

# European Bison Species Strategic Review – perspectives and challenges

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**Abstract:** The document "European Bison Species Strategic Review 2020", is very important for the further conservation of the species. This document was prepared by 32 authors from 15 countries. Its preparation was a process which took more than two years. The final version of the document was sent to Glenn Plumb, chair of Bison Specialist Group IUCN, who was responsible, according to signed agreement, to publish it as "grey" literature of IUCN. On March 11, 2022 the report in PDF version has appeared on the BSG/IUCN website. The problem was that this pdf file only looks similar to "grey" literature of IUCN and after consultation with Publishing Office it became sure that the promises of the chair were not fulfilled. We, as editors of the report, decided to published it in printed version. We did not change the layout, however the ISBN number was assigned by publisher – European Bison Friends Society. Also we removed the information concerning "grey" literature. Apart from the analysis of current status of the species and recommendations for its future conservation discussed are new threats connected with Russian invasion in Ukraine and implementation of Animal Health Legislation in EU countries.

**Key words:** *Bison bonasus*, conservation, population management, actual threats

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Species Action Plans for over 60 rare and endangered species have been published since 1986 by the Species Survival Commission (SSC) of IUCN – The World Conservation Union. They are designed to assess the status of threatened species their habitats, and provide prioritized recommendations for action. Those documents are considered among of the world's most authoritative sources of species conservation information available to nature resource managers, conservationists, and government officials around the world"(SSC 2002, Fuller *et al.* 2003).

The first and so far the only SAP for European bison (*Bison bonasus*) was published in 2004 (Pucek *et al.* 2004). This document provided a detailed analysis of the status of the species by the beginning of XXI century, and outlined measures crucial for its conservation as well as further successful management. As a result of its implementation, population of European bison estimated in 2000 for less than 1800 individuals, by 2021 grew up to about

7000. This has created a new situation related to locally high population density and increasing damages to crops and tree stands that potentially may decrease of acceptance level for the species amongst local communities (Klich *et al.* 2021; 2022). Also some populations grew up above the carrying capacity of their home ranges and because of high density are under the threats of different diseases (Demiaszkiewicz *et al.* 2020).

Additionally, many old problems remain crucial to the species' future, including: its still extremely narrow gene pool, progressing loss of rare founders genes, cases of hybridization with American bison, further health threats related to new diseases, limited living space and isolation of existing herds, shortage of suitable reintroduction sites, poaching, traffic accidents etc. (Olech *et al.* 2019).

Those circumstances were discussed during the special meetings of the Bison Specialist Group of IUCN (European branch) and the European Bison Conservation Centre on September 18<sup>th</sup>, 2018 in Muczne, Poland and on September 6<sup>th</sup>, 2019 in Białowieża, Poland. Representatives of 13 European countries (Belarus, Bulgaria, Czech Republic, Denmark, Germany, Lithuania, Netherlands, Poland, Romania, Russia, Spain, Sweden and Ukraine) agreed that the current Action Plan is out of date and there is an urgent need for its revision.

A group responsible for preparation of the new SAP consisted of members of the Bison Specialist Group and the European Bison Conservation Centre. Finally as much as 32 specialists: ecologists, genetics, veterinarians, foresters, conservationists and breeders, representing all European countries where free ranging or captive populations of the species occur, were involved in the process.

Due to unexpected formal obstacles, there was not possible to publish this document as a Species Action Plan, however it was accepted for circulation in 2022 by SSC IUCN as Species Strategic Review, and can be treated as guidelines for future conservation actions.

The European Bison Species Strategic Review 2020, is the most up to date elaboration on the current knowledge of species' biology, history, world distribution, habitat suitability, health status, legal situation all over the Europe, present and potential threats. In conclusions it provides also practical suggestions, specific solutions, and appropriate local actions towards an improvement of present welfare of the species as well as recommended measures for its further restitution in the future.

Among the most important issues affecting the effectiveness of management of this species differences in its legal status and the approach to European bison conservation amongst European countries, the lack of separate procedures for the management of free, semi-free and captive animals as well

as formal requirements for the relocation of the European bison being similar to those for domestic cattle.

On the almost 140 pages of this publication one can find detailed information about many topics. Some are worth to highlight. In the chapter “Evolutionary origin of the European bison” all relevant theories and hypotheses are presented and the long list of references is attached. The chapter “Habitat suitability” provides an extensive set of data on this subject and the analysis how to actively preserve species representing megafauna to avoid conflict with human activity. Also it is worth to mention that in this publication one can find many details about population size and distribution presented in tables, figures and maps. In the chapter named “Proposed changes” some future solutions are discussed. At the end of the document the chapter about European bison health was prepared by the group of veterinarians with long and extent practice gathered through the work with this species

In the moment of publication this was possibly the most complete overview and analysis of all current issues concerning the European bison. However, very soon new circumstances have appeared: the Russian invasion in Ukraine, where six free ranging herds of the species occur (about 14% of all herds in Europe), and the introduction of Animal Health Law by European Commission which considerably affects procedures connected with breeding, transfers and introduction to the wild of European bison.

### **Russian invasion in Ukraine and the European bison**

After 24<sup>th</sup> February of 2022, when Russian Army invaded Ukraine, two herds – Zalisska and Konotopska populations dwelling in the north-east of the country, were within area under Russian occupation during the first month of invasion. Since there is no information on illegal shooting of European bison, there is a fair chance that most of the animals survived, and some apparently have even been seen after the withdrawal of Russian troops (15 from Zalisska and 50 from Konotopska population). However, it is impossible to assess effects of random artillery or rocket fire and moreover, forests within home ranges of both populations are heavily mined. Therefore there is too high risk to enter this area now. A chance to estimate the losses in those populations may appear not earlier than in autumn after the fall of leaves and better visibility in the forest. Also, already well advanced project of the European bison reintroduction to the acclimatization enclosure in Chernobyl Zone had to be cancelled despite no reported damages to the infrastructure because this area is even more heavily mined and entry there will absolutely impossible for a long time (V. Smagol, pers. comm).

## Animal Health Legislation (AHL)

AHL is regulation (EU) 2016/429 of the European Parliament and of the Council of 9 March 2016, on transmissible animal diseases and amending and repealing certain acts in the area of animal health.

The European Commission has converted existing national rules into a uniform European health law for all kept animals (in captivity). This law is therefore for kept animals, including wild species *ex situ*. The aim of the AHL is to provide tools to control the health of animals in captivity, by means of the registration and identification of individual animals and checking their health prior to transport.

The AHL also applies to kept bovine species and considers: "Bovine are all animals belonging to the ungulate species within the genera *Bison*, *Bos* (including the subgenus *Bos*, *Bibos*, *Novibos* and *Poephagus*) and *Bubalus* (including the subgenus *Anoa*) as well as crossbreeds of those species".

There is lack of separate category for kept wild animals – if they are in captivity they are treated like domesticated species. Unfortunately, the European bison (*Bison bonasus*) or wisent belongs to such defined "Bovines" and is therefore also covered by this law.

It is worth to mention that *Bison bison* (American bison) is kept in Europe mainly for meat production purposes and is much more tamed than European bison. Treatment of both species from *Bison* genus according to the same rules is inappropriate.

Threats for European bison are serious because all Bovines in captivity must be identified (marked), regularly checked via blood sampling, and fulfill special procedure prior to their transport.

For identification purposes animals must be handled. European bison are very strong, wild and nervous, so the use of the squeezing box is difficult and not recommended. The other possibility is sedation, which is used before transport and for any veterinary treatment. Immobilization is also dangerous for animals and it is very costly, so should be used as rarely as possible.

Ear tags are not recommended – European bison tend to lose them more often than domestic cattle. Also this wild species will get the appearance of a domestic animal due to the large ear tags, what is not recommended for education or preservation purposes. Boluses are poorly applicable in wild animals and not recommended. Transponder chips are currently often used to identify European bison and animals are mainly chipped before transport.

Translocation is an element of species conservation and it is necessary for augmentation or for creation of new herds. Additional requirements before the transport (like a quarantine inside building) could be against the welfare

of wild animals, may not be possible before the transport and in consequence dissipate efforts towards the species protection.

In general the implications of the AHL imposing might lead to a lessening of the support for the species conservation, due to an increase in rules and regulations that are difficult to implement in practice and can lead to higher costs.

## References

- Commission Delegated Regulation (EU) 2020/688 of 17 December 2019 supplementing Regulation (EU) 2016/429 of the European Parliament and of the Council, as regards animal health requirements for movements within the Union of terrestrial animals and hatching eggs.
- Demiaszkiewicz, A. W., Moskwa, B., Gralak, A., Laskowski, Z., Myczka, A. W., Kołodziej-Sobocińska, M., Filip-Hutsch, K. (2020). The nematodes *Thelazia gulosa* Raillet and Henry, 1910 and *Thelazia skrjabini* Erschov, 1928 as a cause of blindness in European bison (*Bison bonasus*) in Poland. *Acta Parasitologica*, 65(4), 963–968
- Fuller R.A., McGowan P.J.K., Carroll J.P., Dekker R.W.R.J., Garson P.J. 2003. What does IUCN species action planning contribute to the conservation process? *Biological Conservation*, 112: 343–349
- Klich, D., Łopucki, R., Perlińska-Teresiak, M., Lenkiewicz-Bardzińska, A., Olech, W., 2021. Human-wildlife conflict: the human dimension of European bison conservation in the Bieszczady mountains (Poland). *Animals*, 11 (2), 503. <https://doi.org/10.3390/ani11020503>
- Klich D., Nieszala A., Perzanowski K., Januszczak M., Wołoszyn-Gałęza A., Olech W. 2022. Debarking intensity of European bison in the Bieszczady Mountains in relation to forest habitat features. *Forest Ecology and Management*, 508. <https://doi.org/10.1016/j.foreco.2022.120057>.
- Olech W., Klich D., Perzanowski K. 2019. A new Action Plan for European bison, elaborated due to the new challenges faced by European countries. Oryx-18-CN-0323. Olech, W. and K. Perzanowski (eds.). 2022. *European Bison (Bison bonasus) Strategic Species Status Review 2020*, European Bison Friends Society, Warsaw ISBN 978-83-940362-4-91, pp: 1–138
- SSC, 2002. *Species Survival Commission Action Plan evaluation. Report to the Species Programme of IUCN*. Available from Species Survival Commission, Rue Mauverney 28, CH-1196, Gland, Switzerland.

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## **Opracowanie „European Bison Species Strategic Review” – perspektywy i wyzwania**

**Streszczenie:** Document "European Bison Species Strategic Review 2020" jest bardzo ważny dla przyszłości ochrony żubra. Opracowanie zostało przygotowane przez 32 autorów z 15 krajów. Proces tworzenia dokumentu trwał ponad dwa lata. Ostateczna wersja została wysłana do Glenna Plumb'a, szefa Grupy Specjalistów rodzaju Bison Międzynarodowej Unii Ochrony Przyrody (IUCN), który był odpowiedzialny, zgodnie z podpisanym porozumieniem, do opublikowania dokumentu jako tzw. „szarej” literatury IUCN. W dniu 11 marca 2022 roku opracowanie w formie pliku pdf zostało umieszczone na stronie Grupy (BSG/IUCN). Problem jaki powstało to brak spełnienia przez ten pik wymagań IUCN i po konsultacji z osobami zajmującymi się publikacjami było pewne że obietnice przewodniczącego nie zostały spełnione. Zdecydowaliśmy się wydrukować i wydać dokument, przy czym wydawcą jest Stowarzyszenie Miłośników Żubrów. Nie zmieniliśmy układu, ale powiększone zostały zdjęcia oraz dodany numer ISBN. Usunęliśmy również informację że plik jest „szarą” literaturą IUCN. Oprócz omówienia zawartości dokumentu, w pracy przedstawiono nowe poważne zagrożenia dla żubra. Jednym z nich jest wojna w Ukrainie, a drugim nowe prawo o zdrowiu zwierząt Unii Europejskiej.

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