*Best Practices for Sustainable Wildlife Management*

CONSERVATION OF THE EUROPEAN BISON (*BISON BONASUS*) AND SUSTAINABLE USE OF ITS RESOURCES IN THE REPUBLIC OF BELARUS

The provided information delineates well-established protocols for the conservation of the European bison (*Bison bonasus*) in the emerging range of central-eastern Europe. This includes examination of crucial components of sustainable use of the wild species policies that are effective (such as inclusive and participatory decision-making; incorporation of diverse forms of knowledge and invocation of rights; equitable allocation of costs and benefits; policies tailored to the local social and environmental environment; and monitoring of social and environmental developments).

The European bison holds the distinction of being the largest mammal in the current terrestrial fauna of the Palearctic region. It also serves as the sole remaining representative of wild bulls in Europe. This species has been included in the Red List of the International Union for Conservation of Nature, specifically categorized as "Near Threatened" (NT). Additionally, *В. bonasus* is listed in the Red Books of Belarus, Russia, Ukraine and Lithuania.

The European bison inhabit 33 countries, including Germany (with 71 localities), Russia (44), Poland (29), Spain (20), Sweden (14), Ukraine (13), and France (11). The population trend in the primary locations of the previous distribution exhibits positive dynamics. As of December 2022, the global *B. bonasus* population stood at 10,536, with the majority, 8,225 individuals, residing in their natural habitats. There are 49 subpopulations of free-living bison, with 16 in Russia, 8 in Poland, and 6 in Ukraine.

Belarus has made a significant contribution to the restoration, growth, and research of the European bison population. At the beginning of 2023, there were 2,616 bison within Belarus (26% of the world number or every fourth *B. bonasus* in the world), of which 2,587 individuals were counted in 11 free-living subpopulations (which represented 31% of the free-living bison population or one-third of all European bison).

The increase in the number of European bison in Belarus can be attributed to the effective state documents that have been developed and implemented. These documents outline the strategies and procedures for conserving and utilizing the *B. bonasus* population, and also allocate financial resources from the national budget for their implementation. There are several important programs and plans established for the conservation and management of *B. bonasus* in Belarus. These include "The European bison Program" from 1999, the revised "Rules for Protection and Rational use of the European bison" from 2007, the "Concept for the Conservation and Sustainable use of the European bison" from 2012, the updated "The European Bison Settlement Scheme" from 2013, and the updated "The European bison Population Management Plan" from 2015. Furthermore, there are specific Action Plans for individual European bison populations.

The following funds are allocated for the implementation of measures for the conservation and sustainable use of *B. bonasus* in accordance with subprogram 4 of the State Program "Environmental Protection and Sustainable Use of Natural Resources" for 2021–2025, which is titled "Conservation and sustainable use of biological and landscape diversity":

- $1,212,500 for the implementation of conservation and sustainable use measures for *B. bonasus* subpopulations inhabiting the Berezinsky Biosphere Reserve and national parks;

- the allocation of $83,800 towards the execution of strategies aimed at preserving and promoting the sustainable utilization of the European bison inhabiting the Polesie State Radiation-Ecological Reserve. These strategies will consist of the following: the formation and maintenance of a network of feeding points, helminthological examinations, and veterinary assessments of the European bison, feed procurement and purchase, mineral-vitamin and immunostimulating additives, and the maintenance of food fields for the European bison;

- $111,600 for executing strategies to preserve and sustainably utilize additional subpopulations of the European bison, which involves acquiring and procuring feed, minerals, vitamins, and immunostimulating additives, maintaining designated food fields for the European bison, establishing and managing a network of feeding locations, and other related measures;

The legislation includes a provision for categorizing the European bison into two groups; one group consists of individuals that constitute the main gene pool and are protected as a species listed in the Red Book of the Republic of Belarus. The other group belongs to the reserve gene pool and can be removed from their habitat, including through commercial hunting.

Individuals included in the reserve gene pool are carefully chosen for removal based on specific criteria. These include individuals exhibiting signs of severe exhaustion, individuals with fatal complications and injuries, those born with physical disabilities, individuals displaying aggression towards people or domestic animals, and females over 15 years old and males over 14 years old.

To ensure a fair and cooperative decision-making process, the commission is responsible for assigning individuals to the reserve gene pool. The team consists of experts from various government agencies, including representatives from *B. bonasus* population management, the state veterinary service, the National Academy of Sciences of Belarus, the Ministry of Natural Resources and Environmental Protection, and the State Inspectorate for the Protection of Fauna and Flora under the President of the Republic of Belarus.

Annually, around 50 *B. bonasus* are culled and eliminated for economic purposes. The revenues generated from the extraction of the European bison from the reserve gene pool are utilized to support the sustainability of existing populations and promote the growth of local infrastructure and feeding.

As part of efforts to protect and sustainably manage *B. bonasus* populations, a comprehensive plan for European bison population management and a resettlement scheme have been developed and are currently being implemented in the Republic of Belarus. Developing action plans for the conservation and rational use of European bison populations is also a viable option. These plans include measures that are supported by scientific research and intend to maintain a suitable population size and age-sex structure. The goal is to ensure the welfare of the animals and preserve the main population, while also relocating peripheral herds to nearby areas. Additionally, the plans aim to sustainably utilize resources that exceed the habitat's capacity, which includes reducing the damage caused by *B. bonasus* to agriculture and forestry. This will be achieved through comprehensive monitoring, veterinary control, biotechnical measures, population regulation, protection of the European bison, and environmental education.

By adhering to the aforementioned national strategy and implementing sustainable wildlife management best practices, Belarus has been able to significantly contribute to the long-term conservation of the European bison. Belarus ranked second globally in terms of the *B. bonasus* population in 2005, trailing only Poland. Subsequently, it attained the highest number of free-living bison in 2011 and the total number of this species in 2018.

24.01.2024