes in the biosphere reserve during the reporting period.
- Part two is more descriptive and detailed, referring to the human, physical and biological characteristics as well as to the institutional aspects.
- Part three consists of two Annexes (A): the first Annex (A.1) will be used to update the directory of biosphere reserves on the MABnet. The second annex will be used to provide promotion and communication materials of the biosphere reserve (A.2).

The third annex comprises the Statutory Framework for the World Network of Biosphere Reserves.

Please provide as many quantitative data as possible as well as supporting documentation to complete the information provided, especially:

- Map(s) clearly showing the zonation (see in particular 2.3.1);
- The legal texts for the different zones.

The form should be completed in English, French or Spanish. Two copies should be sent to the Secretariat, as follows:

1. The original hard copy, with the original signatures, letters of endorsement, zonation map and supporting documents. This should be sent to the Secretariat through the Official UNESCO channels, i.e. via the National Commission for UNESCO and/or the Permanent Delegation to UNESCO.
2. An electronic version (on diskette, CD, etc.) of the periodic review form and of maps (especially the zonation map). This can be sent directly to the MAB Secretariat:

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Annex VII. Emerald site “Desniansko-Starohutskyi National Nature Park” – separate file “Emerald UA0000031 dataforms.pdf”

Annex VIII. Emerald site “Smiatsko-Znobivskyi” – separate file “Emerald UA0000062 dataforms.pdf”

PART I: SUMMARY

a) Name of the biosphere reserve:

Desnianskyi Biosphere Reserve

b) Country:

UKRAINE

c) Year of designation:

2009

d) Year(s) of periodic review(s):

2009-2019

e) Previous recommendation(s) made by the International Co-ordinating Council (MAB- ICC), if applicable:

No applicable

f) What follow-up actions are completed and if not completed/initiated, please provide justifications.

No applicable

g) Update on the implementation of measures to achieve the objectives of the biosphere reserve.

The activities in the Desnianskyi Biosphere Reserve were aimed at preserving the biological and landscape biodiversity of the valuable area of Eastern Polesie, increasing its recreational potential, creating conditions for sustainable development of the region by providing a balanced approach to natural resources, involving the general functional zoning of the reserve, monitoring of biodiversity, raising the level of ecological awareness of the local population and visitors.

The total area of the Desnianskyi Biosphere Reserve was not changed. There were changes due to the redistribution of the territory of the Desniansko-Starohutskyi National Nature Park by functional zones according to the Order of the Ministry of Ecology and Natural Resources of Ukraine No. 405 from 29.11.2018 and increasing the core area of the reserve due to the creation of the landscape reserve of national importance "Muravyivskyi" with an area of 1096 hectares by the Presidenial Decree from 10.07.2019 No. 679/2019

h) Briefly describe the process by which the current periodic review has been conducted:

Periodic review includes annual information provided by the Desnianskyi Biosphere Reserve to the MAB National Committee of Ukraine, data of annual reports of the Desniansko-Starohutskyi NNP to the Ministry of Environmental Protection of Ukraine, publications of some institutes of the National Academy of Sciences of Ukraine and higher educational institutions of Sumy, Nizhyn, Hlukhiv, Kyiv, Chernihiv, Kherson), statistical data of local authorities and self-government, publications in the media, interviews, etc.

i) Area and spatial configuration:

	Previous report Desnianskyi BR nomination form 2008	Proposed changes (if any)
Area of terrestrial Core Area(s)	2303 ha	3301 ha
Area of terrestrial Buffer Zone(s)	12875 ha	11877 ha
Area of terrestrial Transition Area(s)	53142 ha	53142 ha
Area of water bodies Core Area(s)	94 ha	152 ha
Area of water bodies Buffer Zone(s)	281 ha	223 ha
Size of water bodies Transition Area(s)	2053 ha	2053 ha
Total Area(s)	70748 ha	70748 ha

The total area of the Desnianskyi Biosphere Reserve did not change. Internal changes took place due to the redistribution of the territory of the Desniansko-Starohutskyi National Nature Park by functional zones according to the order of the Ministry of Ecology and Natural Resources of Ukraine No. 405 dated 29.11.2018 and the core area of the reserve increased due to the creation of the Presidential Decree No. 679/2019 landscape reserve (zakaznyk) of national importance "Muravyivskyi" with an area of 1096 hectares.

j) Human population of the biosphere reserve:

	Previous report Desnianskyi BR nomination form 2008	At present Desnianskyi BR periodic review 2020
Core Area(s) (permanent and seasonally)	0/0	0/0
Buffer Zone(s) (permanent and seasonally)	0/1000	-/1500
Transition Area(s) (permanent and seasonally)	3464/5000	5883/6500

k) Budget (main sources of funds, special capital funds) and international, regional or national relevant projects/initiatives carried out or planned.

Budget in the previous report Desnianskyi BR nomination form 2009	Current budget
US$ 112 thousand	US$ 518 thousand

1) International, regional, multilateral or bilateral framework of cooperation. Describe, where applicable, the contribution of the biosphere reserve to achieve objectives and developing mechanisms that contribute to the implementation of international or regional bilateral or multilateral agreements, conventions, etc.

2010

Within the framework of the Ramsar Convention, a pilot Russian-Ukrainian project "Study of Bird Migrations in Transboundary Wetlands in the Middle Reaches of the Desna River" (2010) was implemented with the assistance of Wetlands International. Workshop "Program for the Conservation of Transboundary Wetlands of the Russian Federation, Belarus and Ukraine" in Moscow (Russian Federation). The meeting was organized by the Ministry of Natural Resources and Ecology of the Russian Federation together with the Russian program Wetlands International. The meeting was prepared and held within the framework of the eponymous project of the Wetlands International, funded by the Ministry of Agriculture, Nature and Food Quality of the Netherlands.

2011

It was take part in the workshop in Smolensk (Russian Federation) on "Sustainable Development of Wetland Ecosystems in Transboundary Conditions" (state and prospects of international cooperation of Belarus, Ukraine, Russia), initiated by the Moscow Office of UNESCO, and the direct organizer of the non-profit partnership "Eurasian Biosphere Reserves" with the participation of the Russian and Belarusian committees under the UNESCO program "Man and the Biosphere", the Biosphere Reserve "Smolensk Lake District" and the Vitebsk Regional Committee for Natural Resources (Belarus);

It was participated in the workshop "Development of a Management Plan for Protected Areas with the Involvement of Stakeholders (European Model)", which was held within the international project "Conservation and Sustainable Use of Natural Resources of the Ukrainian Carpathians", with the support of the Norwegian government, WWF Danube-Carpathian Program and the Ministry Ecology and Natural Resources of Ukraine in Lviv (Ukraine);

The Michael Zukkov Foundation together with the International Academy for Nature Conservation of Wilm Island at the Federal Office for Nature Conservation (BfN) organized a training tour for biosphere reserve specialists on the topic "Protected Areas and Wetland Protection in North-Eastern Germany"

2012

In the Desnianskyi Biosphere Reserve the training on the climatic component of the project "Preservation of Transboundary Wetlands of Polesie in Belarus, Russia and Ukraine" took place. The training was organized by the Frankfurt Zoological Society, the regional coordinator of the public organization "Birds and People", the Ukrainian Society for the Protection of Birds (a partner of BirdLife Unternational), the Belarusian Society for the Protection of Birds (a partner of BirdLife International).

Within the framework of the Ramsar Convention it took part in a working meeting in Sebezh, Pskov Region (Russian Federation) on the topic: "Preservation of Transboundary Wetlands of Polesie in the Republic of Belarus, Russia and Ukraine".

2013

The seminar "Fundamentals of Wetland Monitoring" was organized by the Ukrainian Society for the Protection of Birds (partner BirdLife International) in the framework of the

project "Conservation of Transboundary Wetlands of Polesie in Belarus, Russia, Ukraine" in the Desnianskyi Biosphere Reserve.

2014

It was take part in the scientific-practical workshop "Preservation of Valuable Transboundary Wetlands of the Bryansk Region" (Russia), which aimed to form a partnership to support wetlands valuable for the conservation of biological diversity of the Desna, Snov and Iput rivers (basin of the Dnipro river).

Until 2014, cross-border cooperation was carried out in the direction of creating a bilateral biosphere reserve on the basis of the Russian biosphere reserve "Nerusso-Desnianskoe Polesie" and the Ukrainian "Desnianskyi Biosphere Reserve". Since 2014 work has been suspended due to Russian Federation aggression against Ukraine.

2015

There were organized bicycle races by the Desnianskyi Biosphere Reserve with carrying out of ecological and educational actions, monitoring of flora and vegetation, researches of the new sites representing natural and historical and cultural value.

The workshop on the topic "The Role of Protected Areas in the Middle Reaches of the Desna River in the Context of International Importance" was organized in town Novgorod-Siverskyi. Stands of the mobile exhibition about the Desnianskyi Biosphere Reserve were made.

A visitor center of the Desnianskyi Biosphere Reserve was opened in town Novhorod-Siverskyi, Chernihiv Region (Oblast or Province).

The Ministry of Ecology and Natural Resources of Ukraine with the support of the European Union project "Additional Support of the Ministry of Ecology and Natural Resources of Ukraine in the Implementation of Sectoral Budget Support" held a scientific workshop with representatives of the Desnianskyi Biosphere Reserve in Ukrainian part of the Biosphere Reserve "East Carpathians" (Uzhansky National Nature Park).

2016

Wetland site of international importance "Desna River Floodplains” (4270 ha)", which is located in the Desnianskyi Biosphere Reserve, was included in the international network Wetland Link International.

The bilateral working meeting were held within the framework of the Agreement between the Government of the Federal Republic of Germany and the Government of Ukraine in the field of environmental protection within the project for 2016-2020 on capacity development of protected areas of Ukraine, taking into account European environmental norms and standards of the European Union.

According to the decision of the 36th meeting of the Standing Committee of the Bern Convention in November 2016, sites within the reserve “Desniansko-Starohutskyi National Nature Park” (UA0000031, 16223 ha) and “Smiatsko-Znobivskyi (UA0000062, 54273 ha) became parts of the Emerald Network of Europe.

The Novgorod-Siverskyi District State Administration organized a meeting-seminar on the creation of Landscape Reserve (Zakaznyk) of National Importance “Muravyivskyi”, a discussion of the results of work within the UNESCO Desnianskyi Biosphere Reserve and ways to address topical issues of its development.

The Federal Ministry for the Environment, Nature Conservation, and Nuclear Safety of Germany in the framework of the Agreement with the Government of Ukraine in the field of environmental protection held a bilateral meeting on capacity building of Ukraine's protected areas in accordance with European environmental norms and standards. Participants had the opportunity to get acquainted with the peculiarities of the functioning of the National Nature Park "Lower Odra Valley" and the Biosphere Reserve "Schorfheide-Chorin".

2017

The Association of Protected Areas of Ukraine under the UNDP grant program within the project "Clima East: conservation and sustainable use of peatlands" organized a training in town Novgorod-Siverskyi "Organizational and Legal Framework of Regional Landscape Parks in Modern Conditions".

2018

The Rufford Small Grants for Nature Conservation Foundation supported the project "Study of the Rare Plants and Habitats Distribution in the Desnianskyi Biosphere Reserve and Conducting Environmental Education Measures on its Territory", which was aimed to study the distribution of rare plant species and habitats in the Desnianskyi Biosphere Reserve. which have pan-European environmental significance and a number of practical measures for their conservation.

Within the framework of the project "Adaptation Based on Ecosystems and Sustainable Regional Development" representatives of the Michael Zukkov Foundation and the Center for Economics of the University of Sustainable Development in Eberswalde (Germany) held a number of woprkshops in areas that are parts of the Desnianskyi Biosphere Reserve and adjacent areas with experience exchange.

2019

The President of Ukraine has signed a Decree on the establishing a Landscape Reserve (Zakaznyk) of National Importance "Muravyivskyi" in the Novgorod-Siverskyi District of Chernihivska Provonce (1096 ha), which increased the area of the natural core of the Desnianskyi Biosphere Reserve.

The Michael Zukkov Foundation and the Center for Economics and Ecosystem Management at the University of Sustainable Development Eberswalde (Germany) have joined forces to implement the project "Ecosystem Adaptation to Climate Change and Sustainable Regional Development through Empowerment of Ukrainian Biosphere Reserves" in the Desnianskyi Biosphere Reserve aims to integrate an ecosystem adaptation approach to national and regional planning and measures leading to better adapted land use and large-scale sustainable development.

PART II: PERIODIC REVIEW REPORT

1. BIOSPHERE RESERVE:

1.1 Year designated:

2009

1.2 Year of first periodic review and of any following periodic review(s) (when appropriate):

BR Desnianskyi nomination form 2008

1.3 Follow-up actions taken in response to each recommendation from the previous periodic review(s) (if applicable), and if not completed/initiated, please provide justifications.

No applicable

1.4 Other observations or comments on the above.

No applicable

1.5 Describe in detail the process by which the current periodic review has been conducted:

1.5.1 Which stakeholders were involved?

Within the Chernihiv Region (Oblast, Province): Novgorod-Siverska District State Administration, entrepreneurs, rural communities, schools, communal institution "Novgorod-Sivnerskyi District House of Children's and Youth Creativity" of Novgorod-Siverska District Council, Novgorod-Siverskyi Historical and Cultural Museum-reserve "Slovo o Polku Igorevim" (A word about Igor's regiment), NGO "Desnianska League of Naturalists", state enterprise"Novgorod-Siverska Forest Research Station", Department of Ecology and Natural Resources of the Chernihiv Regional State Administration.

Within the Sumy Region (Oblast, Province): the Desniansko-Starohutskyi National Nature Park, Znob-Novgorod United Territorial Community, Staro-Gutska Village Council, Seredyno-Buda District State Administration, Seredyno-Buda District Council, schools, Seredyno-Buda Children's Center and Youth Creativity”of Seredyno-Buda District Council, entrepreneurs, state enterprise “Syeredyno-Buda Forestry”, subsidiary “Seredyno-Buda Agroforestry”, NGO “Desnianski Zori (Stars)”, Department of Energy and Environmental Protection of Sumy Regional State Administration.

1.5.2 What methodology was used to involve stakeholders in the process (e.g., workshops, meetings, consultation with experts).

The Desniansko-Starohutskyi National Nature Park, local authorities, forestries and schools carried out environmental education activities (dissemination of information in the media and social networks, garbage collection, trees planting), exhibitions, ornithological schools, environmental camps, festivals, forums, workshops, etc.

1.5.3 How many meetings, workshops, etc. occurred throughout the process of conducting this review?

More than 70 meetings were organized, namely: 12 seminars, 6 festivals, 19 photo exhibitions, 5 forums, 9 ecological camps, 12 eco-schools, 12 bike rides, 1 visit center of the Desnianskyi Biosphere Reserve in town Novgorod-Siverskyi.

1.5.4 Were they well attended, with full and balanced representation?
(Describe participation and stakeholders).

The most active participants in the events were employees of the Desniansko-Starohutskyi National Nature Park, environmentalists, representatives of local authorities and self-government, schoolchildren, teachers, researchers, public figures, local residents, and business representatives.

2. SIGNIFICANT CHANGES IN THE BIOSPHERE RESERVE DURING THE PAST TEN YEARS:

2.1 Brief summary overview: Narrative account of important changes in the local economy, landscapes or habitat use, and other related issues. Note important changes in the institutional arrangements for governance of the biosphere reserve area, and changes (if any) in the coordinating arrangements (including the biosphere reserve organization/coordinator/manager) that provide direction for the biosphere reserve. Identify the role of biosphere reserve organization/coordinator/manager in initiating or responding to these changes.

Recently, primarily due to declining rainfall and drought, there were the processes of transformation of floodplain lakes into swamps, open grass-sedge swamps into forest swamps, natural overgrowing of trees and bushes of floodplain meadows have intensified.

The road of district significance is laid through the forest reserve of local significance "Island" to the village of Novovasylivka, which previously could be reached only by the only highway through the territory of the Russian Federation.

Administrative reform is underway: settlements along the Desna River have become part of the Znob-Novgorod United Territorial Community.

The share of agricultural production has increased - the use of arable land has been resumed, which has not been used for some time due to the crisis in the agricultural sector.

Environmental education and public involvement in environmental monitoring have developed. Explanatory work, publication of articles in newspapers, speeches at sessions of city and settlement councils are constantly carried out.

Roads were repaired on the basis of co-financing with the united communities, current repairs of communal roads, street lighting, construction of water mains, reconstruction of the water supply network, reconstruction and overhaul of buildings and premises of communal property.

On the basis of the communal enterprise "Znoba-Blagoustrii" mini-shops on processing of agricultural products and wildflowers are created, the line for production of pellets is created, the enterprise is equipped with a hydraulic lift and a wood chopping machine.

In 2013 an updated map of the biosphere reserve was created, based on the new form of MAB UNESCO in the ArcGis 10.0 program with georeference and in vector form.

2.2 Updated background information about the biosphere reserve.

2.2.1 Updated coordinates (if applicable). If any changes in the biosphere reserve’s standard geographical coordinates, please provide them here (all projected under WGS 84):

Cardinal points:	**Latitude**	**Longitude**
Most central point:	52° 14' 40" N	33° 29' 28" E
Northernmost point:	52° 22' 18" N	33° 22' 41" E
Southernmost point:	52° 01' 19" N	33° 16' 00" E
Westernmost point:	52° 02' 01" N	33° 13' 18" E
Easternmost point:	52° 16' 57" N	33° 56' 42" E

In 2013, an updated map of the biosphere reserve was created, based on the new form of MAB UNESCO in the ArcGis 10.0 program with geo-binding and in vector form.

2.2.2 If necessary, provide an updated map on a topographic layer of the precise location and delimitation of the three zones of the biosphere reserve Map(s) shall be provided in both paper and electronic copies. Shape files (also in WGS 84 projection system) used to produce the map must also be attached to the electronic copy of the form.

The updated map is provided in paper and electronic forms.

If applicable, also provide a link to access this map on the internet (e.g. Google map, website).

http://www.nppds.inf.ua/DBR.jpg

2.2.3 Changes in the human population of the biosphere reserve.

Most recent census data on 31.12.2019:

No	Settlement	Population, persons
Sumy Region (Oblast, Province):		
1	Znob-Trubchevske	413
2	Karpechenkove	30
3	Kudoiarove	0
4	Liubakhove	10
5	Ulytsia	2
6	Novovasylivka	244
7	Ochkyne	289
8	Zhuravka	218
9	Krasnoiarske	3
10	Kryvonosivka	180
11	Borovychi	49
12	Taboryshche	35
13	Khylchychy	175

14	Krenidivka	229
15	Vasylivske	0
16	Mefedivka	229
17	Ukrainske	38
18	Chervone	4
19	Chetvertakove	5
20	Stara Huta	240
21	Nova Huta	35
22	Vasylivka	8
23	Havrylova Sloboda	38
Chernihiv Region (Oblast, Province):		
24	Hremiach	958
25	Murav'i	142
26	Kamianska Sloboda	218
27	Kamin'	98
28	Pushkari	243
29	Rohivka	270
30	Liskonohy	342
31	Lenkiv	179
32	Domotkanov	300
33	Kyselivka	14
34	Byryne	645

2.2.4 Update on conservation function, including main changes since last report.
(Note briefly here and refer to 4 below).

In 2009 the third edition of the Red Book of Ukraine was published, which included new species. Accordingly, the number of protected species has increased (paragraph 4.1).

On the territory of the Desnianskyi Biosphere Reserve in the floodplains of the Desna River, a very intensive flight of waterfowl and around water (up to 30,000 at a time) is observed every year. Important migration routes of birds - Polesie Latitude and Dnieper - intersect here. The dominant spring migration for all years of observations - white-fronted goose. The dominant of autumn migration for all years of observations is the finch.

Changes are likely to be associated with climate change: rainfall is declining, groundwater levels are falling, and air temperatures are rising.

In November 2016 sites within the reserve “Desniansko-Starohutskyi National Nature Park” (UA0000031, 16223 ha) and “Smiatsko-Znobivskyi (UA0000062, 54273 ha) were included into the Emerald Network of Europe.

2.2.5 Update on the development function, including main changes since last report.
(Note briefly here and refer to 5 below).

The zone of core areas has been increased, the representativeness of natural complexes has increased too. New types of tourist routes have been developed: groups of visitors are offered excursions along the ecological trail with a tower for bird watching in the Desna floodplains with the professional support of an ornithologis and bicycle tours.

Permanent types of nature management in the Desnianskyi Biosphere Reserve are the following:

agricultural types (growing cereals, haymaking, breeding and grazing, beekeeping). Development takes place at the expense of enterprises to which land is leased. Tenants use new technologies, use high-quality elite seeds, apply fertilizers, achieving increased yields in the cultivation of cereals, oilseeds and vegetables;

forestry types (logging, processing of forest plantations).

Sustainable development will be ensured through the rational use of fish and hunting resources by the local population, the collection of mushrooms and berries, and the development of recreation.

2.2.6 Update on logistic support function, including main changes since last report.
(Note briefly here and refer to 6 below).

The Desnianskyi Biosphere Reserve collaborates with research institutions of the National Academy of Sciences of Ukraine and research departments of several national universities.

An inventory of the flora of vascular plants and fauna of vertebrates, fungi and algae of the Desniansko-Starohutskyi National Nature Park took place. Due to constant monitoring, the lists of species were replenished with new species.

School and student youth with their educators are involved in monitoring the state of the environment, and methods adapted for them are being developed. Since 2002, the ecological camp "Desnianski Zori" has been teaching children and students the basic techniques of field biological research, educating a caring attitude to all living things. As a result of this work, 3 monographs were published, which are used as a practical guide.

Eco-educational work: the festival of biological collections has become a tradition for the last 3 years, it has turned from a city to a regional one, actions and quests have become more popular among young people, workshops and exhibitions in communities and village councils are held more regularly.

The Desnianskyi Biosphere Reserve became a participant in the project "Ecosystem Adaptation to Climate Change in the Desnianskyi Biosphere Reserve", funded by the Federal Ministry of Environment, Nature Protection and Nuclear Safety (Germany) and implemented by the Michael Zukkov Foundation (Germany) in cooperation with the University of Sustainable Development.

2.2.7 Update on governance management and coordination, including changes since last report (if any) in hierarchy of administrative divisions, coordination structure.
(Note briefly here and refer to 7 below).

In Ukraine the administrative reform, which consists in giving greater powers to local governments and helping to address the social needs of the population is undergoing. The revenue part of the budget of territorial communities and village councils in the district of the Desniansko-Starohutskyi National Nature Park consists of their own revenues, transfers from the state budget, grants and subventions.

2.3 The authority/authorities in charge of coordinating/managing the biosphere reserve:
(Comment on the following topics as much as is relevant).

The Desnianskyi Biosphere Reserve is overseen by its Coordinating Council. The general coordinating body is the Desniansko-Starohutskyi National Nature Park which reports to the Ministry of Environmental Protection and Natural Resources of Ukraine, in cooperation with local authorities.

2.3.1 Updates to cooperation/management policy/plan, including vision statement, goals and objectives, either current or for the next 5-10 years

The Project (Management Plan) for the Organization of the Territory of the Desniansko-Starohutskyi National Nature Park, Protection, Reproduction and Recreational Use of its Natural Complexes and Objects was approved in 2012.

Annual plans of nature protection measures the Desniansko-Starohutskyi National Nature Park (financial and quantitative indicators), annual plan of nature protection measures (quantitative indicators), limits on the use of natural resources within the park are approved every year.

The Desnianskyi Biosphere Reserve annually implements and reports on the implementation of the Plan of Measures for the Implementation in Ukraine of the Lima Action Plan for UNESCO's Man and the Biosphere Programme and its World Network of Biosphere Reserves, approved by a joint order of the Ministry of Ecology and Natural Resources of Ukraine and the National Academy of Sciences of Ukraine from 04.07.2018 No. 303/243. In the Environmental Ministry of Ukraine the Sector of Nature Heritage of the National Commission of Ukraine for UNESCO coordinates implementing this plan.

At the district level, the following was developed and implemented: the Program of Economic and Social Development of Seredyno-Buda District for 2019 and the following 2020-2021, the Program of Small and Medium Business Development in Seredyno-Buda District for 2017-2018, the Environmental Protection Program in Seredyno-Buda District for 2019-2021, the District Program of National-patriotic Education of Children and Youth for 2018-2020 and others.

2.3.2 Budget and staff support, including approximate average annual amounts (or range from year-to-year); main sources of funds (including financial partnerships established (private/public), innovative financial schemes); special capital funds (if applicable); number of full and/or part-time staff; in-kind contribution of staff; volunteer contributions of time or other support.

The Desniansko-Starohutskyi National Nature Park is funded from the state budget (an average of 152 thousand US dollars per year) and can provide paid services (about 45 thousand US dollars per year). Sponsorship income - $ 5,000. The total average budget is $ 202,000 per year. Staff inclusea 70 persons. 5 of them - authority, 26 - state security service (guard), 5 - researchers, 4 - specialists in environmental education and recreation, 30 - support units.

The annual budget of village councils and united territorial communities, on the lands of which the Desnianskyi Biosphere Reserve is located, averages 5,277,000 US dollars, which finances socio-economic and cultural development programs.

2.3.3 Communications strategy for the biosphere reserve including different approaches and tools geared towards the community and/or towards soliciting outside support.

Communication, education and public awareness activities in the Desnianskyi Biosphere Reserve are carried out by the relevant units of the Desniansko-Starohutskyi National Nature Park and public environmental organizations (NGOs) "Desnianski Zori" and "Desnianska League of Naturalists" with the participation of local authorities through self-government and participation in roundtables, workshops actively used network of Internet resources.

2.3.4 Strategies for fostering networks of cooperation in the biosphere reserve that serve as connections (“bridging”) among diverse groups in different sectors of the community (e.g. groups devoted to agricultural issues, local economic development, tourism, conservation of ecosystems, research and monitoring).

The possibilities of the Internet are widely used to inform about the goals, objectives and activities of the Desnianskyi Biosphere Reserve. The network cooperation extended to scientific conferences, exhibitions, festivals, meetings with all interested groups, explanatory events for the population.

2.3.5 Particular vision and approaches adopted for addressing the socio-cultural context and role of the biosphere reserve (e.g. promotion of local heritage resources, history, cultural and cross-cultural learning opportunities; cooperation with local population; reaching out to recent immigrant groups, indigenous people etc.).

The role of the Desnianskyi Biosphere Reserve since its inception is to become responsible for the greening of the economy, when people can live without the destruction of nature, using natural potential, developing ecotourism and other environmentally friendly activities.

2.3.6 Use of traditional and local knowledge in the management of the biosphere reserve.

The local communities use traditional knowledge on land use (growing cereals, oilseeds, vegetables), forestry, beekeeping, breeding productive livestock and poultry, grazing and haymaking, etc.

2.3.7 Community cultural development initiatives. Programmes and actions to promote community language, and, both tangible and intangible cultural heritage. Are spiritual and cultural values and customary practices promoted and transmitted?

Cultural development within the Desnianskyi Biosphere Reserve takes place in accordance with community programs aimed at improving the provision of educational services, the development of culture and the arts, and the preservation of cultural and historical values.

Near the village Pushkari, Chernihiv Region, is a well-known Paleolithic site, the artifacts of which are stored in the leading collections of Eastern Europe.

In the village of Ochkyne, Sumy Region, in the Neolithic and Bronze Ages, tribes of hunters, farmers and pastoralists lived. The remains of the settlements were found during archeological expeditions on the southern outskirts of the village and along the coastal sandy slope between the villages of Borovychi and Ochkyne.

On the territory of the reserve there are monuments of history and culture closely connected with the events of the Second World War of 1939-1945. In the Starohutski forests

there is a partisan dugout, which is included in one of the tourist routes. There are monuments to those killed during the war in the settlements.

In the countryside, houses have been preserved, which are marked by a kind of architecture, there are houses of culture, where various events are held. In general, local traditions and usual practices are preserved on the territory.

In the adjacent territory in the city of Novgorod-Siverskyi, which was founded in 989 and is closely connected with the development of the state of Kyiv Rus, there is a historical and cultural museum-reserve "Slovo o polku Igorevim" with a complex of historical monuments of Sivershchyna.

Ethnically, the majority of the reserve's population are Ukrainians (about 80%), Russians - 18%, Belarusians - up to 1%, other nationalities - up to 1%.

2.3.8 Specify the number of spoken and written languages (including ethnic, minority and endangered languages) in the biosphere reserve. Has there been a change in the number of spoken and written languages? Has there been a revitalization programme for endangered languages?

The colloquial language within the Desnianskyi Biosphere Reserve is diverse, the border location of the territory is indicated: Ukrainian, Russian, Belarusian, in some places words specific to a certain area are used. Written languages are Ukrainian and Russian. In 2019, the Law of Ukraine “On Ensuring the Functioning of the Ukrainian Language as the State Language” came into force in Ukraine, which guarantees the position of the Ukrainian language in public administration, services, education and the media. It also provides for the liability of officials for ignorance of the state language. At the same time, the law does not restrict private communication in all languages and the free use of national minority languages.

2.3.9 Management effectiveness. Obstacles encountered in the management/coordination of the biosphere reserve or challenges to its effective functioning.

Management within the Desnianskyi Biosphere Reserve is carried out primarily by public authorities in accordance with the competence and arrangements. In particular, the administration of the Desniansko-Starohutskyi National Nature Park organizes investigatios throughout the reserve. The protection of natural complexes is carried out by the state protection services of the park and forestry. These services, together with the National Police and the State Environmental Inspectorate, periodically conduct joint raids to prevent poaching and illegal logging, which is rare.

2.4 Comment on the following matters of special interest in regard to this biosphere reserve: (Refer to other sections below where appropriate).

2.4.1 Is the biosphere reserve addressed specifically in any local, regional or/and national development plan? If so, what plan(s)? Briefly describe such plans that have been completed or revised in the past 10 years.

Activities in the Desnianskyi Biosphere Reserve are included into strategies / concepts / programs / plans for regional development, environmental protection, rural development, poverty alleviation, tourism, culture in Sumy and Chernihiv regions. Resolution of the Cabinet of Ministers of Ukraine of August 6, 2014 No. 385 approved the State Strategy for Regional Development until 2020, one of the goals of which is to decentralize state powers by transferring them to the local level while transferring appropriate financial resources, improving strategic planning processes and fulfillment of set tasks at all levels, introduction of an effective mechanism for coordinating the actions of central and local executive bodies, local governments

during the implementation of sectoral priorities and tasks at different territorial levels. Relevant action plans are approved annually at the state, oblast and rayon levels to implement this strategy. A new state strategy for the next period has been developed.

2.4.2 Outcomes of management/cooperation plans of government agencies and other organizations in the biosphere reserve.

Every year the management, protection regimes of nature protection territories, research, monitoring, educational and training works are improved, recreation and tourism are developed.

2.4.3 Continued involvement of local people in the work of the biosphere reserve. Which communities, groups, etc. How are they involved?

For example, the regional public organization (NGO) "Desnianski Zori" unites scientists from various institutions, school teachers and middle and high school students to involve them in research, supports joint bicycle rides on the reserve. Biological School “Desnianska League of Naturalists” and Ornithological School “Birds Unite the World” inspire young people to become ecologically aware of natural ecosystems and species.

2.4.4 Women’s roles. Do women participate in community organizations and decision-making processes? Are their interests and needs given equal consideration within the biosphere reserve? What incentives or programmes are in place to encourage their representation and participation? (e.g. was a “gender impact assessment” carried out?) Are there any studies that examine a) whether men and women have different access to and control over sources of income and b) which sources of income do women control? If so, provide reference of these studies and/or a paper copy in an annex.

In the Desnianskyi Biosphere Reserve men and women have equal rights. The administration of the Desniansko-Starohutskyi National Nature Park consists of 35%. women and 65% of men, and women do not have a practice in the state security service.

2.4.5 Are there any changes in the main protection regime of the core area(s) and of the buffer zone(s)?

The regime of protection of protected areas has intensified, measures are being taken to improve the sanitary condition of forests, and any continuous felling within protected areas is prohibited. From 2018, continuous felling in other forest areas requires an environmental impact assessment in accordance with the Law of Ukraine “On Environmental Impact Assessment” (2017).

2.4.6 What research and monitoring activities have been undertaken in the biosphere reserve by local universities, government agencies, stakeholders and/or linked with national and international programs?

A complete inventory of flora and fauna in the Desnianskyi Biosphere Reserve was conducted with the participation of the institutes of botany and zoology of the National Academy of Sciences of Ukraine, the study of tree stands was carried out by the state enterprise "Novgorod-Siverskaya Forest Research Station".

Scientific curator of the Desniansko-Starohutskyi National Nature Park is Sumy National Agrarian University. It uses the territory of the Desnianskyi Biosphere Reserve as a base for student internships, training.

2.4.7 How have collective capacities for the overall governance of the biosphere reserve (e.g. organization of new networks of cooperation, partnerships) been strengthened?

The public is constantly involved into monitoring on the state of the environment. The Desniansko-Starohutskyi National Nature Park actively cooperates with the Sumy Center for Extracurricular Activities with Talented Youth, the Ukrainian Society for the Protection of Birds, the non-profit partnership “Birds and People” (RF), NGOs “Desnianski Zori” and “Desnianska League of Naturalists”, and the Ecoclub ”Zelena Khvylia” (Green Wave).

2.4.9 Participation of young people. How were young people involved in the organizations and community decision-making processes? How were their interests and needs considered within the biosphere reserve? What are the incentives or programs in place to encourage their participation?

Annually local teachers and pupils free involved to environmental actions, special programs and campaigns for education in the field of biodiversity conservation. In particular, the Desnianskyi Biosphere Rreserve annually hosts the Desnianski Zori ecological camp for schoolchildren who implement research miniprojects and their data are included into the Chronicle of Nature of the Desniansko-Starohutskyi National Nature Park, taken into account in the further development of the park and biosphere reserve.

3. ECOSYSTEM SERVICES:

3.1 If possible, provide an update in the ecosystem services provided by each ecosystem of the biosphere reserve and the beneficiaries of these services.
(As per previous report and with reference to the Millennium Ecosystem Assessment Framework and The Economics of Ecosystems and Biodiversity (TEEB) Framework (http://millenniumassessment.org/en/Framework.html and http://www.teebweb.org/publications/teeb-study-reports/foundations/)).

Ecosystem services are key to human well-being, providing food (such as vegetables, fruits), drinking water, wood (eg building materials) and fuel. Regulated ecosystem services are now receiving increasing attention and are of great importance for adapting to climate change. Cultural ecosystem services in diverse and semi-natural landscapes offer high recreational, educational value, inspiration and crafts. In particular, such environmental services are common in the Desnianskyi Biosphere Reserve: well-preserved natural complexes important for a healthy environment for human existence and in particular oxygen supply, scenic conditions for health and recreation (recreational areas, hiking trails, eco-trails), wood for construction housing and as fuel, fish resources for amateur fishermen, wild berries and mushrooms, honey production, grazing and haymaking for large domestic animals.

3.2 Specify if there are any changes regarding the indicators of ecosystem services that are being used to evaluate the three functions (conservation, development and logistic) of the biosphere reserve. If yes, which ones and give details and update.

Due to the increase in the cultivation of honey crops, honey production (transit zone) increased. Strengthening the protection of natural complexes in core areas has led to an increase in hunting animals in the buffer and transit zones, which has increased the potential for hunting.

3.3 Update description on biodiversity involved in the provision of ecosystems services in the biosphere reserve (e.g. species or groups of species involved).

Ecosystem services relate primarily to the exploitation of the values of forests, wetlands (rivers with floodplains, lakes, swamps, ponds and ditches), open lands (meadows, wastelands), urban areas (pastures, gardens, parks, squares). Traditional services remain beekeeping, picking

mushrooms, berries, growing vegetables and fruits, haymaking, fishing, use of wood, hunting (wild boar, roe deer, hare, etc.).

3.4 Specify whether any recent/updated ecosystem services assessment has been done for the biosphere reserve since its nomination/last report. If yes, please specify and indicate if and how this is being used in the management plan.

Every year local authorities collect (evaluate) statistical data on the procurement of wood, honey, berries, etc. by public and private enterprises and the local population. Annually the Desniansko-Starohutskyi National Nature Park also reports the Ministry of Environmental Protection and Natural Resources of Ukraine about the harvesting of timber during reconstruction and sanitary felling, if any, about the funds received from the provision of paid services, including number for recreation.

The assessment of ecosystem services is envisaged during the preparation of the new Project (Management Plan) for the Organization of the Territory of the Desniansko-Starohutskyi National Nature Park, Protection, Reproduction and Recreational Use of its Natural Complexes and Objects. Every year on the basis of this project, scientifically substantiated limits of the use of ecosystem services are determined.

The updated map is provided in paper and electronic form.

4. THE CONSERVATION FUNCTION:

[This refers to programmes that seek to protect biodiversity at landscape and site levels and/or ecological functions that provide ecosystem goods and services in the biosphere reserve. While actions to address this function might be focused on core area(s) and buffer zone(s), ecosystem dynamics occur across a range of spatial and temporal scales throughout the biosphere reserve and beyond.]

4.1 Significant changes (if any) in the main habitat types, ecosystems, species or varieties of traditional or economic importance identified for the biosphere reserve, including natural processes or events, main human impacts, and/or relevant management practices (since the last report).

The core areas of the Desnianskyi Biosphere Reserve consist of large forest areas of the Starohutskyi forest massif, which have many taiga features and where pine forests, as well as meadows and swamps predominate. There are many relict species (for example willows: Lapland, Blueberry, Starke willow). The animal population is typical for Polesie. The vegetation of the Desna floodplains, which are represented in numerous arms and floodplain lakes, is characterized by high diversity and high aesthetic value.

Since the submission of Nomination form in 2008, significant changes in the List of rare species have not occurred. Only in 2009 the third edition of the Red Data Book of Ukraine, which included new species was published. Accordingly, the reserve has increased the number of protected species: flora - 35 and fauna – 97.

At the same time, the number of certain species of hunting animals increased: Sus scrofa (on 22 %), Capreólus capreólus (on 15%), Lepus europaeus (on 17%).

<u>FLORA</u>

<u>Rare species that listed in the Red Data Book of Ukraine:</u>

Diphasiastrum complanatum (L.) Holub, Diphasiastrum zeilleri (Rouy) Holub, Lycopodium annotinum L., Huperzia selago (L.) Bernh. ex Schrank & Mart., Botrychium multifidum (S.G.Gmel.) Rupr., Salvinia natans (L.) All., Pulsatilla patens (L.) Mill. (Pulsatilla latifolia

Rupr.), Pulsatilla pratensis (L.) Mill. , Salix lapponum L., Salix myrtilloides L., Salix starkeana Willd., Jovibarba globifera (L.) J.Parn. (Jovibarba sobolifera (Sims.)Opiz), Aldrovanda vesiculosa L., Utricularia minor L., Trapa natans L., Nymphoides peltata (S.G.Gmel.) O.Kuntze, Pedicularis sceptrum-carolinum L., Cirsium heterophylum (L.) Hill, Lilium martagon L., Iris sibirica L., Dactylorhiza fuchsii (Druce) Soo, Dactylorhiza incarnata (L.) Soo, Dactylorhiza maculata (L.) Soo, Cirsium heteroohyllum (L.), Epipactis helleborine (L.) Crantz, Epipactis palustris (L.) Crantz., Goodyera repens (L.) R.Br., Listera ovata (L.) R.Br., Neottia nidus-avis (L.) Rich., Platanthera bifolia (L.) Rich., Platanthera chlorantha (Cust.) Rchb., Carex brunnescens (Pers.) Poir., Carex globularis L., Carex vaginata Tausch, Sparganium minimum Wallr.

The European Red List:

Silene lithuanica Zapal.

FAUNA

Rare species listed in the Red Data Book of Ukraine:

Hirudo medicinalis, Acherontia atropos, Aglia tau, Anax imperator, Apatura iris, Aromia moschata, Bombus muscorum, Calopteryx virgo, Catocala fraxini, Catocala sponsa, Cucullia argentea, Endromis versicolora, Limenitis populi, Lucanus cervus, Papilio machaon, Pericallia matronula, Staurophora celsia, Xylocopa valga, Xylocopa violaceae, Eudontomyzon mariae, Carassius carassius, Acipenser ruthenus, Alburnoides bipuntatus rossikus (Berg), Phoxinus perenurus, Lota lota, Barbus barbus borysthenicus, Leuciscus leusiscus, Coronella austriaca, Pelecanus onocrotalus, Ciconia nigra, Bucephala clangula, Anser erythropus, Anas strepera, Mergus serrator, Pandion haliaetus, Milvus migrans, Aquila heliaca, Circus cyaneus, Circus macrourus, Circus pugargus, Circaetus gallicus, Hieraaetus pennatus, Aquila clanga, Aquila pomarina, Bubo bubo, Aquila chrysaetos, Haliaetus albicilla, Falco peregrinus, Tetrao urogallus, Tetrastes bonasia, Lyrurus tetrix, Otis tarda, Columba oenas, Coracias garrulus, Dendrocopos leucotos, Gallinago media, Grus grus, Haematopus ostralegus, Tringa stagnatilis, Numenius arquata, Aegolius funereus, Glaucidium passerinum, Asio flammeus, Lanius excubitor, Neomys anomalus, Sicista betulina, Pipistrellus kuhli, Pipistrellus pipistrellus, Pipistrellus nathusii, Nyctalus leisleri, Vespertilio murinus, Myotis brandti, Myotis daubentoni, Pipistrellus pygmaeus, Plecotus auritus, Nyctalus noctula, Eptesicus serotinus, Mustela lutreola, Mustela erminea, Mustela putorius, Lutra lutra, Lynx lynx, Lepus timidus, Allactaga jaculus, Bison bonasus, Ursus arktos, Charadrius hiaticula, Neophron percnopterus, Alces alces, Gymnocephalus acerinus, Sternula albifrons, Picus viridis, Emus hirtus, Osmoderma eremita, Numenius phaeopus, Sicista subtilis, Himantopus himantopus.

The European Red List includes:

Osmoderma eremita, Hirudo medicinalis, Formica polyctena, Formica rufa, Myrmeleon formicarius, Eudontomyzon mariae Berg, Emys orbicularis, Gavia arctica, Anser erythropus, Aythya marila, Milvus migrans, Circus macrourus, Aquila clanga, Neophron percnopterus, Falco vespertinus, Perdix perdix, Otis tarda, Vanellus vanellus, Limosa limosa, Coracias garrulus, Allactaga jaculus, Sicista subtilis, Mustela lutreola, Lutra lutra L., Bison bonasus L.

Endangered species listed in the Annex II of the Bern Convention:

Anguis fragilis, Pelobates fuscus, Bufo viridis, Triturus cristatus, Bombina bombina, Hyla arborea, Rana arvalis, Lacerta agilis, Coronella austriaca, Emys orbidcularis, Gavia arctica, Podiceps ruficollis, Podiceps nigricollis, Podiceps grisegena, Pelecanus onocrotalus, Botaurus stellaris, Ixobrychus minitus, Egretta alba, Ardea purpurea, Ciconia ciconia, Ciconia nigra, Branta leucopsis, Anser erythropus, Cygnus cygnus, Mergus albellus, Pandion haliaetus, Pernis

apivorus, Milvus migrans, Circus cyaneus, Circus macrourus, Circus pygargus, Circus aeruginosus, Accipiter gentilis, Accipiter nisus, Buteo lagopus, Buteo buteo, Circaetus gallicus, Hieraaetus pennatus, Aquila clanga, Aquila pomarina, Aquila heliaca, Aquila chrysaetos, Haliaetus albicilla, Neophron percnopterus, Falco peregrinus, Falco subbuteo, Falco columbarius, Falco vespertinus, Falco tinnunculus, Tetrao urogallus, Grus grus, Porzana porzana, Porzana parva, Crex crex, Otis tarda, Charadrius hiaticula, Charadrius dubius, Arenaria interpres, Tringa ochropus, Tringa glareola, Tringa stagnatilis, Actitis hypoleucos, Xenus cinereus, Calidris alpina, Gallinago media, Larus minutus, Chlidonias niger, Chlidonias leucopterus, Chlidonias hybrida, Sterna hirundo, Sterna albifrons, Bubo bubo, Asio otus, Asio flammeus, Aegolius funereus, Athene noctua, Glaucidium passerinum, Strix aluco, Caprimulgus europaeus, Coracias garrulus, Alcedo atthis, Merops apiaster, Upupa epops, Jynx torquilla, Picus viridis, Picus canus, Dryocopus martius, Dendrocopos major, Dendrocopos syriacus, Dendrocopos medus, Dendrocopos leucotos, Dendrocopos minor, Riparia riparia, Hirundo rustica, Delichon urbica, Eremophila alpestris, Anthus campestris, Anthus trivialis, Anthus pratensis, Motacilla flava, Motacilla citreola, Motacilla alba, Lanius collurio, Lanius minor, Lanius excubitor, Oriolus oriolus, Nucifraga caryocatactes, Bombycilla garrulus, Troglodytes troglodytes, Prunella modularis, Locustella luscinioides, Locustella fluviatilis, Locustella naevia, Acrocephalus schoenobaenus, Acrocephalus palustris, Acrocephalus scirpaceus, Acrocephalus arundinaceus, Hippolais icterina, Sylvia nisoria, Sylvia atricapilla, Sylvia borin, Sylvia communis, Sylvia curruca, Phylloscopus trochilus, Phylloscopus collybita, Phylloscopus sibilatrix, Philoscopus trochiloides, Regulus regulus, Ficedula hypoleuca, Ficedula albicollis, Ficedula parva, Muscicapa striata, Saxicola rubetra, Saxicola torquata, Oenanthe oenanthe, Phoenicurus phoenicurus, Phoenicurus ochruros, Erithacus rubecula, Luscinia luscinia, Luscinia svecica, Remiz pendulinus, Parus palustris, Parus montanus, Parus cristatus, Parus ater, Parus caeruleus, Parus major, Sitta europaea, Certhia familiaris, Serinus serinus, Chloris chloris, Spinus spinus, Carduelis carduelis, Acanthis cannabina, Acanthis flammea, Carpodacus erythrinus, Loxia curvirostra, Coccothraustes coccothraustes, Emberiza calandra, Emberiza citronella, Emberiza schoeniclus, Plectrophaenax nivalis, Myotis daubentoni, Myotis brandti, Plecotus auritus, Nyctalus leisleri, Nyctalus noctula, Pipistrellus nathusii, Pipistrellus kuhlii, Eptesicus serotinus, Vespertilio murinus, Canis lupus, Ursus arctos, Mustela lutreola, Lutra lutra, Sicista betulina. Sicista subtilis, Pipistrellus pygmaeus.

4.2 Describe the main conservation programmes that have been conducted in the biosphere reserve over the past ten years as well as current on-going ones. Note their main goals and the scope of activities, e.g. biotic inventories, species-at-risk, landscape analyses, conservation stewardship actions. Cross reference to other sections below where appropriate.

Within the framework of the Joint Program of the EU and the Council of Europe on the establishment of the Emerald Network in Eastern Europe and the Caucasus (2011-2015) a database of potential sites of the Emerald Network of Ukraine has been developed. In November 2016 at the 36th meeting of the Standing Committee of the Bern Convention (Strasbourg, France) it was granted the official status of the Emerald Network sites of Europe. Desniansko-Starohutskyi National Nature Park with an area of 16223.0 hectares has received registration under # UA0000031, and Smiatsko-Znobivskyi with an area of 54273.00 hectares - # UA0000062.

There was participated in the implementation of the Work Program for 2017-2021 "Study of ichthyofauna of freshwater reservoirs of Ukraine to determine the technological properties of raw materials from aquatic bioresources to develop recommendations for their integrated processing, technology of innovative foods, promotion of domestic products based on aquatic organisms".

As part of the Program of the Annals of Nature for Reserves and National Nature Parks (2002), some measures were taken to preserve rare and endangered species of animals and plants.

The Desniansko-Starohutskyi National Nature Park was involved in compiling the Ecological Passport of the Sumy Region and the Report on the State of the Environment in the Sumy Region annually in accordance with the Procedure of interaction of the Environmental Ministry of Ukraine with regional state administrations for environmental protection.

4.3 In what ways are conservation activities linked to, or integrated with, sustainable development issues (e.g. stewardship for conservation on private lands used for other purposes)?

The Desniansko-Starohutskyi National Nature Park in cooperation with local communities, village councils (currently united territorial communities are formed on their basis) and the involvement of local police supervised and monitored compliance with nature protection legislation in the Desnianskyi Biosphere Reserve.

4.4 How do you assess the effectiveness of actions or strategies applied?
(Describe the methods, indicators used).

The implementation of strategies / programs / action plans for biodiversity conservation was positively evaluated. is assessed positively.

According to the results of scientific research conducted on the territory of the Desnianskyi Biosphere Reserve 3 monographs, 1 textbook and more than 140 scientific publications were published, 2 candidate and 3 doctoral dissertations were defended. The herbarium is preserved, a large number of ecological-educational and recreational events are held every year, and annually, starting from 2002, the ecological camp "Desnianski Zori" of biological direction is held. Bird migration and ornithological schools are being monitored on the territory of the Desna Flood wetland.

The Desnianskyi Biosphere Reserve includes two areas important for birds (IBA - Important Bird Areas), Prydesnianska (mostly wetland) and Starohutska (mostly forest). Both were identified as IBA due to the presence in these areas of several dozen pairs of *Crex crex*.

4.5 What are the main factors that influenced (positively or negatively) the successes of conservation efforts in the entire biosphere reserve? Given the experiences and lessons learned in the past ten years, what new strategies or approaches will be imost effective for conservation for sustainable development?

The activities were carried out on the territory of the Desnianskyi Biosphere Reserve: investigations, trainings on habitat identification and mapping, audits of tourist shelters, bicycle races with simultaneous inspection of protected areas, etc., which had positive impacts on the preservation of biodiversity of the Desnianskyi Biosphere Reserve and dissemination of knowledge about the reserve. The opening of the visit center of the Desnianskyi Biosphere Reserve was due to the implementation of invaluable experience gained in working with partners from the eco-club "Zelena Khvylia" (Green Wave), non-profit partnership "Birds and People", Michael Zukkov Foundation, Ukrainian Society for Bird Protection, participation in a series of trainings study trips to Germany.

The landscape reserve (zakaznyk) of national importance “Muravyivskyi” was created to optimize the conservation of the Desna floodplains.

Factors that negatively affected environmental activities were: increasing the level of anthropogenic pressure (human impacts) on ecosystems, the factor of disturbance of some fauna

species, the risk of extinction or dangerous decline in some species of plants (vulnerable, beautiful, medicinal etc.), increased riskof forest fires, increasing the level of environmental pollution as a resul

4.6 Other comments/observations from a biosphere reserve perspective.

New projects for restoration of the Desna River floodplains are needed.

5. THE DEVELOPMENT FUNCTION:

[This refers to programmes that address sustainability issues at the individual livelihood and community levels, including economic trends in different sectors that drive the need to innovate and/or adapt, the main adaptive strategies being implemented within the biosphere reserve, and initiatives to develop certain sectors such as tourism to complement and/or compensate for losses in other markets, employment, and community well-being over the past ten years]

5.1 Briefly describe the prevailing trends over the past decade in each main sector of the economic base of the biosphere reserve (e.g. agriculture and forest activities, renewable resources, non-renewable resources, manufacturing and construction, tourism and other service industries).

In the transition zone, forestry enterprises provide the population with fuel, process wood and manufacture wood products, except furniture. Traditional agriculture and trade remain as priority. Livestock, mainly dairy, in the biosphere reserve is engaged in the local population. Feeding of young animals for meat, beekeeping is practiced. Grazing of cattle and poultry, haymaking are carring out not intensively. Mushrooms and berries are collected for own needs and for sale in the markets.

To create quality conditions for recreation, the conditions for vacationers are improving every year. There are no long-term recreation facilities on the territory of the biosphere reserve. On the banks of the Desna River there are recreation centers "Desnianka", "Borovychanka", tent camps, equipped rooms in the visitor center of the Desnianskyi Biosphere Reserve and modernly equipped rooms in the office of the Starohutskyi Nature Protection Research Department. For short-term rest in the summer it is possible to accept 80 vacationers at a time, in winter 50 vacationers.

There are 2 children's summer camps in Novgorod-Siverskyi and Seredyno-Budskyi Districts for the rehabilitation of school-age children, which take up to 150 children at a time.

For such types of short-term recreation as amateur fishing, swimming, the coastal areas of the Desna River, floodplain (old) lakes are used, and the Starohutska part and the forests of the pine terrace are used to collect mushrooms and berries. The vast majority of short-term vacationers are residents of the biosphere reserve. Also there exist the practice of setting up tents in undeveloped areas, arrival by private vehicles.

Mining is not carried out on the territory of the biosphere reserve. There are no industrial enterprises.

Hunting is carried out outside the core areas, on the adjacent hunting grounds.

5.2 Describe the tourism industry in the biosphere reserve. Has tourism increased or decreased since nomination or the last periodic review? What new projects or initiatives have been undertaken? What types of tourism activities? What effect have these activities had on the economy, ecology and society of the biosphere reserve? Are there any studies that examine

whether designation of the area as a biosphere reserve has influenced the number of tourists? Please provide the bibliographic information of any studies and/or a paper copy in an annex.

Departments at district state administrations and united territorial communities, Desniansko-Starohutskyi National Nature Park, tourist companies organize tourist activities on the territory of the Desnianskyi Biosphere Reserve.

The whole area has excellent conditions for recreation. It should be noted that the quality of recreational resources has not decreased. The following types of tourism are developed: recreational fishing; recreational picking of mushrooms and berries; educational ecological tourism (use of ecological trails, practice of conducting ecological summer camps); scientific tourism (observation of animals in nature). There are 8 tourist trails on the territory of Desnianskyi Biosphere Reserve.

The placement of information about recreation on the territory of the biosphere reserve in newspapers, on Internet sites, exhibitions and festivals have slightly increased the flow of tourists. The main reason so far is bad roads and lack of transport links.

The implementation of the project "Study of Bird Migrations in Transboundary Wetlands in the Middle Reaches of the Desna River" was the beginning of the development of ornithological tourism and ornithological schools for children. One of the largest bird migration routes in Europe there is along the Desna River. The place for registration is chosen not far from the tourist base "Borovychanka" and is equipped with a special tower to which everyone is invited.

The existing network of institutions and enterprises of cultural and household purposes is represented by many types of necessary services, but their territorial distribution is extremely uneven. The funding of existing cultural and household institutions in the Seredyno-Buda District of the Sumy Region is in good condition, and the Novgorod-Siverskyi District of the Chernihiv Region is more developed: historical monuments, museums, hotels, restaurants, a chain of shops.

The Baha-1000 and Partizan-trophy-2011 races in 2011-2012 also contributed to the popularization of the Desnianskyi Biosphere Reserve and the Desniansko-Starohutskyi National Nature Park, attracting attention not only to the residents of Ukraine, but also to foreigners.

5.3 When applicable, describe other key sectors and uses such as agriculture, fishing, forestry. Have they increased or decreased since the nomination or the last periodic review? What kind of new projects or initiatives have been undertaken? What effect have they had on the economy and ecology of the biosphere reserve, and on its biodiversity? Are there any studies that examine whether designation as a biosphere reserve has influenced the frequency of its activities? If so, provide the bibliographic information of these studies and/or a paper copy in an annex.

No significant changes in key sectors and uses occurred.

From 2018 felling of all trees in separate forest areas in forests requires environmental impact assessment in accordance with the Law of Ukraine “On Environmental Impact Assessment” (2017), ie forest management becomes safer to preserve the biodiversity of forest ecosystems.

5.4 How do economic activities in the biosphere benefit local communities?

The locals receive incomes from the collection of mushrooms, berries, medicinal plants, as well as the cultivation of fruits and vegetables. There is trade in meat and dairy products, providing services to tourists, providing the population with fuel and construction timber.

5.5 How do you assess the effectiveness of actions or strategies applied?
(Describe the methods, indicators).

Since the nomination it has been improved quality of life local communities and services quality to visitors. Assessment in details was not implemented.

5.6 Community economic development initiatives. What programmes exist to promote comprehensive strategies for economic innovation, change, and adaptation within the biosphere reserve, and to what extent are they implemented?

Rural development is ensured through the implementation of the State Strategy for Regional Development until 2020, approved by the Cabinet of Ministers of Ukraine dated August 6, 2014 No.385, through decentralization of state powers by transferring them to the local level while transferring appropriate financial resources. Administrative reform has also been launched to form united territorial communities, followed by next reduction in the number of administrative districts in the oblasts.

Programs of economic and social development of districts are developed to ensure joint actions of executive authorities and local governments to create conditions for sustainable economic development through capacity building and modernization of basic industries, increase the efficiency of the agro-industrial complex, support small and medium business, ensure effective employment policies, and on their basis - raising living standards.

During the existence of the Desnianskyi Biosphere Reserve local budget programs were implemented: promoting the development of small and medium enterprises; providing long-term loans to individual housing developers in rural areas; measures to prevent and eliminate emergencies and the consequences of natural disasters; implementation of investment projects; ensuring the activities of palaces and houses of culture, clubs, leisure centers and other club facilities; environmental protection; tourism development.

5.7 Local business or other economic development initiatives. Are there specific “green” alternatives being undertaken to address sustainability issues? What relationships (if any) are there among these different activities?

In the Desnianskyi Biosphere Reserve there are no large industrial or commercial organizations. It is basically a small trade and service establishments. However, the owners have become more careful with wood, which has recently risen significantly in price. In particular, in the town of Seredyno-Buda the conditions for storage of fuel wood (shelter of warehouses and sheds for storage) have been significantly improved. Much more efficient boilers have been used for space heating, and sawdust is more often used as fuel.

The state enterprise "Seredyno-Budske Forestry" has successfully passed the certification "FSC", where all the conditions are met, including on the implementation of environmental measures.

5.8 Describe the main changes (if there are any) in terms of cultural values (religious, historical, political, social, ethnological) and others, if possible with distinction between material and intangible heritage.
(c.f. UNESCO Convention concerning the Protection of the World Cultural and Natural Heritage 1972 and UNESCO Convention for the Safeguard of the Intangible Cultural Heritage 2003 (http://portal.unesco.org/en/ev.php-URL_ID=13055&URL_DO=DO_TOPIC&URL_SECTION=201.html and http://portal.unesco.org/en/ev.php-URL_ID=17716&URL_DO=DO_TOPIC&URL_SECTION=201.html)).

There weres no changes in cultural values.

5.9 Community support facilities and services. What programmes in/for the biosphere reserve address issues such as job preparation and skills training, health and social services, and social justice questions. What are the relationships among them and with community economic development?

The biosphere reserve provides advices and support to local people in the development issue of tourism, services to visitors, etc.

5.10 What indicators are in place to assess the effectiveness of activities aiming to foster sustainable development? What have these indicators shown?

According to land lease agreements, owners of land shares (units) and land plots receive up to UAH 70.0 million annually per year. Amount of rent under the agreements increased by an average of 1.3%.

Agrarian enterprises that lease land in the districts invest up to UAH 3.1 million in the development of territorial communities.

Production of crop products increased by UAH 2.8 million (1.1%).

Revenues from the activities of small businesses to the local budget increased by 26.3%.

There have been positive developments in food production, for example, in the Novgorod-Siverskyi District - PJSC "Meat and Dairy Complex "Siverskyi"has increased the production of canned meat almost 2 times compared to previous years.

To ensure the organization of free transportation to places of study and home of students and teachers of secondary schools in rural areas in the districts there is a program "School Bus".

By types of economic activity, enterprises in the field of trade, agriculture and forestry traditionally predominate.

The average annual salary is constantly rising, but remains low compared to EU countries.

5.11 What are the main factors that influenced (positively or negatively) the success of development efforts in the entire biosphere reserve? Given the experiences and lessons learned in the past ten years, what new strategies or approaches will be most effective?

Revival of agricultural production, the resumption of use of almost all arable lands became a positive factor in the last 3-4 years.

Among the negative factors are low pensions of local residents and low salaries in the public sector, very poor condition of road infrastructure, which significantly hinders socio-economic development, including tourism.

6. THE LOGISTIC FUNCTION:

[This refers to programs that enhance the capacity of people and organizations in the biosphere reserve to address both conservation and development issues for sustainable development as well as research, monitoring, demonstration projects and education needed to deal with the specific context and conditions of the biosphere reserve.]

6.1 Describe the main institutions conducting research or monitoring in the biosphere reserve, and their programmes. Comment on organizational changes (if any) in these institutions over the past ten years as they relate to their work in the biosphere reserve.

The main logistics institution of the Desnianskyi Biosphere Reserve, which is engaged in research, environmental, educational and recreational activities, training, communications, etc.,

is the Desniansko-Starohutskyi National Nature Park. The park conducts research in the framework of the Program of the Chronicle of Nature for Reserves and National Nature Parks in the following areas:

abiotic researches (with the help of the nearest to the biosphere reserve meteorological station Khutir-Mykhailivskyi);

biotic investigations: completed inventory of vascular plants, mosses, vertebrates, created databases, constantly monitoring the migration of birds in the floodplains of the Desna River, accounting for mammals, blackbirds, phenological observations, studying the restoration of trees and the status of animal populations in habitats and plants.

Such institutes are involved in biotic investigations:

Institute of Zoology named Ivan Schmalhauzen of the National Academy of Sciences of Ukraine (ecological monitoring of background and rare groups: evolutionary-genetic taxonomy of fish, study of birds of prey, small mammals, reptiles, amphibians, it is planned to complete the inventory of entomofauna);

Institute of Botany named Mykola Kholodnyi of the National Academy of Sciences of Ukraine (completed inventory of macromycetes, algae, lichenoflora, higher vascular plants, mosses, lichens).

Universities (higher educational institutions) of cities: Sumy, Chernihiv, Nizhyn, Glukhiv, Kyiv, Kherson, and Rivne are involved in researches.

6.2 Summarize the main themes of research and monitoring undertaken over the past ten years and the area(s) in which they were undertaken in order to address specific questions related to biosphere reserve management and for the implementation of the management plan (please refer to variables in Annex I).

(For each specific topic provide reference citations. Provide the full citations alphabetically by lead author at the end of Section 6 or in a separate annex).

Abiotic research and monitoring:

Climate

Hydrology

Relief

Anthropogenic factors (human impacts) influencing biodiversity and ecosystems: agriculture, forestry, recreation, poaching, etc.)

Biotic research and monitoring:

Flora and vegetation

Fauna

Habitats

Monitoring of conservation of plant and animal species, habitats listed in the Red Data Book of Ukraine and international Red lists

Monitoring of IBA territories

Definition and formation of the database of sites of the Emerald Network of Europe “Desniansko-Starohutskyi National Nature Park” and “Smiatsko-Znobivskyi”

Socio-economic research:

Forest management organization and development projects

Development of forestry, agriculture

The full citations see in Annex III.

6.3 Describe how traditional and local knowledge and knowledge from relating to management practices have been collected, synthesized and disseminated. Explain how such knowledge is being applied to new management practices, and how and if it has been integrated into training and educational programmes.

The Desniansko-Starohutskyi National Nature Park collects information on research results and activities in the park and the Desnianskyi Biosphere Reserve in the Chronicle of Nature, which is printed annually as a book and is available in the park administration. The most interesting information is posted on the park's website and in the media. Information is also collected and disseminated among stakeholders on individual inquiries, during forums, working meetings, workshops and more.

In the work of the Desniansko-Starohutskyi National Nature Park there are several key areas of activities of scientists who acted as instructors for students and teachers. Together, they conducted tours and observations, which were stages of collecting materials for dissertations and part of more in-depth research on specific topics in the institutions where everyone worked. All this work was executed during the organization and helding environmental camps. Since 2002, young students have been involved in environmental monitoring. Several approaches to the organization and conduct of environmental camps have been developed. They are essentially biological schools, where students and teachers learn the practical basics of research. In the structure of the program of ecological camps most of the time is devoted to educational and practical work in the field. The main instructor in such work is a biologist. Teachers and students learn and immediately try to do as much as possible on their own. In the future, the collected material is used to prepare research projects for competitions in the system of the Ministry of Education and Science of Ukraine. Based on the results, textbooks were published, approved by the Ministry of Education and recommended for secondary and higher education institutions.

6.4 Environmental/sustainability education. Which are the main educational institutions (“formal” – schools, colleges, universities, and “informal” services for the general public) that are active in the biosphere reserve? Describe their programmes, including special school or adult education programmes, as these contribute towards the functions of the biosphere reserve. Comment on organizational changes (if any) in institutions and programmes that were identified in the biosphere reserve ten or so years ago (e.g. closed down, redesigned, new initiatives). Refer to programmes and initiatives of UNESCO Associated Schools networks, UNESCO Chairs and Centers where applicable.

The Desniansko-Starohutskyi National Nature Park has a special department, the functions of which include the study of existing experience, the development of suitable for the region environmental education programs and their implementation. Every year the park prepares a plan for environmental education and a report on the work done, which are approved by the scientific and technical council of the institution and submitted to the Ministry of Environmental Protection and Natural Resources of Ukraine.

Ecological and educational activities of the park include:

holding annual spring actions "March of Parks" for schoolchildren, as well as other categories of the population;

conducting ecological evenings, quizzes, practical classes and weeks of ecological knowledge for schoolchildren of different ages;

organization of annual summer camps for middle and high school students;

conducting ecological excursions for locals and park visitors;

holding thematic exhibitions for locals and park visitors;

conducting specialized environmental actions for schoolchildren of different ages aimed at protecting specific species of animals and plants;

organization of actions among schoolchildren on the manufacture and hanging of artificial nests for birds and bats;

conducting work among schoolchildren and youth of the district to study the history and traditions of the region;

participation in seminars of workers and heads of education of the Seredyno-Buda District and the Sumy Region and the Novgorod-Siverskyi District of the Chernihiv Region;

providing methodological assistance to kindergartens in the area, promoting their adoption of environmental direction in educational work;

regular environmental publications in the local and regional press and on the Internet.

On the basis of the Desnianskyi Biosphere Reserve for today operate the following units:

The Unit of Environmental Education and International Relations;

The Center for Environmental Education and Recreation (visit center);

educational ecological routes for locals and park visitors;

museum of nature;

libraries and video library.

6.5 How do you assess the effectiveness of actions or strategies applied?
(Describe the methods, indicators).

6.5.1 Describe the biosphere reserve's main internal and external communication mechanisms/systems

The main communication mechanism is web site http://www.nppds.inf.ua/, e-mail nppdesstar@gmail.com, Facebook: https://www.facebook.com/nppds.buda/ (all in Ukrainian)

6.5.2 Is there a biosphere reserve website? If so, provide the link.

http://www.nppds.inf.ua/

6.5.3 Is there an electronic newsletter? How often is it published? (provide the link, if applicable).

See: http://www.nppds.inf.ua/ and https://www.facebook.com/nppds.buda/

6.5.4 Does the biosphere reserve belong to a social network (Facebook, Twitter, etc.)? Provide the contact.

https://www.facebook.com/nppds.buda/

6.5.5 Are there any other internal communication systems? If so, describe them.

No.

6.6 Describe how the biosphere reserve currently contributes to the World Network of Biosphere Reserves and/or could do so in the future.

Prior to the Russian aggression in 2014, the Desniansky Biosphere Reserve closely cooperated with the Russian Nerusso-Desnianskoe Polesie Biosphere Reserve in almost all areas of activity (according to the three functions of biosphere reserves), had close contacts both at the level of environmental institutions and local authorities government and self-government, economic institutions, including the creation of a joint transboundary biosphere reserve.

Today, Dr. Serhii Panchenko, a researcher at the Desniansko-Starohutsky National Nature Park, is actively involved in the creation of the Pripyat Polesie as a transboundary Ukrainian-Belarusian biosphere reserve.

6.6.1 Describe any collaboration with existing biosphere reserves at national, regional, and international levels, also within regional and bilateral agreements.

The Desniansky Biosphere Reserve participated in joint conferences and exchanges of experience with the Carpathian Biosphere Reserve (Ukraine), the trilateral Biosphere Reserve “East Carpathians” (Ukraine), the Schorfheide-Chorin Biosphere Reserve and the South-East Rügen Biosphere Reserve (Gemany).

6.6.2 What are the current and expected benefits of international cooperation for the biosphere reserve?

International cooperation comprehensively resolves the joint ecological problems, raise level of environmental education and promote public awareness, introduce the green tourism, promote the conservation of cultural heritage, socio-economic development.

6.6.3 How do you intend to contribute to the World Network of Biosphere Reserves in the future and to the Regional and Thematic Networks?

Further preserving the environment, promoting sustainable development, research and monitoring, conducting educational programs and cooperation with other biosphere reserves.

6.7 What are the main factors that influenced (positively or negatively) the success of activities contributing to the logistic support function? Given the experiences and lessons learned in the past ten years, what new strategies or approaches will be favored as being most effective?

Payment of the land tax to the local budget from the Desniansko-Starohutskyi National Nature Park has had a positive impact on the development of local communities, the emergence of additional jobs, involvement of local residents in the tourism business, promotes a positive attitude to society, nature involvement in the world experience. areas of solving problems of nature protection and development of the recreational industry, creating conditions for sustainable development of the territory.

Negative factors in the field of logistics: limited use of stakeholders by the Internet and social networks. Poor road infrastructure limits direct contact between stakeholders and their involvement.

6.8 Other comments/observations from a biosphere reserve perspective.

The Mikhael Zukkov Foundation and the Center for Economics and Ecosystem Management at the Eberswalde University for Sustainable Development have joined forces by proposing a project "Ecosystem Adaptation to Climate Change and Sustainable Regional Development through Capacity Building of Ukrainian Biosphere Reserves", which would benefit

three Ukrainian biosphere reserves: Desnianskyi BR, Roztocze BR and Shatskyi BR (part of the transboundary (Ukraine-Belarus-Poland) biosphere reserve "West Polesie"). The project aims to integrate an ecosystem adaptation approach to national and regional planning and measures leading to better adapted land use and large-scale sustainable development.

7. GOVERNANCE, BIOSPHERE RESERVE MANAGEMENT AND COORDINATION:

[Biosphere reserve coordination/management coordinators/managers have to work within extensive overlays of government bodies, business enterprises, and a "civil society" mix of non-governmental organizations and community groups. These collectively constitute the structures of governance for the area of the biosphere reserve. Success in carrying out the functions of a biosphere reserve can be crucially dependent upon the collaborative arrangements that evolve with these organizations and actors. Key roles for those responsible for the biosphere reserve coordination/management are to learn about the governance system they must work within and to explore ways to enhance its collective capacities for fulfilling the functions of the biosphere reserve.]

7.1 What are the technical and logistical resources for the coordination of the biosphere reserve?

The main coordinating role is played by the Desniansko-Starohutskyi National Nature Park, which is provided with administrative buildings, transport and communications. There are visit centers of the Desnianskyi Biosphere Reserve in town Seredyna-Buda (Sumy Region) and Novgorod-Siverskyi (Chernihiv Region).

7.2 What is the overall framework for governance in the area of the biosphere reserve? Identify the main components and their contributions to the biosphere reserve.

The Desnianskyi Biosphere Reserve is overseen by its Coordinating Council. The general coordinating body is the Desniansko-Starohutskyi National Nature Park, which reports to the Ministry of Environmental Protection and Natural Resources of Ukraine, and the public organization (NGO) Desnianski Zori in cooperation with local authorities.

7.3 Describe social impact assessments or similar tools and guidelines used to support indigenous and local rights and cultural initiatives (e.g. CBD Akwé:Kon guidelines, Free, Prior, and Informed Consent Programme/policy, access and benefit sharing institutional arrangements, etc.).

No applicable.

7.4 What (if any) are the main conflicts relating to the biosphere reserve and what solutions have been implemented?

No conflicts occurred.

7.4.1 Describe the main conflicts regarding access to, or the use of, resources in the area and the relevant timeframe. If the biosphere reserve has contributed to preventing or resolving some of these conflicts, explain what has been resolved or prevented, and how this was achieved for each zone?

The new laws of Ukraine on the implementation of the Association Agreement between Ukraine and the European Union: on environmental impact assessment, strategic environmental assessment, etc., are difficult for individual farmers to accept, but they are being implemented.

The ban on hunting in the economic zone of the Desniansko-Starohutskyi National Nature Park had a certain negative effects, as a result the controlled hunting farm "Seredyno-Budske" lost the right to conduct forestry in the village councils in the Sumy Region, where the Desnianskyi Biosphere Reserve is located. Instead, in the Sumy Region 3 hunting farms are

created and function. Thus, it has become more difficult to implement environmental measures in the transit zone where these farms operate.

7.4.2 Describe any conflicts in competence among the different administrative authorities involved in the management of the area comprising the biosphere reserve.

No conflicts occurred.

7.4.3 Explain the means used to resolve these conflicts, and their effectiveness. Describe its composition and functioning, resolution on a case-by-case basis. Are there local mediators; if so, are they approved by the biosphere reserve or by another authority?

No applicable.

7.5 Updated information about the representation and consultation of local communities and their participation in the life of the biosphere reserve:

7.5.1 Describe how local people (including women and indigenous people) are represented in the planning and management of the biosphere reserve (e.g., assembly of representatives, consultation of associations, women's groups).

Majority of members of the Coordination Council of the Desnianskyi Biosphere Reserve and the staff of the Desniansko-Starohutskyi Natiional Nature Park are local people.

See section 2.4.3 above too.

7.5.2 What form does this representation take: companies, associations, environmental associations, trade unions (list the various groups)?

Today, united territorial communities are being formed, which should become the basic link and financial manager of local authorities. In addition, public organizations are created and developed, and trade unions operate at enterprises, as well as at the Desniansko-Starohutskyi National Nature Park.

7.5.3 Indicate whether there are procedures for integrating the representative body of local communities (e.g., financial, election of representatives, traditional authorities).

Special procedures are absent. Represenatives of the the Coordination Council of the Desnianskyi Biosphere Reserve and the Desniansko-Starohutskyi Natiional Nature Park are deputies of local councils and take part in the planning activities in the region.

7.5.4 How long-lived is the consultation mechanism (e.g., permanent assembly, consultation on specific projects)?

As needed.

7.5.5 What is the impact of this consultation on the decision-making process (decisional, consultative or merely to inform the population)?

Consultative.

7.5.6 At which step in the existence of a biosphere reserve is the population involved: creation of the biosphere reserve, drawing up of the management plan, implementation of the plan, day to day management of the biosphere reserve? Give some practical examples.

The local population in one way or another (primarily through local authorities and public organizations) is involved in all stages of the establishment and operation of the Desnianskyi Biosphere Reserve. Their representatives are members of the Coordinating Council of the reserve and accordingly participate in the planning of activities and organization of activities.

Many pupils and teachers of local schools took part in the annual eco-camp "Desnyanski Zori", the results of research in which (in particular, a survey of the local population) are taken into account in the management of the reserve.

7.6 Update on management and coordination structure:

7.6.1 Describe any changes regarding administrative authorities that have competence for each zone of the biosphere reserve (core area(s), buffer zone(s) and transition area(s))? If there are any changes since the nomination form/last periodic review report, please submit the original endorsements for each area.

Ukraine is currently undergoing administrative reform, so some of the village councils that approved the Desnianskyi Biosphere Reserve have merged into united territorial communities with certain powers to use land and natural resources outside the settlements. This has a positive effect on meetings, conferences, action plans, finding common solutions, and so on.

7.6.2 Update information about the manager(s)/coordinator(s) of the biosphere reserve including designation procedures.

The main coordinating role in the Desnianskyi Biosphere Reserve is played by the Desniansko-Starohutskyi National Nature Park under the leadership of its director Mr. Serhii Kubrakov in cooperation with local authorities and self-government.

7.6.3 Are there any changes with regard to the coordination structure of the biosphere reserve? (if yes, describe in details its functioning, composition and the relative proportion of each group in this structure, its role and competence.). Is this coordination structure autonomous or is it under the authority of local or central government, or of the manager of the biosphere reserve?).

The structure of the Coordinating Council of the Desnianskyi Biosphere Reserve (by positions) has not changed in principle during the reporting period, the changes will be carried out after the implementation of administrative reform with the creation of united territorial communities.

7.6.4 How has the management/coordination been adapted to the local situation?

The management of the Desnianskyi Biosphere Reserve has been adapted to the local situation by including new representatives of local authorities and self-government.

7.6.5 Was the effectiveness of the management/coordination evaluated? If yes, was it according to a procedure?

The effectiveness of the management / coordination of activities in the Desnianskyi Biosphere Reserve has not been directly evaluated, but is taken into account or reflected in the annual plans and reports.

7.7 Update on the management/cooperation plan/policy:

7.7.1 Are there any changes with regard to the management/cooperation plan/policy and the stakeholders involved? If yes, provide detailed information on process for involvement of stakeholders, adoption and revision of the plan.

Oriented Management Plan of the Desnianskyi Biosphere Reserve has been revised (see Annex II): plan title was changed to “Framework Management Plan”, actualization of implementation of a number of measures was noted, II.5.4, II.5.5, III.2.1, III.2.2, IV.3.2, IV.3.3, IV.3.4, V.1.3, V.1.4), measure III.1.1 on monitoring of biodiversity and economic use has been

editorially changed, a new section “Consideration of programs / strategies, plans and recommendations in the activities of the biosphere reserve” has been added. , developed in the framework of MAB UNESCO program, etc.

It is planned to develop a new Project (Management Plan) for the Organization of the Territory of the Desniansko-Starohutskyi National Nature Park, Protection, Reproduction and Recreational Use of its Natural Complexes and Objects for the next 10 years (2023-2032), which will include measures for territory of the Desnianskyi Biosphere Reserve as a whole.

7.7.2 Describe contents of the management/cooperation plan (provide some examples of measures and guidelines). Is the plan binding? Is it based on consensus?

The Project (Management Plan) for the Organization of the Territory of the Desniansko-Starohutskyi National Nature Park, Protection, Reproduction and Recreational Use of its Natural Complexes and Objects (2012) includes:

ensuring coordination and efficiency of actions on the territory of the Desnianskyi Biosphere Reserve;

ensuring proper working conditions for the staff of the Desniansko-Starohutskyi National Nature Park;

creation of a database on biodiversity, use of natural resources, monitoring of the environment on the territory of the reserve and in its vicinity;

ensuring the appropriate level of professional and technical qualifications of staff;

raising awareness on biodiversity conservation and sustainable socio-economic development;

legal support for the protection and sustainable use of biodiversity in the Desnianskyi Biosphere Reserve and in the Left Bank Polissya as a whole;

study of fauna, flora and vegetation within the Reserve;

large-scale monitoring of social and economic factors affecting the environment, condition and level of use of natural resources;

improving the management and detailing of the zoning of the Desnianskyi Biosphere Reserve;

development of a general land use policy and detailed regulatory mechanisms and main directions of management of each individual plot;

restoration of degraded ecosystems;

optimization of recreational and tourist activities;

promoting sustainable socio-economic development;

monitoring of socio-economic changes;

raising public awareness in the field of biodiversity conservation and sustainable development of the reserve.

7.7.3 Describe the role of the authorities in charge of the implementation of the plan. Describe institutional changes since the nomination form/last periodic review report. Please provide evidence of the role of these authorities.

The administration of the Desniansko-Starohutskyi National Nature Park was responsible for the implementation of the plan with the support of the Novgorod-Siverskyi District State Administration (Chernihiv Region) and Seredyno-Buda District State Administration (Sumy Region), the Znob-Novgorod United Territorial Community (Seredyno-Buda District of the Sumy Region). The park administration organizes the work of the Coordinating Council of the Desnianskyi Biosphere Reserve, which is attended by representatives of local authorities and self-government, enterprises and public organizations. Representatives of the park administration are regularly invited to meetings of representatives of local authorities and self-government.

7.7.4 Indicate how the management plan addresses the objectives of the biosphere reserve.

The Framework (Oriented) Management Plan of the Desnianskyi Biosphere Reserve is based on the indicators of the Seville Strategy for Biosphere Reserves.

The main goals of the Oriented Management Plan of the reserve are:

to ensure protection and conservation of typical and the most valuable natural complexes of the region;

to ensure rationale use of natural resources;

to ensure coordination of activities in the region;

to increase a level of public environmental knowledge and awareness;

to promote sustainable development of the region.

Close ties are maintained with local and central executive authorities, partner organizations of Ukraine and foreign countries in the direction of sustainable development of the territory.

7.7.5 What are the progresses with regard to the guidelines of the management/cooperation plan/policy?

The reserve is a participant in the implementation of the Plan of Measures for the Implementation in Ukraine of the Lima Action Plan for UNESCO's Man and the Biosphere Program and its World Network of Biosphere Reserves, approved by a joint order of the Ministry of Ecology and Natural Resources of Ukraine and the National Academy of Sciences of Ukraine from 04.07.2018 No. 303/243.

Close ties are maintained with local and central executive authorities, partner organizations of Ukraine and foreign countries in the direction of sustainable development of the territory.

7.7.6 Were there any factors and/or changes that impeded or helped with the implementation of the management/coordination plan/policy? (Reluctance of local people, conflicts between different levels of decision-making).

There were no conflicts, but some decisions took time. Thus, the local population was caused by a legislative ban on continuous felling of trees in some areas in the economic zone of

the Dusniansko-Starohutskyi National Nature Park and the adoption of the Law of Ukraine "On Environmental Impact Assessment" (2018).

7.7.7 If applicable, how is the biosphere integrated in regional/national strategies? Vice versa, how are the local/municipal plans integrated in the planning of the biosphere reserve?
(Please provide detailed information if there are any changes since the nomination form/last periodic review report).

The Desnianskyi Biosphere Reserve takes part in the implementation of the Plan of Measures for the Implementation in Ukraine of the Lima Action Plan for UNESCO's Man and the Biosphere Program and its World Network of Biosphere Reserves, approved by a joint order of the Ministry of Ecology and Natural Resources of Ukraine and the National Academy of Sciences of Ukraine from 04.07.2018 No. 303/243.

Municipal plans were developed taking into account the fact that the territories of local communities and village councils were within the boundaries of the Desnianskyi Biosphere Reserve.

8. CRITERIA AND PROGRESS MADE:

[Conclude by highlighting the major changes, achievements, and progress made in your biosphere reserve since nomination or the last periodic review. How does your biosphere reserve fulfill the criteria. Develop justification for the site to be a biosphere reserve and rationale for the zonation. What is lacking, and how could it be improved? What can your biosphere reserve share with others on how to implement sustainable development into practice?]

Brief justification of the way in which the biosphere reserve fulfills each criteria of article 4 of the Statutory Framework of the World Network of Biosphere Reserves:

1. "Encompass a mosaic of ecological systems representative of major biogeographic region(s), including a gradation of human interventions".

(The term "major biogeographic region" is not strictly defined but it would be useful to refer to the Udvardy classification system (http://www.unep-wcmc.org/udvardys-biogeographical-provinces-1975_745.html).

The Desnianskyi Biosphere Reserve is located within the basin of the Desna River, one of the largest tributaries of the Dnipro, represents the Biome of Deciduous Forests of the Temperate Zone of the Central European Province according to the Classification of Biogeographical Provinces of the World of M. Udwardy (1975) and the Continental biogeographical region on the map of the Emerald Network of Europe.

In accordance with the geobotanical zoning of Ukraine (1977): Mixed Forests Zone of the South-West of the Eastern European Plain: European Deciduous Forest Region: Polesie Subprovince: East Polesie (Novgorod-Siversky) District: Shostka District.

Human impacts vary from absolute conservation, protection and reproduction of ecosystems for sustainable use of recreational resources, forestry and agriculture.

2. “Be of Significance for biological diversity conservation”.

The list of flora of higher vascular plants in the Desnianskyi Biosphere Reserve includes 876 species, of which 35 species are listed in the Red Data Book of Ukraine. 146 species of lichens, 675 species of fungi and fungal organisms were found.

The vertebrate fauna is 348 species, of which 97 species are listed in the Red Data Book of Ukraine. The avifauna includes 231 species belonging to 18 orders and 50 families (42 species in the Red Data Book of Ukraine).

The list of invertebrates was supplemented by 92 species that were not previously registered and is 1627 species.

Of the animals, 22 species are listed in the IUCN Red List, and 178 species are listed in Annex II of the Bern Convention.

The European Red List includes 24 species.

In the Desnianskyi Biosphere Reserve there are occured endangered natural habitat types from Revised Annex I to Resolution 4 (1996) of the Bern Convention on endangered natural habitat types using the EUNIS habitat classification (Adopted by the Standing Committee on 5 December 2014)

EUNIS code	EUNIS name
C	Inland surface waters
C1.222	Floating Hydrocharis morsus-ranae rafts
C1.223	Floating Stratiotes aloides rafts
C1.224	Floating Utricularia australis and Utricularia vulgaris colonies
C1.225	Floating Salvinia natans mats
C1.226	Floating Aldrovanda vesiculosa communities
C1.3411	Ranunculus communities in shallow water
C1.3413	Hottonia palustris beds in shallow water
C1.4	Permanent dystrophic lakes, ponds and pools
C2.33	Mesotrophic vegetation of slow-flowing rivers
C3.4	Species-poor beds of low-growing water-fringing or amphibious vegetation
C3.51	Euro-Siberian dwarf annual amphibious swards (but excluding C3.5131 Toad-rush swards)
D	Mires, bogs and fens
D2.3	Transition mires and quaking bogs
D5.2	Beds of large sedges normally without free-standing water
E	Grasslands and lands dominated by forbs, mosses or lichens
E1.71	Nardus stricta swards
E1.9	Open non-Mediterranean dry acid and neutral grassland, including inland dune grassland
E2.2	Low and medium altitude hay meadows
E3.4	Moist or wet eutropic and mesotrophic grassland

E3.5	Moist or wet oligotrophic grassland
E5.4	Moist or wet tall-herb and fern fringes and meadows
F	Heathland, scrub and tundra
F4.2	Dry heaths
F9.1	Riverine scrub
G	Woodland, forest and other wooded land
G1.21	Riverine Fraxinus - Alnus woodland, wet at high but not at low water
G1.22	Mixed Quercus - Ulmus - Fraxinus woodland of great rivers
G1.3	Mediterranean riparian woodland
G1.51	Sphagnum Betula woods
G1.8	Acidophilous Quercus-dominated woodland
G1.A1	Quercus - Fraxinus - Carpinus betulus woodland on eutrophic and mesotrophic soils
G3.E	Nemoral bog conifer woodland
X	Habitat complexes
X35	Inland Sand Dunes

3. “Provide an opportunity to explore and demonstrate approaches to sustainable development on a regional scale”.
(Including examples or learning experiences from putting sustainable development into practice).

Given the use of more advanced equipment, technologies and plant varieties, the agricultural sector has become significantly more productive. Today, gardening is also moving to new technologies and varieties of fruit trees. The development of the agricultural sector is facilitated by the expansion of markets, including in the European Union and the Middle East. Unfortunately, the intensification of agricultural production has a negative impact on the natural environment, including contributes to the eutrophy of the Desna River and its floodplains.

Recreation and tourism are gradually developing, but their development is hampered by terrible roads. Today, the state plans to completely rebuild the road infrastructure of the region in the coming years, which will significantly positively affect its socio-economic development and well-being of the local population.

4. “Have an appropriate size to serve the three functions of biosphere reserves”.

The reserve area is 70748 hectares and provides implementation of three functions.

5. Appropriate zonation to serve the three functions

Core areas of the Desnianskyi Biosphere Reserve are presented by natural areas that have nature conservation status (protected areas). During the reporting period, the core area increased due to the creation in 2019 of a landscape reserve of national importance in the Novgorod-Siverskyi District of the Chernihiv Region "Muravyivskyi", representativeness in the Desna floodplains improved.

The buffer zone surrounds natural areas, including near the border with the Russian Federation, where this is done at the request of the Administration of the State Border Guard

Service of Ukraine. The buffer zone also includes natural areas that are used sparingly: forest lands, water lands (especially the Desna River with floodplains), coastal strips, etc.

The transit zone includes settlements with road infrastructure, farmlands (arable lands, pastures and hayfields) with small natural areas (swamps, ditches, meadows, forests, etc.).

6. “Organizational arrangements should be provided for the involvement and participation of a suitable range of inter alia public authorities, local communities and private interests in the design and the carrying out of the functions of a biosphere reserve”.

The functions of the Desnianskyi Biosphere Reserve are executed due to the activities of the Coordination Council at the Desniansko-Starohutskyi National Nature Park in cooperation with local authorities and self-government bodies, NGO “Desniansky Zori”.

7. Mechanisms for implementation:

a) Mechanisms to manage human use and activities

Management and use of natural resources on the territory of the Desnianskyi Biosphere Reserve is carried out in accordance with current legislation in compliance with environmental regulations in accordance with the laws of Ukraine "On Environmental Protection", "On Strategic Environmental Assessment", "On Environmental Impact Assessment", "On Protected Areas of Ukraine”, “On Hunting”, "On Fisheries, Industrial Fishing and Protection of Aquatic Bioresources", the Land Code of Ukraine, the Forest Code of Ukraine, the Subsoil Code of Ukraine, etc.

b) Management policy or plan

Management in the Desnianskyi Biosphere Reserve was aimed at following the best ideas for the implementation of the principles of sustainable development, environmental protection. During the reporting period, they focused on the Project (Management Plan) for the Organization of the Territory (Management Plan) of the Desniansko-Starohutskyi National Nature Park, Protection, Reproduction and Recreational Use of its Natural Complexes and Objects and the decisions of the coordination council meeting. Local authorities and self-government, state and private enterprises operate according to other plans. In addition, the Oriented Management Plan of the Desnianskyi Biosphere Reserve, which is based essentially on the indicators of the Seville Strategy for Biosphere Reserves, and the Plan of Measures for the Implementation in Ukraine of the Lima Action Plan for UNESCO's Man and the Biosphere Program and its World Network of Biosphere Reserves were constantly taken into account, approved by a joint order of the Ministry of Ecology and Natural Resources of Ukraine and the National Academy of Sciences of Ukraine from 04.07.2018 No. 303/243.

c) Authority or mechanism to implement this policy or plan

The Desnianskyi Biosphere Reserve was managed by its Coordinating Council at the Desniansko-Starohutskyi National Nature Park.

d) Programmes for research, monitoring, education and training

The Desniansko-Starohutskyi National Nature Park, as the basic institution of the Desnianskyi Biosphere Reserve, in accordance with its Territorial Organization Project (Management Plan), implements investigations, monitoring, educational and training programs both on its own and in adjacent territories. Each year, the relevant action plans are reviewed and approved by the Scientific and Technical Council, and the results are published annually in the form of the Chronicle of Nature of the park. Specialists from the institutes of botany and zoology of the National Academy of Sciences of Ukraine, universities of Sumy, Nizhyn, Chernihiv,

Hlukhiv, Kyiv, Kherson, and Rivne are involved in conducting botanical, zoological, and ecological researches.

Every year on the territory of the Desnianskyi Biosphere Reserve students of regional universities collect materials for their diploma. Students who take part in regional and national competitions of research works are also involved in scientific work. In the same direction the ecological camp "Desnianski Zori" is regularly held.

Does the biosphere reserve have cooperative activities with other biosphere reserves (exchanges of information and staff, joint programmes, etc.)?

At the national level:

Exchange of information with biosphere reserves of Ukraine: Ukrainian parts of the transboundary biosphere reserves “East Carpathians”, “West Polesie” and “Roztocze”, and Carpathian BR, BR “Askania-Nova”.

At the regional level:

The above-mentioned transboundary Ukrainian-Belarusian-Polish Biosphere Reserve "West Polesie", with which cooperation is carried out, is also located in one of the largest swamped lowlands in Europe – Polesie Region.

Through twinning and/or transboundary biosphere reserves:

The Desnianskyi Biosphere Reserve before the Russian aggression in 2014 had close contacts with the Nerusso-Desnianskoe Polesie Biosphere Reserve (The Russian Federation).

Within the World Network:

Experience exchange was carrying out during visits to the biosphere reserves: the Schorfheide-Chorin Biosphere Reserve and the South-East Rügen Biosphere Reserve (Germany).

Obstacles encountered, measures to be taken and, if appropriate, assistance expected from the Secretariat:

No obstacles encountered.

Main objectives of the Biosphere Reserve:

Describe the main objectives of the biosphere reserve integrating the three functions and the sustainable development objectives for the coming years.

The main objectives of the Desnianskyi Biosphere Reserve for the coming yearsv are conservation, restoration and sustainable use of natural complexes, sustainable socio-economic development of the region, decelopment of tourism and recreation, investigations, monitoring and environmental education with involvement local people and using possibilities of the European Union in accordance with the Agreemend on Association between Ukraine and the EU.

9. SUPPORTING DOCUMENTS

[List of the annexes submitted with periodic review report.]

(1) Updated location and zonation map with coordinates

[Provide the biosphere reserve's standard geographical coordinates (all projected under WGS 84). Provide a map on a topographic layer of the precise location and delimitation of the three zones of the biosphere reserve (Map(s) shall be provided in both paper and electronic copies). Shapefiles (also in WGS 84 projection system) used to produce the map must also be attached to the electronic copy of the form. If applicable, also provide a link to access this map on the internet (e.g. Google map, website…).]

The updated zonation map of the Desnianskyi Biosphere Reserve is provided in electronic form (Annex IV – separate file).

(2) Updated vegetation map or land cover map

[A vegetation map or land cover map showing the principal habitats and land cover types of the biosphere reserve should be provided, if available.]

The vegetation map was not revised - such map was developed for Desna River basin. There were no significant spatial changes in the location of the main natural and economic areas and boundaries of settlements.

(3) Updated list of legal documents (if possible with English, French or Spanish synthesis of its contents and a translation of its most relevant provisions)

[If applicable update the principal legal documents since the nomination of the biosphere reserve and provide a copy of these documents.]

The Desnianskyi Biosphere Reserve is guided by the following laws:

1. Constitution of Ukraine.
2. Law of Ukraine "On Environmental Protection"
3. Law of Ukraine "On the Protected Areas of Ukraine"
4. Law of Ukraine "On the Red Data Book of Ukraine"
5. Law of Ukraine "On Strategic Environmental Assessment"
6. Law of Ukraine "On Environmental Impact Assessment"
7. Land Code of Ukraine
8. Forest Code of Ukraine
9. Water Code of Ukraine
10. Other national legislation and international agreements

Other legal documents:

Project (Management Plan) for the Organization of the Territory of the Desniansko-Starohutskyi National Nature Park, Protection, Reproduction and Recreational Use of its Natural Complexes and Objects;

Plan of Measures for the Implementation in Ukraine of the Lima Action Plan for UNESCO's Man and the Biosphere Program and its World Network of Biosphere Reserves, approved by a joint order of the Ministry of Ecology and Natural Resources of Ukraine and the National Academy of Sciences of Ukraine from 04.07.2018 No. 303/243;

Annual action plans of the Desniansko-Starohutskyi National Nature Park, Seredyno-Buda and Novgorod-Siverskyi State District Administrations, Forest enterprisers, etc.

(4) Updated list of land use and management/cooperation plans

[List existing land use and management/cooperation plans (with dates and reference numbers) for the administrative area(s) included within the biosphere reserve. Provide a copy of these documents. It is recommended to produce an English, French or Spanish synthesis of its contents and a translation of its most relevant provisions.]

Land use planning on the territory of the Desnianskyi Biosphere Reserve consists of:

the projects (management plans) of organization and development of forestry, which make up for a 10-year period forest management production associations in Seredyno-Buda and

Novgorod-Siverskyi administrative districts, the Desniansko-Starogutskyi National Nature Park (these projects are complex technical documents in Ukrainian);

annual plans for the use of agricultural land by agricultural firms, which in market conditions consider the information as confidential;

annual work plans of Seredyno-Buda and Novgorod-Siverskyi district state administrations, united territorial communities and village councils with the implementation of economic policy, business development, policy in trade and consumer services, international and foreign economic relations, construction, improvement of roads and transport infrastructure, increasing the investment attractiveness of the territory, expanding the network of social and household services, improving the quality of educational services, developing the cultural environment, improving the quality of health care, promoting the introduction of modern technologies for growing crops, ensuring the functioning of the state environmental monitoring system, regulating public relations for organization, protection and use of territories and objects of nature reserve fund, reproduction of their natural complexes (these plans are schematic without sufficient funding, in Ukrainian).

(5) Updated species list (to be annexed)
[Provide a list of important species occurring within the proposed biosphere reserve, including common names, wherever possible.]

See section 4.1, annexes VI – VIII on Ramsar site and Emerald sites.

(6) Updated list of main bibliographic references (to be annexed)
[Provide a list of the main publications and articles of relevance to the proposed biosphere reserve.]

See Annex III.

(7) Further supporting documents.

Ramsar Sheet of wetland “Desna River Floodplains” (revised) – in Annex VI.
Emerald site “Desniansko-Starohutskyi National Nature Park” – in Annex VII.
Emerald site “Smiatsko-Znobivskyi” – in Annex VIII.

10. ADRESSES

10.1 Contact address of the biosphere reserve:
[Government agency, organization, or other entity (entities) to serve as the main contact to whom all correspondence within the World Network of Biosphere Reserves should be addressed.]

Name: Coordination Council of the Desnianskyi Biosphere Reserve, Administration of the Desniansko-Starohutskyi National Nature Park

Street or P.O. Box: Novgorod-Siverska Street, 62
City with postal code: t. Seredyno-Buda, Sumska Oblast, 41000
Country: Ukraine
Telephone: +380545171449
E-mail: nppdesstar@gmail.com
Web site: http://www.nppds.inf.ua

10.2. Administering entity of the core area(s):

Name: Administration of the Desniansko-Starohutskyi National Nature Park
Street or P.O. Box: Novgorod-Siverska Street, 62
City with postal code: t. Seredyno-Buda, Sumska Oblast, 41000
Country: Ukraine

Telephone: +380545171449
E-mail: nppdesstar@gmail.com
Web site: http://www.nppds.inf.ua

10.3. Administering entity of the buffer zone(s):

Name: Coordination Council of the Desnianskyi Biosphere Reserve, Administration of the Desniansko-Starohutskyi National Nature Park

Street or P.O. Box: Novgorod-Siverska Street, 62
City with postal code: t. Seredyno-Buda, Sumska Oblast, 41000
Country: Ukraine
Telephone: +380545171449
E-mail: nppdesstar@gmail.com
Web site: http://www.nppds.inf.ua

10.4. Administering entity of the transition area(s):

Name: Coordination Council of the Desnianskyi Biosphere Reserve, Administration of the Desniansko-Starohutskyi National Nature Park

Street or P.O. Box: Novgorod-Siverska Street, 62
City with postal code: t. Seredyno-Buda, Sumska Oblast, 41000
Country: Ukraine
Telephone: +380545171449
E-mail: nppdesstar@gmail.com
Web site: http://www.nppds.inf.ua

Activities in the Desnianskyi Biosphere Reserve has been analyzed and evaluated positively by the Coordination Council of the Desnianskyi Biosphere Reserve in its meeting on 21 February, 2020.

Mr. Serhii Kubrakov,

Head of the Coordination Council of the Desnianskyi Biosphere Reserve, Director of the Desniansko-Starohutskyi National Nature Park

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Annex I. MABnet Directory of Biosphere Reserves (revised)

Administrative details

Country: Ukraine
Name of BR: Desnianskyi
Year designated: 2009
Administrative authorities: (7.6)
Administrative authorities: (7.6) Coordination Council of the Desnianskyi Biosphere Reserve
Name Contact: (10.1): Head of the Coordination Council of the Desnianskyi Biosphere Reserve, Director of the Desniansko-Starohutskyi National Nature Park Mr. Serhii Kubrakov
Contact address: *(Including phone number, postal and email adresses)* (10.1)
Name: Desniansko-Starohutskyi National Nature Park
Street or P.O. Box: Novgorod-Siverska Str., 62
City with postal code: t. Seredyno-Buda, Sumska Oblast, 41000
Country: Ukraine
Telephone: +380544171449
E-mail: nppdesstar@gmail.com
Related links: *(web sites)* http://www.nppds.inf.ua
Social networks: (6.5.4) https://www.facebook.com/nppds.buda/

Description

General description:

Desnianskyi Biosphere Reserve is located in middle stream of the Desna River (one of the biggest branches of the Dnipro River) in the Eastern Polesie Region and presents the basic landscape types of the east of the Polesie Lowland: rivers, lakes, floodplains, bogs, transition mires, fens, real, peaty and swampy grasslands, pine, broad-leaf and mixed forests, including floodplains. Alluvial-outwash plains occupy 60% of the reserve area, and 15% are terrace sand plains, which occupied by forests mainly. 20% of the reserve area are under floodplains and appr. 5% are moraine-outwash plains. The majority of agricultural lands are located between floodplains and a moraine-outwash plains, namely hayfields, pastures, etc. Low density of population within the biosphere reserve and on adjoining areas, absence of huge industrial centers in the region create the background for development of agriculture and forestry on the base of principles of rational use of natural resources with considerable part of traditional forms of nature use. Already now numbers of research, monitoring educational programs are realizing. National Nature Park "Desniansko-Starohutskyi", 3 small wildlife reserves (zakazniks) and 3 nature monuments, wetland of international importance "Desna River Floodplains" form the territory of the Reserve. Sites of the Emerald Network of Europe as Desniansko-Starohutskyi National Nature Park and Smiatsko-Znobivskyi were designated in the biosphere reserve. On the north Desnianskyi Biosphere Reserve borders with the Russian biosphere reserve "Nerusso-Desnianskoe-Polesie".

Major ecosystem types: Rivers, floodplains, lakes, ponds, mesophyte and sweppe and swampy and peaty grasslands, carnivorous and mixed and broad-leaved and small-leaved forests, forest sands, forest mesotrophic and forest eutrophic and bush eutrophic and grassy eutrophic mires, pastures, arable and fallow lands, ecosystems of villages.

Major habitats & land cover types: rivers and floodplains, carnivorous forests (pine forests), mixed forests (pine-oak forests), broad-leaved (oak, alder, birch, willow) forests, grassy and sphagnum mires, meadows, settlements and arable lands.

Bioclimatic zone: the Biome of Deciduous Forests of the Temperate Zone of the Central European Province according to the Classification of Biogeographical Provinces of the World of M. Udwardy (1975).
Location (latitude & longitude): from 52° 01' 19" N to 52° 22' 18" N & from 33° 13' 18" E to 33° 56' 42" E
Total Area (ha): 70748 ha
Core area*(s):* 5732 ha
Buffer zone(s):12325 ha
Transition area(s) :57018 ha
Different existing zonation: strict protected zone of the Desniansko-Starohutskyi National Nature Park and Muravjivskyi Landscape Zakaznik enter into the composition of core areas of the reserve; buffer zone consist of zone of regulative recreation of the Desniansko-Starohutskyi National Nature Park and other well-preserved natural areas; transition zone consist of settlements and areas, where forestry, agriculture, farming, tourism and recreation are conducting.
Altitudinal range *(*metres above sea level): : highest elevation – 170,0 m; lowest elevation - 122.0 m
Zonation map(s) (refer to section 2.2.2): The updated zonation map of the Desnianskyi Biosphere Reserve is provided in paper and electronic form (Annex IV).

Main objectives of the biosphere reserve

Brief description

The main objectives of the biosphere reserve are conservation, restoration and recreational use of natural complexes, sustainable development of the region, research, monitoring and environmental education.

Research

Brief description

Regular investigations are conducting since 1996. The basic directions are biological and landscape diversity conservation, monitoring of birds migrations and vegetation dynamics. Annually the Chronicle of nature of the National Nature Park "Desniansko-Starogutskyi" is conducting. Here up to 20 scientists from the National Nature Park "Desniansko-Starogutskyi", universities, research institutes of the National Academy of Sciences of Ukraine. Bibliography of works numbers over 640 sources, there were published 4 monographs, 11 thesis uphold. Pupils and students are widely involved into carrying of researched.

Monitoring

Brief description

Monitoring of endangered species of flora and fauna and habitats from the Reda Data Book of Ukraine and international Red lists, including Emerald sites: Desniansko-Starohutskyi National Nature Park and Smiatsko-Znobivskyi.
Monitoring IBA No. 28.
Monitoring of Ramsar site "Desna River Floofplains".
Long-term floristic monitoring results of renaturalization wetlands after drainage reclamation.
Study of the dynamics of climate change.

Specific variables (fill in the table below and tick the relevant parameters)

Abiotic		Biodiversity	
Abiotic factors	+	Afforestation/Reforestation	+
Acidic deposition/Atmospheric factors	+	Algae	+
Air quality	+	Alien and/or invasive species	+
Air temperature	+	Amphibians	+
Climate, climatology	+	Arid and semi-arid systems	-
Contaminants	+	Autoecology	+
Drought	+	Beach/soft bottom systems	+
Erosion	+	Benthos	-
Geology	+	Biodiversity aspects	+
Geomorphology	+	Biogeography	+
Geophysics	-	Biology	+
Glaciology	-	Biotechnology	-
Global change	+	Birds	+
Groundwater	+	Boreal forest systems	+
Habitat issues	+	Breeding	+
Heavy metals	-	Coastal/marine systems	-
Hydrology	+	Community studies	+
Indicators	+	Conservation	+
Meteorology	+	Coral reefs	-
Modeling	-	Degraded areas	+
Monitoring/methodologies	+	Desertification	-
Nutrients	-	Dune systems	-
Physical oceanography	-	Ecology	+
Pollution, pollutants	+	Ecosystem assessment	+
Siltation/sedimentation	+	Ecosystem functioning/structure	+
Soil	+	Ecosystem services	+
Speleology	-	Ecotones	-
Topography	+	Endemic species	+
Toxicology	+	Ethology	-
UV radiation	+	Evapotranspiration	-
		Evolutionary studies/Palaeoecology	-
		Fauna	+
		Fires/fire ecology	+
		Fishes	+
		Flora	+
		Forest systems	+
		Freshwater systems	+
		Fungi	+
		Genetic resources	-
		Genetically modified organisms	-
		Home gardens	-
		Indicators	+
		Invertebrates	+
		Island systems/studies	-
		Lagoon systems	-
		Lichens	+
		Mammals	+
		Mangrove systems	-

		Mediterranean type systems	-
		Microorganisms	-
		Migrating populations	+
		Modeling	-
		Monitoring/methodologies	+
		Mountain and highland systems	-
		Natural and other resources	+
		Natural medicinal products	-
		Perturbations and resilience	-
		Pests/Diseases	-
		Phenology	+
		Phytosociology/Succession	-
		Plankton	-
		Plants	+
		Polar systems	-
		Pollination	-
		Population genetics/dynamics	-
		Productivity	+
		Rare/Endangered species	+
		Reptiles	+
		Restoration/Rehabilitation	+
		Species (re) introduction	-
		Species inventorying	+
		Sub-tropical and temperate rainforest	-
		Taxonomy	-
		Temperate forest systems	-
		Temperate grassland systems	-
		Tropical dry forest systems	-
		Tropical grassland and savannah	-
		Tropical humid forest systems	-
		Tundra systems	-
		Vegetation studies	+
		Volcanic/Geothermal systems	-
		Wetland systems	+
		Wildlife	+

Socio-economic		**Integrated monitoring**	
Agriculture/Other production systems	+	Biogeochemical studies	-
Agroforestry	+	Carrying capacity	+
Anthropological studies	+	Climate change	+
Aquaculture	-	Conflict analysis/resolution	+
Archaeology	+	Ecosystem approach	+
Bioprospecting	-	Education and public awareness	+
Capacity building	+	Environmental changes	+
Cottage (home-based) industry	+	Geographic Information System (GIS)	+
Cultural aspects	+	Impact and risk studies	+
Demography	+	Indicators	-
Economic studies	+	Indicators of environmental quality	+
Economically important species	+	Infrastructure development	+

Energy production systems	-	Institutional and legal aspects	+
Ethnology/traditional practices/knowledge	+	Integrated studies	+
Firewood cutting	+	Interdisciplinary studies	+
Fishery	+	Land tenure	+
Forestry	+	Land use/Land cover	+
Human health	+	Landscape inventorying/monitoring	+
Human migration	+	Management issues	+
Hunting	+	Mapping	+
Indicators	+	Modeling	+
Indicators of sustainability	+	Monitoring/methodologies	+
Indigenous people's issues	+	Planning and zoning measures	+
Industry	+	Policy issues	+
Livelihood measures	+	Remote sensing	-
Livestock and related impacts	+	Rural systems	+
Local participation	+	Sustainable development/use	+
Micro-credits	+	Transboundary issues/measures	+
Mining	+	Urban systems	+
Modeling	-	Watershed studies/monitoring	+
Monitoring/methodologies	+		
Natural hazards	+		
Non-timber forest products	+		
Pastoralism	-		
People-Nature relations	+		
Poverty	+		
Quality economies/marketing	+		
Recreation	+		
Resource use	+		
Role of women	+		
Sacred sites	+		
Small business initiatives	+		
Social/Socio-economic aspects	+		
Stakeholders' interests	+		
Tourism	+		
Transports	+		

Activity II.4.3: To use INTERNET possibilities and regular updating of a special site on the Biosphere Reserve in INTERNET, placement of information in social networks.

** *Activity III.1.1:* Monitoring of flora and fauna, natural habitats, improvement of functional zoning of the reserve territory and establishment of sustainable nature management (optimization of recreational, tourist and economic use of natural resources, etc.).

** *Activity III.2.2:* To support the traditional practices (e.g. rotational grazing, limited drainage, farming, beekeeping, horticulture, mushroom and berry picking, etc.).

** *Activity IV.2.4:* To conclude agreements on cooperation in the development of recreation and tourism with legal entities and individuals.

Activity IV.2.6: To develop cross-border tourism tourism in the proposed Biosphere Reserve in the Desna River basin (Ukraine-Russian Federation). To promote the development of cross-border tourism within the Ukrainian-Russian biosphere reserve in the Desna River basin (Ukraine-Russia). - Currently, the event is suspended due to Russia's aggression in eastern Ukraine and the Crimea.

OBJECTIVE VI: **TO TAKE INTO ACCOUNT IN THE ACTIVITIES OF THE BIOSPHERE RESERVE PROGRAMMES, STRATEGIES, PLANS AND RECOMMENDATIONS DEVELOPED WITHIN MAB UNESCO PROGRAMME**

Output VI.1: **Prompt acquaintance of interested organizations and individuals with the materials of the MAB UNESCO Programme.**

Measures:

** *Activity VI.1.1:* To post and/or to link to websites, social networks, booths, etc. about programs, strategies, plans and recommendations of the MAB UNESCO Programme (the Statutory Framework of the World Network of Biosphere Reserve, the Seville Strategy, the Lima Action Plan, etc.).

Output VI.2: **Implementation of plans and recommendations within the MAB UNESCO Programme.**

Measures:

** *Activity VI.2.1:* To take measures and inform about the implementation of the Plan of Measures for the Implementation in Ukraine of the Lima Action Plan for UNESCO's Man and the Biosphere Programme and its World Network of Biosphere Reserves, approved by a joint order of the Ministry of Ecology and Natural Resources Ukraine and the National Academy of Sciences of Ukraine from 04.07.2018 No. 303/243, and next plans.

** *Activity VI.2.2:* To provide information promptly at the request of the National Committee of Ukraine for MAB UNESCO Programme.

Annex III. Reference citations

Scientific Papers

1. Kuzmenko T., Kuzmenko Yu. Fallow land avifauna of Eastern forest zone: breeding season // Екологічні проблеми сільськогосподарського виробництва. Матеріали IV Всеукраїнської науково-практичної конференції молодих учених (м. Сколе, 1-4 червня 2010 року). Київ: ТОВ «ДІА», 2010. С. 207-210.
2. Olga Burova, Marina Zhezhera. Algae of Desna River and its Flood-land Water Bodies of Desniansko-Starogutsky National Nature Park (Ukraine) // The past, present and future of phycological research. Its significance for man and for the protection of environment: Book of Abstract. 30th International Conference of the Polish Phycological Society (Wrocław – Pawłowice, Poland, 19-21 May 2011). P. 114-115.
3. Андріанова Т.В. Рідкісні знахідки фітофтрофних аноморфних грибів із заповідних територій Чернігівської та Сумськоїо бластей/ Т.В. Андріанова// Фіторізноманіття прикордонних територій України, Росії та Білорусі у постчорнобильський період: Зб. статей за матеріалами міжнар. наук. конф., (Чернігів, 17-18 груд. 2010 [Україна]). Київ: Фітосоціоцентр, 2010. С.11-16.
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