



# Global Re-introduction Perspectives: 2013

Further case-studies from around the globe  
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## Restoration of wisent population within the Carpathian eco-region, Europe

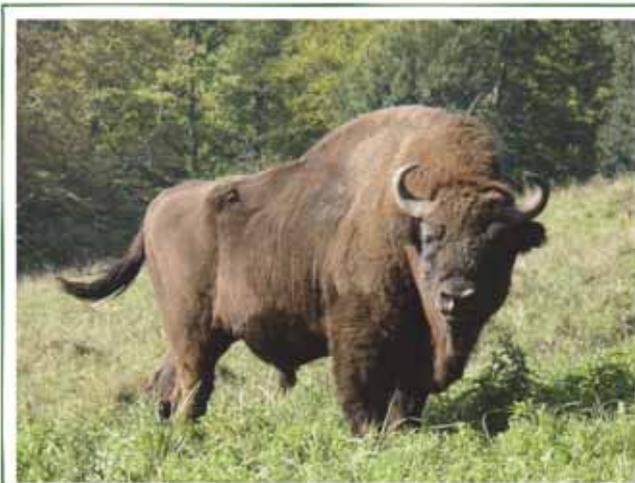
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### Introduction

The wisent or European bison (*Bison bonasus* L.), fairly common in the Carpathian eco-region (a mountain range of about 210,000 km<sup>2</sup>) in Medieval Ages, finally disappeared there by late 18<sup>th</sup> century, due to overhunting and gradual habitat loss. First attempts for its re-introduction date back to the 1960s (Poland and Ukraine). The restitution project involving five countries (Poland, Slovakia, Ukraine, Romania and Hungary) was initiated in the late 1990s. By 2012, there are 6 free ranging wisent populations counting together over 350 individuals and seven breeding enclosures (100 animals). Planned activities concentrated on increment of wisent numbers, the extension of their range and an improvement of the genetic pool through prescribed supplementation with selected individuals from captivity. The species has IUCN status Vulnerable. It is divided into two genetic lines, Lowland with VU status and Lowland-Caucasian classified as Endangered (EN) because of decreased population size. The species is listed in Appendix III of the Bern Convention, and on Annexes II\* and IV of the EU Habitats and Species Directive. In Polish Red List the species has category EN and most countries in which the species occurs have national management plans. The European Bison Conservation Centre established in last

years is responsible for coordination and information exchange.



Wisent bull in Romania © Kajetan Perzanowski

### Goals

- Goal 1: The establishment of a viable meta-population of the species in the Carpathian eco-region.
- Goal 2: An improvement of present genetic structure of Carpathian herds.
- Goal 3: An extension of the present range of the species in the eco-region.

- Goal 4: An increase of a number of free-ranging herds.
- Goal 5: An introduction of a routine monitoring of all free ranging herds in the region.

## Success Indicators

- Indicator 1: Reaching an effective population number over 500 individuals.
- Indicator 2: An increase of underrepresented founders in the gene pool of this population.
- Indicator 3: An establishment of free ranging herds in Romania and Slovakia.
- Indicator 4: Spontaneous migrations of animals outside of herds' home ranges.
- Indicator 5: Acceptance of free ranging wisents by local communities.



Release at Bieszczady National Park

© Kajetan Perzanowski

## Project Summary

**Feasibility:** The Carpathians are the largest and most important linkage for wildlife between the south-eastern and central part of the continent. This mountain chain remains mostly forested (from about 30% in Hungary up to over 60% in Romania), including the largest in Europe stretch of natural mountain forest dominated by fir and beech. It is also a mainstay of a majority of native large mammals including almost all European large predators: brown bears, wolves and lynx. The wisent, extirpated from the region some 200 years ago, was the last surviving species of large grazers, contributing in the past to the maintenance of grassland communities and forest mosaic. Gradual encroachment of settlements into mountain valleys, and the development of livestock based local economy have led to the fragmentation and the loss of a large part of natural habitats. Economic and political changes after the World War Two did not facilitate a cooperation in the field of nature conservation within the region. A majority of forests, and a considerable part of cultivated land became state controlled and subject to central planning. First attempts to bring back wisents to the region were undertaken independently some 50 years ago in Poland and Ukraine, but internationally coordinated project became possible only by the end of the 1990s of the 20<sup>th</sup> century.

**Implementation:** The project was initially based upon already existing free ranging herds (two in Poland and two in Ukraine) but gradually it was extended to Slovakia, Romania, and Hungary. According to the guidelines determined by the European strategy for the conservation of the species (Pucek *et al.*, 2004), concerned with separate maintenance of two genetic lines (Lowland and Lowland



Loading of wisents in Ukraine

© Lukasz Polawski

–Caucasian), since first wisent released there belonged to the latter, further introductions followed the same rule. The source of new animals are genetically selected from various breeding centers of Europe. Because of exceptionally high levels of inbreeding within the species, the main criterion for their choice is the genetic distance and founder representation. The genetic evaluation is based on pedigree analysis as well as on

DNA genotyping, mainly microsatellites. In the beginning of the project, all involved countries did not belong to the EU, so an import of animals was legally and logistically quite complicated. Now, only Ukraine remains outside of the EU so large part of necessary arrangements and paperwork is much easier. A serious problem remain however health related issues, since as Bovines, wisents may transmit various diseases dangerous to the livestock including foot and mouth disease, brucellosis or TB. Also the legal status of this species is not the same all over the Europe, ranging from fully protected to being listed among cattle. So far in countries of western Europe, wisents are maintained only in captivity and their release to the wild is considered as highly controversial, however there are plans for such experiments in Germany, Sweden, Holland and Denmark.

**Post-release monitoring:** In countries where wisents enjoy the freedom, their numbers, population structure and movements are monitored either by Forest Service or national park personnel. As a rule, samples of tissue are collected from dead animals, and in the case of Polish population also seasonally samples of feces as an indicator of parasitic infestations. Since 2002, in the majority of cases, wisents released to the wild were fitted with radio-collars allowing to verify their interactions with wild animals and follow their fate. There is an exchange of information on this subject among neighboring countries (Poland, Slovakia and Ukraine), and results of monitoring are published on regular basis in commonly accessible international journals.

## Major difficulties faced

- Problems connected with transfer of animals between countries (health status) and between EU and non EU countries (legal status).
- Obtaining a consensus with local stakeholders.
- Lack of stable financial support for established free ranging herds.

- Uncontrolled losses of animals due to poaching in Ukraine.

## Major lessons learned

- The project was carried out in countries of various economic conditions and different legislations regarding nature conservation so every time a different approach was required to tackle any arising issues.
- A key for the success of newly established herds is an acceptance of the presence of introduced animals by local communities.
- There is a threshold regarding the size of a population (about 40 animals), below which its numbers grow very slowly and the population remains vulnerable to extinction.
- Free ranging herds should be monitored on long term basis, including: population census, spatial distribution, and mortality causes.

## Success of project

Highly Successful	Successful	Partially Successful	Failure
	√		

### Reason(s) for success/failure:

- A number of people dedicated to the conservation of this species.
- High level of social acceptance for the species in countries of the region.
- Fairly well maintained natural and semi-natural habitats.
- Well-developed methods for captive breeding of the species.
- Broad access to captive animals suitable for introduction to the wild.

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