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Restitution of Wisents in Poland: The Activities Aimed at Wisent Protection

*Restytucja żubra w Polsce.
Działania zorientowane na ochronę żubrów*

Introduction

The Polish legislation on nature conservation has a long tradition, as these activities were undertaken as early as in the Middle Ages.¹ However, it was not until the second half of the 19th century and early 20th century that nature protection became one of the factors influencing the culture of almost all countries of the world. This period saw the development of the concept of biodiversity conservation based on the principle of sustainable development, which allowed

¹ More, among other things, in: J. Ciechanowicz-McLean, *Polskie prawo ochrony przyrody*, Warszawa 2006, pp. 13–17; W. Radecki, *Zarys dziejów prawnej ochrony przyrody i środowiska w Polsce*, Kraków 1990, pp. 7–10; A. Habuda, W. Radecki, *Instytucje prawa ochrony przyrody*, [in:] *Instytucje prawa ochrony środowiska. Geneza, rozwój, perspektywy*, red. W. Radecki, Warszawa 2010, pp. 204–211.

us to see the complexity of nature and interdependence between, among other things, the condition of natural resources and economic development.²

As defined in the Polish Act on Nature Protection, nature protection involves maintaining, sustainable use and renewal of its particular resources, formations and components. To meet the goals so defined, the application of legal institutions established by the provisions of the Act, such as forms of nature protection, is of paramount importance.³

The subject of this article is to present factual actions taken under existing laws to protect bison in Poland. The paper examines statutes from both Polish and European legislation and the factual actions taken on their basis over the years. The legal texts were subjected to linguistic, systemic, teleological, functional and pro-European legal interpretation and analysis. The study also examines selected factual and legal cases performed to reconstruct and evaluate the actions taken to restore and preserve European bison in Poland. The case studies were performed of actual state with the aim of exemplifying certain legal, environmental and factual aspects of animals preserving and control. The study adopts the legal status as appropriate for the mentioned activities. The undertaken actions were compared with the current legal status, with the aim of exemplifying certain relations between legal and factual aspects of restoring, protecting, monitoring and controlling the endangered species, together with the consequences of decisions made to ensure *Bison bonasus* conservation.

The Białowieża Forest and wisents

The Białowieża Forest is a compact forest complex situated on both sides of the border between Poland and Belarus. The Belarusian part is wholly protected as a national park. The Polish part covers 62,000 ha, of which 10,500 ha is the

² A. Kaźmierska-Patrzyzna, *Istota prawna obszarów Natura 2000 – uwagi ogólne*, [in:] *Problemy wdrażania systemu Natura 2000 w Polsce*, red. A. Kaźmierska-Patrzyzna, M.A. Król, Szczecin–Łódź–Poznań 2013, p. 39.

³ Articles 2 and 6 of the Act of 16 April 2004 on Nature Protection (Journal of Laws of 2018, item 142). More about forms of nature protection: W. Radecki, *Ustawa o ochronie przyrody. Komentarz*, Warszawa 2008, p. 64 ff.; idem, *Prawna ochrona przyrody w Polsce, Czechach i Słowacji. Studium prawnoporównawcze*, Warszawa 2010, p. 176 ff.; B. Rakoczy, *Prawo ochrony przyrody*, Warszawa 2009, p. 29 ff.; A. Lipiński, *Prawne podstawy ochrony środowiska*, Warszawa 2007, p. 197 ff.

area of the Białowieża National Park,⁴ 12,000 ha is a network of nature reserves, while the remaining part is economically exploited.⁵

The unique nature of the Forest, its special character in terms of biodiversity preservation, ecological and biological processes that are important for the evolution and development of natural ecosystems, and unmeasurable scientific value, have been appreciated in the international arena.⁶ It was listed as the UNESCO World Heritage in 2014 as the first cross-border object (Polish-Belarusian) in Europe. The registration did not cover only its outskirts in the immediate vicinity of the village of Hajnówka and the villages located along the western border of the Forest.⁷

Nature of the Forest is protected under applicable regulations of ordinances concerning the protection of species of plants, animals and fungi, and under planning documents containing protective tasks for Białowieża, reserves, habitats and species subject to protection in the area of Natura 2000 covering the whole area of the Forest.⁸ Additional recommendations and protection priorities for this area are formulated in the economic and protective programme for the “Forest Promotional Complex Białowieża Forest for 2012–2021”,⁹ and a re-nomination application to UNESCO regarding the recognition of the whole Białowieża Forest as a human heritage site.¹⁰ It is noteworthy that the criteria for the recognition as a UNESCO World Heritage Site clearly express the priorities which include

⁴ Article 6, para. 1, item 1 of the Act on Nature Protection and Annex to that Act, the list of National Parks, item 2. The Białowieża National Park is the largest and the oldest natural area in Europe covered by strict protection. It is assumed to be first established in 1921, while in 1947, this entity was re-established as the Białowieża National Park. The park covers an area of 10,517.27 ha, which accounts for 1/6 of the Polish part of the Białowieża Forest. See https://bpn.com.pl/index.php?Itemid=178&id=104&option=com_content&task=view (access: 5.03.2022).

⁵ T. Wesołowski, A. Kujawa, A. Bobiec, A. Bohdan, L. Buchholz, P. Chylarecki, J. Engel, M. Falkowski, J.M. Gutowski, B. Jaroszewicz, S. Nowak, A. Orczewska, R.W. Mysłajek, W.W. Walankiewicz, *Spór o przyszłość Puszczy Białowieskiej: mity i fakty. Głos w dyskusji*, „Chrońmy Przyrodę Ojczystą” 2016, vol. 72(2), pp. 83–99.

⁶ A. Kujawa, A. Orczewska, M. Falkowski, M. Blicharska, A. Bohdan, L. Buchholz, P. Chylarecki, J.M. Gutowski, M. Latałowa, R.W. Mysłajek, S. Nowak, W. Walankiewicz, A. Zalewska, *Puszcza Białowieska – obiekt światowego dziedzictwa UNESCO – priorytety ochrony*, „Leśne Prace Badawcze” 2016, vol. 77(4), pp. 302–303.

⁷ Polski Komitet ds. UNESCO, <http://www.unesco.pl/?id=290> (access: 4.03.2018).

⁸ A. Kujawa [et al.], *op. cit.*, p. 303.

⁹ Regionalna Dyrekcja Lasów Państwowych, *Program gospodarczo-ochronny leśnego kompleksu promocyjnego „Puszcza Białowieska” na lata 2012–2021*, Białystok 2011.

¹⁰ R. Krzyściak-Kosińska, V. Arnolbik, A. Antczak, “Belovezhskaya pushcha / Bialowieza Forest” World Heritage Site (33 bis). *Proposed Modification of the Criteria and Boundaries Change of the Name of the Property. Nomination Dossier to the UNESCO for the Inscription on the World Heritage List*, 2012, <http://whc.unes-co.org/uploads/nominations/33ter.pdf> (access: 4.03.2022).

the protection of spontaneous natural processes taking place in habitats that are representative for the protection of biodiversity on the site.¹¹

According to the standard data form for the “Natura 2000 Białowieża Forest” area, the object of protection covers 10 natural habitats, including 5 non-forest and 5 forest habitats. The latter account for 67.53% of the Natura 2000 area of 63,177.88 ha established within the forest complex that contains the best preserved and stable forest vegetation having the characteristics of primeval plant communities.¹²

One of the main priorities of nature protection in the Białowieża Primeval Forest is the protection of the wisent (European bison), for which the Forest is the basic refuge. This is mainly due to the history of the species – it was here that the last free-living survivors were found and here the population was reproduced, first by breeding, and finally in free-living herds.¹³ The current scientific research undermines the earlier views, according to which wisents were considered to be animals strongly associated with forests. The wisent is a ruminant associated with open grasslands,¹⁴ which determines, among other things, the provisions of the protection plan for the Białowieża National Park. One of the conditions for the conservation of objects of protection is simply “the maintenance of non-forest ecosystems that constitute a place of for wisent pasturage”.¹⁵

Wisents (Latin: *Bison bonasus*) are the largest European mammals. They were almost completely eradicated on the European continent, although they once inhabited it in quite significant numbers. During the 19th century, they were seen on the territory of Poland and in the Caucasus, but as early as in 1919 it was made public that the last wild lowland wisent died in the Białowieża Primeval Forest. The same happened to the Caucasian wisent six years later.¹⁶

The fate of these animals caused that the Poles presented a wisent restoration project during the International Congress of Conservation of Nature held in

¹¹ Polski Komitet ds. UNESCO...

¹² J.M. Matuszkiewicz, *Zmiany w grądach, borach mieszanych i łęgach jesionowo-olszowych Puszczy Białowieskiej*, [in:] *Geobotaniczne rozpoznanie tendencji rozwojowych zbiorowisk leśnych w wybranych regionach Polski*, red. J.M. Matuszkiewicz, Warszawa 2007, pp. 197–289.

¹³ M. Krasińska, Z.A. Krasiński, *Żubr. Monografia przyrodnicza*, Warszawa–Białowieża 2004.

¹⁴ G.I.H. Kerley, R. Kowalczyk, J.P.G.M. Cromsigt, *Conservation Implications of the Refugee Species Concept and the European Bison: King of the Forest or Refugee in a Marginal Habitat?*, “Ecography” 2012, vol. 35(6), pp. 519–529; H. Bocherens, E. Hofman-Kamińska, D.G. Drucker, U. Schmölcke, R. Kowalczyk, *European Bison as a Refugee Species? Evidence from Isotopic Data on Early Holocene Bison and Other Large Herbivores in Northern Europe*, “PLoS ONE” 2015, vol. 10(2), <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0115090> (access: 4.03.2022); as cited in: A. Kujawa [et al.], *op. cit.*, p. 314.

¹⁵ Regulation of the Minister of the Environment of 7 November 2014 regarding legislation of Conservation Plan for the Białowieża National Park (Journal of Laws of 2014, item 1735).

¹⁶ Z.A. Krasiński, *Żubr. Puszczy Imperator*, Białowieża 2005, pp. 1–24.

1923.¹⁷ At that time, the Society for the Protection of the European Bison was founded.¹⁸ The success of the project depended on a small number of individual animals that survived in zoological parks and private menageries. In 1966, the wisent as a species threatened with extinction was listed on the Red List¹⁹ and was subject to strict species protection. In Poland, pursuant to the provisions of the Act on nature protection of 16 April 2004 and the Ordinance of the Minister of Environment of 16 December 2016 on species protection,²⁰ the wisent is covered by strict protection.²¹ Wisents are also directly protected under the provisions of the Bern Convention²² and the Habitats Directive.²³

¹⁷ On 2 June 1923, Jan Sztolcman presented the Polish project to save the wisent from extinction based on the experience of the American Bison Society. See also P. Daszkiewicz, T. Samojlik, *Żubry czy żubrobizony? Polemika na temat akcji ratowania żubrów podczas II Międzynarodowego Kongresu Ochrony Przyrody w 1931 roku w Paryżu*, „Kwartalnik Historii Nauki i Techniki” 2005, vol. 50(1), pp. 161–176.

¹⁸ The Society based in Frankfurt am Main brought together members from 16 countries. See M. Maciantowicz, *Międzynarodowe Towarzystwo Ochrony Żubra*, <https://www.encyklopedialesna.pl/pdf/miedzynarodowe-towarzystwo-ochrony-zubra> (access: 23.09 2022); for more, see M. Krasieńska, Z.A. Krasieński, *op. cit.*

¹⁹ The Red List of Threatened Species is published by the International Union for Conservation of Nature (IUCN). It was published for the first time in 1963. The Polish Red Data Book of Animals is a register of selected endangered species of animals in Poland, developed based on the model of the international Red List of Threatened Species. It contains a list of species endangered with extinction, along with their exact description and maps. It also specifies a degree of threat of individual species, the rarity of their occurrence and the used and proposed methods of protection. The Red Data Book of Animals is maintained for Poland by the Institute of Nature Conservation of the Polish Academy of Sciences in Kraków in cooperation with several dozen scientists from all over Poland. The latest edition of the Red Data Book of Vertebrates classifies the wisent as a high-risk species, strongly endangered. See Z. Głowaciński (red.), *Czerwona lista zwierząt ginących i zagrożonych w Polsce*, Kraków 2002, pp. 7–12.

²⁰ Journal of Laws of 2016, item 2183.

²¹ Under a royal decree, the wisent was already protected in the 16th century (during the reign of Sigismund the Old, under the Lithuanian Statutes which became effective in the Grand Duchy of Lithuania in 1526). In 1803, Tsar Alexander I issued a decree prohibiting hunting wisents. The wisent was strictly protected under a special ordinance of the Minister of Religious Denominations and Public Education dated 12 October 1938, https://bpn.com.pl/index.php?option=com_content&task=view&id=65&Itemid=117 (access: 5.03.2022); <http://www.zubry.com/ochrona-zubra72> (access: 5.03.2022).

²² Convention on the Conservation of European Wildlife and Natural Habitats was ratified by 50 contracting parties, including by four African states, Belarus and the European Union. Poland ratified the Convention in 1995 (Journal of Laws of 1996 no. 58, item 263), by which undertook to carry out activities aimed at the protection of endangered and critically endangered species and their habitats, as well as conducting educational activities and disseminating information on the protection of wild fauna and flora and international cooperation aimed at the protection of cross-border species. Annex III lists species from the *Bovidae* family which includes the wisent and chamois living in Poland.

²³ Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (OJ L 206 of 22 July 1992) and Council Directive 97/62/EC of 27 October 1997

Protection of the wisent as part of the Natura 2000 network

The world's wisent population in 2017 was about 6,000 individuals, with nearly 1,700 in Poland.²⁴ This state is a result of the implementation of many projects for the protection of the species, as well as close international cooperation.²⁵ The significant increase in the number of herds and the population indicates the effectiveness of the activities carried out and the need to continue them. For many years, joint efforts have been carried out by State Forests (Polish: *Lasy Państwowe*), national parks, scientific institutions and non-governmental organizations.²⁶

By signing, on 16 April 2003, the Treaty of Athens which constituted the legal basis for joining the EU,²⁷ Poland agreed, among other things, to designate the Natura 2000 network areas on its territory.²⁸ The Community law forming the basis for the creation of the Natura 2000 network was implemented into the

adapting to technical and scientific progress Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (OJ L 305/42 of 8 January 1997). Annex II lists the species of plants and animals the protection of which requires the designation of special areas of conservation. In the *Bovidae* family, among others, the annex lists the wisent, with the indication that it is a species of paramount importance.

²⁴ In the years 1990–1992, the Polish population accounted for around 17–18% of the European population, while the percentage in recent years is around 26–28%. The trend in recent years has been growing – the population is growing every year by about 200 individuals thanks to the expansion of existing herds and the emergence of new ones. According to: W. Olech, K. Perzanowski, *Podręcznik dobrych praktyk ochrony żubra*, Warszawa 2014, p. 10; http://www.walily.bialystok.lasy.gov.pl/widget/aktualnosci/-/asset_publisher/1M8a/content/zubry-pod-stala-opieka-lasow-panstwowych/pop_up?_101_INSTANCE_1M8a_viewMode=print&_101_INSTANCE_1M8a_languageId=pl_PL (access: 1.03.2022).

²⁵ W. Olech, J. Dackiewicz, *Znaczenie polskich żubrów *Bison bonasus* dla restytucji gatunku w Europie*, [in:] *Rola hodowli ex situ w procesie restytucji żubra*, red. W. Olech, Gołuchów 2007, abstracts, p. 80.

²⁶ *Kompleksowa ochrona żubra przez Lasy Państwowe*, <http://www.lbg.lasy.gov.pl/kompleksowy-projekt-ochrony-zubra-przez-lasy-panstwowe> (access: 8.03.2022).

²⁷ Treaty between the Kingdom of Belgium, the Kingdom of Denmark, the Federal Republic of Germany, the Hellenic Republic, the Kingdom of Spain, the French Republic, Ireland, the Italian Republic, the Grand Duchy of Luxembourg, the Kingdom of the Netherlands, the Republic of Austria, the Portuguese Republic, the Republic of Finland, the Kingdom of Sweden, the United Kingdom of Great Britain and Northern Ireland (Member States of the European Union) and the Czech Republic, the Republic of Estonia, the Republic of Cyprus, the Republic of Latvia, the Republic of Lithuania, the Republic of Hungary, the Republic of Malta, the Republic of Slovenia, the Slovak Republic concerning the accession of the Czech Republic, the Republic of Estonia, the Republic of Cyprus, the Republic of Latvia, the Republic of Lithuania, the Republic of Hungary, the Republic of Malta, the Republic of Poland, the Republic of Slovenia and the Slovak Republic to the European Union, signed in Athens on 16 April 2003 (OJ L 236 of 23 September 2003).

²⁸ *Natura 2000 w Polsce*, <https://natura2000.gdos.gov.pl/natura-2000-w-polsce/ext:pdf> (access: 10.03.2022).

Polish legislation by the Act of 3 October 2008 on Sharing Information on the Environment and Its Protection, Public Participation in Environmental Protection and Environmental Impact Assessments²⁹ and the Act of 16 April 2004 on Nature Protection, making Natura 2000 the newest legal form of nature protection in Poland.

The idea of the Natura 2000 network assumes increasing the effectiveness of protective measures by creating an additional, a complete and methodically consistent, system of protection of the natural heritage of Europe, which overlaps the already existing area and species protection systems by complementing and strengthening them. It is a globally unique solution in the field of international area protection of nature.³⁰ The basis for its operation are two EU directives – Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds³¹ (hereinafter referred to as the “Birds Directive”) and Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora³² (hereinafter referred to as the “Habitats Directive”). Pursuant to the provisions of the Directive, each EU Member State is obliged to provide natural habitats and species of plants and animals referred to in these directives with conditions conducive to protection or ensure their good (proper) condition, including by designating special protection areas (SPAs) and special areas of conservation (SACs).³³ The directives are also intended to fulfill the obligations under ratified international agreements: on the protection of species of wild fauna and flora (Bern Convention),³⁴ on the conservation of migratory species of wild animals (signed in Bonn on 23 June 1979)³⁵ and the Convention on Biological Diversity (signed in Rio de Janeiro on 5 June 1992).³⁶

²⁹ Journal of Laws of 2008, no. 199, item 1227.

³⁰ *Cele tworzenia obszarów / Przedmiot ochrony*, <https://natura2000.gdos.gov.pl/cele-tworzenia-obszarow-przedmiot-ochrony/ext:pdf> (access: 8.03.2022). See more A. Habuda, *Obszary Natura 2000 w prawie polskim*, Warszawa 2013; idem, *Obszary Natura 2000 w prawie polskim, czeskim i slowackim*, Warszawa 2017; M. Michalak, *Wprowadzenie do polskiego porzadku prawnego formy ochrony przyrody „obszary Natura 2000” jako przejaw europeizacji prawa ochrony srodowiska*, [in:] *Europeizacja prawa administracyjnego i administracji publicznej*, red. E. Wójcicka, B. Przywora, Częstochowa 2016.

³¹ OJ L 20 of 26 January 2010.

³² OJ L 206 of 22 July 1992.

³³ *Kryteria wyznaczania obszarów*, <https://natura2000.gdos.gov.pl/natura-2000-w-polsce> (access: 27.02.2022).

³⁴ Convention on the Conservation of European Wildlife and Natural Habitats, Bern, 19 September 1979, European Treaty Series no. 104.

³⁵ Convention on the Conservation of Migratory Species of Wild Animals, Bonn, 23 June 1979, UNTS 1651.

³⁶ Convention on Biological Diversity, Rio de Janeiro, 5 June 1992, UNTS 1760.

The preparations for the establishment of the Natura 2000 network in Poland began as early as at the end of the 1990s. Preliminary analyses of resources were carried out at that time, and negotiations were held on the inclusion into the EU law of habitats and species requiring protection in Poland, and absent in the countries of the old European Union and, therefore, not protected by EU law at that time. By the end of 2008, the Council of Ministers set in an ordinance, 141 special protection areas and sent to the European Commission 364 proposals for special areas of conservation. The proposals have been adopted and function as areas of Community interest, becoming “full-fledged” Natura 2000 sites. Currently, the Natura 2000 network occupies almost 1/5 of the land area of Poland, comprising 849 habitat areas and 145 bird areas.³⁷

The protected areas within the Natura 2000 network are designated by EU Member States in accordance with the provisions contained in the above-mentioned directives.³⁸ The designation is only based on scientific and natural criteria.³⁹ The boundaries of Natura 2000 areas are not subject to change due to economic, social or industrial reasons. Local economic and social conditions are taken into account only at the stage of network functioning and management of particular Natura 2000 sites (when formulating conservation plans or protection plans for specific Natura 2000 sites). Pursuant to Art. 25 para. 1 of the Act on nature protection, the network of Natura 2000 areas includes: special protection areas designated on the basis of the Birds Directive, special areas of conservation designated under the Habitats Directive, areas of Community interest under the Habitats Directive.

Some of the plant and animal species and natural habitats listed in the Habitats Directive have been marked as a priority. These are the habitats for which Europe bears special responsibility due to the fact that their larger parts remain

³⁷ Natura 2000 areas may coincide with national forms of nature conservation: national parks, nature reserves, landscape parks, etc. See, e.g. K. Dziubak, P. Łagodzki, M. Dziubak, *op. cit.*, p. 20. Despite the fact that the Natura 2000 area is a separate form of nature protection, it in fact covers areas that have already been protected in the forms known to Polish legislation for many years. In this situation, the Natura 2000 area is covered by a double legal regime. See A. Kaźmierska-Patrzyzna, *op. cit.*, p. 54; Z. Bukowski, *Wybrane uwarunkowania prawne odnoszące się do obszarów Natura 2000 stanowiących park narodowy*, [in:] *Problemy...*, p. 159 ff.; see also J. Kamienicka, B. Wójcik, *Natura 2000. ABC dla turystyki*, Warszawa 2010, p. 13.

³⁸ The procedure for delimiting the areas consists of many stages. See A. Kaźmierska-Patrzyzna, *op. cit.*, pp. 47–50; A. Lipiński, *Planowanie ochrony obszarów Natura 2000*, [in:] *Instytucje...*, pp. 341–357.

³⁹ Such a thesis is confirmed by the case law of the European Court of Justice (judgment of the CJEC of 19 May 1998 in case C-3/96/EC *Commission v. the Netherlands*, cases C-157/89 *Commission v. Italy* and C-60/05 *WWF Italia and Others*). This thesis is also supported by K. Dziubak, P. Łagodzki, M. Dziubak, *Europejska sieć ekologiczna Natura 2000*, [in:] *Problemy...*, p. 18.

within the administrative borders of the European Union. One of the priority species of animals occurring in Poland is the wisent.

The occurrence of the wisent in the Natura 2000 areas in Poland is confirmed in five free-living herds: Bieszczady, Mirosławiec, Białowieża Forest, Borki Forest and Knyszyn Forest. There are also four large Wisent Breeding Centres in Poland, established specifically to run closed breeding of this species. These include centres located in Białowieża, Niepołomice, Pszczyna and Smardzewice, as well as large demonstration farms: Centre for Forest Culture in Gołuchów and Międzyzdroje. In particular, wisents are kept in several zoological parks.⁴⁰

Despite the tremendous effort of foresters, scientists and enthusiasts, wisents are struggling with numerous problems. The most serious threat to the contemporary wisent seems to be low genetic variability and isolation of existing herds (so-called inbreeding, i.e. reproduction of closely related individuals within a tightly closed and isolated population).⁴¹ They are also threatened by diseases (mainly tuberculosis),⁴² lack of coordination of breeding and protective activities between Poland and neighboring countries, progressive fragmentation of habitats⁴³ and loss of pasture areas due to human activities.⁴⁴

⁴⁰ W. Olech (red.), *Perspektywy restytucji żubrów w Europie. Perspektywy rozwoju populacji żubrów*, Goczałkowice-Zdrój 2006, pp. 37–42; idem, *Hodowla żubrów. Poradnik utrzymania w niewoli*, Warszawa 2008, passim.

⁴¹ See, e.g. K. Perzanowski, *Historia, stan obecny i perspektywy ochrony populacji żubra w Bieszczadach*, „Roczniki Bieszczadzkie” 2014, vol. 22, p. 122; W. Olech, K. Perzanowski, *Ochrona i modelowanie populacji żubra*, „Annals of Warsaw University of Life Sciences – SGGW. Animal Science” 2011, vol. 50, p. 57.

⁴² The wisent is a species very vulnerable to diseases. There were many cases of infections in wisents, which ended with the decline of whole herds or parts thereof (tuberculosis in Bieszczady, an epidemic of foot-and-mouth disease in Pszczyna, bluetongue disease in Germany). The probability of occurrence of these diseases is related with the possibility of direct or indirect contact of wisents with household animals. The course of infectious diseases in wisents is, as a rule, more harmful than in other species. Another aspects is acceptance of parasites and sometimes a very high intensity of their invasion. See W. Olech, K. Perzanowski, *Podręcznik...*, p. 25; K. Anusz, J. Kita, M. Zaleska, *Zagrożenia zdrowia żubrów*, [in:] *Ochrona żubra w Puszczy Białowieskiej. Zagrożenia i perspektywy rozwoju populacji*, red. R. Kowalczyk, D. Ławreszuk, J.M. Wójcik, Białowieża 2010, pp. 51–62. See also M. Bruczyńska, A. Dodkowska, A. Dzikowski, M. Rudy, B. Orłowska, M. Welz, M. Krajewska-Wędzina, W. Olech, K. Anusz, *Legal Obstacles in the Eradication of Bovine Tuberculosis in European bison (Bison bonasus) – a Threat to an Effective Reintroduction Strategy*, “Diversity” 2022, vol. 14(9), p. 710, <https://www.mdpi.com/journal/diversity> (access: 22.09.2022).

⁴³ It was assessed that a demographically stable wisent population should have at least 100 individuals. Such a population needs an acreage of at least 200–300 km. See W. Olech, K. Perzanowski, *Podręcznik...*, p. 24.

⁴⁴ On order to successfully reintroduce a species that had been lost, the most important thing is to provide it with appropriate habitat conditions. In the case of the wisent, these should be habitats of at least several thousand hectares, including mixed tree stands, and to a lesser extent coniferous and deciduous, with about 20-percent share of natural pastures in the form of glades,

Systematic actions aimed at the protection of the wisent have various forms and diverse scale. For example, in 2017, the project “Comprehensive Protection of the Wisent by State Forests” was commenced, whose main goal is to ensure the sustainability of the wisent population and its development. The activities undertaken as part of the project are planned for 2017–2020. The partners jointly implementing the project are 22 forest districts, 5 regional directorates of State Forests, Forest Gene Bank in Kostrzyca, Centre for Forest Culture in Gołuchów, the Warsaw University of Life Sciences, Association of Wisent Enthusiasts, and the Białowieża National Park. The organizational unit coordinating and supervising the implementation of the project is the Department of Nature Conservation of the General Directorate of State Forests.

Thanks to European Union funding of about PLN 29 million from the “Infrastructure and Environment” program under the Cohesion Fund, the project “Comprehensive Protection of the European bison in Poland” will be implemented in 2019–2023. The beneficiary is the Warsaw University of Life Sciences and the partners are Białowieża National Park, Forest Culture Center in Gołuchów, and 24 forest districts, including Augustów, Baligród, Białowieża, Bielsk, Borki, Browsk, Cisna, Czerwony Dwór, Drawsko, Gołdap, Hajnówka, Janów Lubelski, Kobiór, Komańcza, Krynki, Lesko, Lidzbark, Lutowiska, Niepołomice, Płaska, Stuposiany, Supraśl, Waliły, Żednia.⁴⁵ The project covers 90% of the national free-ranging population of the species in 8 provinces and 5 key breeding pens. In addition, for the stability of the species, it is planned to increase the acreage of free-ranging herds by another 2 sites and reduce tourist pressure on the sites of the species. Most of the tasks planned for implementation are related to active protection of the species.

The overarching goal of the project is to take care of the welfare of the population by carrying out tasks such as managing the species’ population through ongoing monitoring of animal numbers and health status, handling free-ranging herds, including prophylaxis and veterinary services, mitigating conflict situations related to the presence of bison by, among other things, leasing meadows on the outskirts of Białowieża National Park, and educating the public on how to deal with encountered individuals and farmers on how to prevent damage. Maintaining and improving the food base of the free-ranging population by improving the species’ natural food base is also an important aspect.

blanks or mid-forest meadows. Of course, all-year-round access to water is essential. The area should be fragmented as little as possible and deprived of anthropogenic barriers, such as linear residential development or transport routes. Close proximity to arable fields is also undesirable. See W. Olech, K. Perzanowski, *Podręcznik...*, pp. 31–32.

⁴⁵ <https://projekt.wisent.org/o-projekcie> (access: 20.09.2022).

Support will be provided for the restoration breeding of the species: repairs to infrastructure for bison breeding (feedlots, trapping facilities, roads, fences, buildings, as well as breeding and agrotechnical treatments) are planned. Thought has also been given to improving the genetic structure in closed breeding and in free-ranging populations by feeding the population with individuals of known pedigree from breeding as a genetic reserve. The results of distribution and ecological monitoring will help in environmental management and evaluation of the effectiveness of habitat improvement activities. The results of health monitoring will allow the introduction of appropriate prevention methods for infectious and parasitic diseases.

To sum up, the assumptions of this and other projects are similar. The priority is to keep the wisent population (as well as its spreading to increase the safety of the population),⁴⁶ improvement of wisent life conditions and ongoing monitoring of these animals. To this end, meadows are being reclaimed and mowed, hay is being prepared, fodder purchased, drainage ditches renovated, and water holes, feeding racks and haystacks constructed. Therefore, the collection and purchase of hay is carried out, meadows where wisents live are being rented and roughage is bought.

An important part of the population, constituting a genetic reserve for the species, are herds living in breeding pens. As part of maintaining such herds, the infrastructure and equipment of existing pens are modernized and new ones are being built. Free-living herds are monitored on a continuous basis. Genetic monitoring is carried out,⁴⁷ monitoring of health (examination of the health status of the population gives the possibility of early detection of diseases), spatial distribution of herds (using telemetric data and direct observations), and environmental monitoring of habitats (enables comparative analysis of wisent-inhabited areas with those uninhabited; the research shows that the protection of the wisent is beneficial for the whole environment – acting in favour of the wisent and its habitats is therefore the tantamount to the protection of other plant and animal species).

⁴⁶ On 8 February 2018, a male and three young females were transported to an adaptation yard located in the forest district of Augustów. The creation of small populations of this species is one of the objectives of the project “Comprehensive Protection of the Wisent by State Forests”. It is an origin of a new free-living herd that will soon settle in the Augustów Forest. The animals were caught from a free-living herd of in the Borki Forest. See R. Rogoziński, *Pierwsze żubry w Puszczy Augustowskiej*, http://www.augustow.bialystok.lasy.gov.pl/obszary-natura-2000/-/asset_publisher/x9eK/content/pierwsze-zubry-w-puszczy-augustowskiej#p_101_INSTANCE_kCS6 (access: 13.03.2022).

⁴⁷ The project “*Ex situ* Conservation of the Wisent *Bison bonasus* in Poland” established the first wisent gene bank in the world. See E. Strucka, Z. Kusza, B. Młynarczyk, Z. Kwapis, W. Olech, A. Suchecka, *Efekty projektu „Ochrona ex situ żubra *Bison bonasus* w Polsce”*, Warszawa 2014, pp. 28–38. Also, under the project “Comprehensive Protection of the Wisent by State Forests” it is planned to establish a professional wisent gene bank, to be located at the Forest Gene Bank in Kostrzyca. The Bank will secure the future of the species, and the collection will serve the wisent conservation and research.

It is worth mentioning here that until recently the wisent, despite being listed in the Annexes of the Habitats Directive, did not appear in free-living herds in the European Union countries, except Poland, Lithuania, Slovakia and Romania. It was only in 2013 that the first small free-living herd was introduced in Germany. This species has no protective status in countries where it is not a component of local fauna. In many countries it is treated in the same way as domestic cattle.⁴⁸

Designating wisent refuges is particularly noteworthy due to the great importance of refuges in their protection and breeding.⁴⁹ The idea of establishing refuges is to avoid a conflict between the need to ensure peace in the areas where wisents occur and economic forestry activities. Wisent refuges and migration corridors connecting them, were designated as part of the Natura 2000 network based on long-term data on the distribution of wisent population and sites of their seasonal concentration, as well as information included in the forest development plans.⁵⁰

In recent years, nearly 100 wisents from Poland have been sent to foreign breeding centers and free-ranging populations in Spain, Switzerland, Bulgaria and Romania and others. This is due to the efforts of a team of specialists from the Warsaw University of Life Sciences, the State Forests and the Bison Lovers Association. In total, since 1935, more than 450 bison from Poland have supported the restitution of the species outside our country. However, this requires constant cooperation at the national and international levels. The main purpose of the exchange is to increase the current range of the species and create new sites for it. The transports are also aimed at preventing animals from mating in close kinship, which is crucial when breeding a species with such low genetic variability.

For example, only in 2022, 16 animals left Poland. On January 10, 2022, 8 bison from 4 Polish breeding centers left for Spain. Preparations for their transport began back in 2021, as it was necessary to examine the animals and obtain the documents required before exporting them out of the country, such as veterinary certificates or an export permit for a species under strict protection from GDOŚ. The destinations were the bison breeding farm La Serreta, registered in the Bison Pedigree Book, and a new breeding farm near San Rafael – Finca Venta Cornejo

⁴⁸ It must be labeled, assigned a passport, and in case of a wish to liquidate the herd, there are no provisions to prevent this. This is especially undesirable when it concerns genetically valuable individuals. Despite the lack of adequate provisions, awareness of herd owners is now considerable enough to allow them to participate voluntarily in the conservation programme. See W. Olech, K. Perzanowski, *Podręcznik...*, p. 25.

⁴⁹ K. Perzanowski, M. Januszczak, A. Wołoszyn-Gałęza, *Management of Wisent Population within a Natura 2000 Site*, "European Bison Conservation Newsletter" 2009, vol. 2, pp. 34–39; eidem, *Założenia do wyznaczenia ostoi żubra w Bieszczadach*, "European Bison Conservation Newsletter" 2008, vol. 1, pp. 79–86.

⁵⁰ P. Brewczyński, *Żubr w Bieszczadach*, http://ochronazubra.rdpl-krosno.pl/pl/o_zubrze/58.html (access: 9.03.2022).

y Las Hoyadas. The European Bison Conservation Center of Spain (EBCC), with which scientists from the Institute of Animal Science at the Warsaw University of Life Sciences are in constant contact, takes care of the bison on site. The transport of the animals was financed by the project “Comprehensive Protection of the Bison by the State Forests” implemented under the Forest Fund.⁵¹

Another 3 individuals left for Bulgaria on April 6, 2022. Females trapped from the wild in the Bieszczady Forest District of Lutowska have joined the free-ranging herd registered in the Pedigree Book under the name NANOVITSA. Currently, the herd numbers 12 individuals, including 4 bulls. The area where they live is located in the Eastern Rhodopes Nature Reserve. The export of the Bieszczady bison to Bulgaria was subsidized by the Forest Fund within the framework of the project “Comprehensive Protection of the Bison by the State Forests”, successfully implemented since 2017, by the State Forests, the Warsaw University of Life Sciences and the Association of Bison Lovers.⁵²

On March 28, 2022, 5 wisents from Poland left for Fruška Gora National Park in Serbia. There, they will reside in an enclosure of 120 hectares, located in the forest and 1/6 covered by meadows and pastures. This is the first semi-free herd in Serbia, until now the animals have only been kept at the Palic Zoo. There will be another breeding of the lowland line of the species in Europe, thus, Serbia will join the effort to actively protect the wisents. The export of wisents to Serbia is co-financed by the project “Comprehensive Protection of the Bison by the State Forests” and the coordination of this project is handled by specialists from the Warsaw University of Life Sciences.⁵³

The idea of active protection of the wisent has been proposed for many years. Meetings and workshops presenting the species and building its image among local communities are being organized. The education of the youngest is very important here (creation of educational paths, organization of school trips, etc.).

Concluding remarks

At the legal and institutional level, nature conservation in Europe dates back to the early 20th century. International cooperation, practices sharing and information between the Member States, have resulted in joint nature protection initiatives. As a consequence, the basic forms of nature protection have become

⁵¹ L. Sternik-Stempkowska, *Aktualności*, <https://projekt.wisent.org/k/aktualnosci/page/1-6> (access: 20.09.2022).

⁵² *Ibidem*.

⁵³ *Ibidem*.

widespread and have entered the European natural space.⁵⁴ Despite the very good effects of wisent restitution in Poland, it remains an endangered species (according to an appropriate category on the IUCN Red List). The wisent is listed on the III Annex to the Bern Convention, which means that the management of this species should be conducted in a manner that does not threaten the stability of the population; it is also listed as a priority species in the Habitats Directive, which results in a special obligation for the Member States of the European Union to act towards its protection.⁵⁵ This covers, among other things, the establishment of the European Ecological Network Natura 2000, whose aim is to preserve the European natural heritage. The network combines features of the two forms of protection: area protection and species protection.

According to Lidia Sternik-Stempkowska, who implements the above-mentioned project “Comprehensive Protection of European bison by State Forests”, at the end of 2019, after the inventory, 2,048 specimens in free roaming herds and 221 in enclosed breeding were shown. The bison inventory is carried out during the winter period, when the animals concentrate around feeding sites. It facilitates observation and detailed identification of the herd structure. Apart from winter inventory, there are also year-round observations conducted, the results of which are transferred to the *Wisent Pedigree Book*, which is the only official register of herds and individuals in the world. The Book is published annually and presents the status at the end of each calendar year. It also serves as a compendium of knowledge for breeders around the world.

Data for 2020 show that European population is 8,425 individuals, including 6,237 in free roaming herds. In Poland, the whole population is 2,269 individuals (27%), including 2,048 free roaming bison in six locations (33% of free roaming European population). Professor Wanda Olech forecasts that provided a reasonable active protection is continued, in 2029 there can be approximately 13,342 specimens in Europe, including 9,318 in free roaming herds, and approximately 3,143 specimens in Poland, including 2,730 free roaming wisents (29%) in 24 roaming stations. In 2021, a new breeding herd of wisents was created – mammals from the Borecka Forest were transferred to the Lubelskie Province, to the Janów Lubelski Forest District.⁵⁶ Two more free-ranging herds are to be established in the Bircza and Rymanów Forest Districts in southeastern Poland. A show enclosure is being build in Krajewo in Mazovia. Although the bison reintroduction process is a long one, education and talks with the local community have already begun.

⁵⁴ M. Woźniak, *Natura 2000 jako obszar konfliktogenny*, [in:] *Problemy...*, pp. 237–238.

⁵⁵ K. Perzanowski, *Zarządzanie populacją żubra *Bison bonasus**, [in:] *Zarządzanie populacjami zwierząt*, Warszawa 2016, p. 74.

⁵⁶ *Kompleksowa ochrona żubra w Polsce*, <https://www.sggw.edu.pl/kompleksowa-ochrona-zubra-w-polsce/> (access: 10.03.2022).

The dynamically growing population is proof of the effectiveness of the activities carried out so far in Poland. They are gaining recognition, and with the support they receive and international approval and cooperation, they can continue. In order to maintain the upward trend, activities should be focused on proper management of existing bison herds and searching for space and creation of new local populations. In Poland, the wisent is under strict species protection. The aim of the protection is to achieve a demographically stable population with a possible large diversity of the gene pool, and this is the objective of all activities being undertaken. The most urgent objective at the moment seems to be to provide the conditions for the migration of particular wisent individuals between subpopulations (setting the migration corridors). This would be made easier by prohibiting, during periods of increased reproductive activity, the general access to parts of the forest constituting a wisent refuge.

While creating the strategy for free roaming populations, one should consider as an aim increasing the number and range of population with minimizing conflicts, improving the feeding base (restoration of mid-forest meadows, water retention, appropriate number of properly located winter feeding sites), carrying out comprehensive monitoring, minimizing the damages caused by wisents in agriculture and forestry, defining the possibility of development of existing wisent populations, creation of new small wisent herds. Absolutely, there is a need for active protection of the species.

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Abstract: The Białowieża Forest is a compact forest complex situated on the border between Poland and Belarus. The Polish part covers 62,000 ha, of which 10,500 ha is the area of the Białowieża National Park. Nature of the Forest is protected under applicable regulations of ordinances concerning the protection of species of plants, animals and fungi, and under planning documents containing protective tasks for Białowieża, reserves, habitats and species subject to protection in the area of Natura 2000. One of the main priorities of nature protection in the Białowieża Primeval Forest is the protection of the wisent (European bison), for which the Forest is the basic refuge. This is mainly due to the history of the species – it was here that the last free-living survivors were found and here the population was reproduced, first by breeding, and, finally, in free-living herds. The world's wisent population in 2017 was about 6,000 individuals, with nearly 1,700 in Poland. This state is a result of the implementation of many projects for the protection of the species, as well as close international cooperation. The significant increase in the number of herds and the population indicates the effectiveness of the activities carried out and the need to continue them.

Keywords: law; protection; nature; national park; endangered species

Abstrakt: Puszcza Białowieska to zwarty kompleks leśny położony na granicy Polski i Białorusi. Część polska obejmuje 62 tys. ha, z czego 10,5 tys. ha to obszar Białowieskiego Parku Narodowego. Przyroda Puszczy chroniona jest na podstawie obowiązujących przepisów rozporządzeń dotyczących ochrony gatunkowej roślin, zwierząt i grzybów oraz na podstawie dokumentów planistycznych zawierających zadania ochronne dla Białowieży, rezerwatów, siedlisk i gatunków podlegających ochronie w obszarze Natura 2000. Jednym z głównych priorytetów ochrony przyrody w Puszczy Białowieskiej jest ochrona żubra, dla którego Puszcza jest podstawową ostoją. Wynika to przede wszystkim z historii gatunku – to tutaj znaleziono ostatnie żyjące na wolności osobniki i to tutaj nastąpiła reprodukcja populacji, najpierw poprzez hodowlę, a w końcu w wolno żyjących stadach. Europejska populacja żubra w 2020 r. liczyła 8425 osobników, z czego w Polsce blisko 2270. Stan ten jest wynikiem realizacji wielu projektów na rzecz ochrony gatunku, a także ścisłej współpracy międzynarodowej. Znaczący wzrost liczebności stad i populacji wskazuje na skuteczność prowadzonych działań i konieczność ich kontynuacji.

Słowa kluczowe: prawo; ochrona; środowisko; park narodowy; zagrożone gatunki