Status of the brown bear in Poland

Nuria Selva
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Strict protection since 1952
Annex II and IV Habitats Directive

<table>
<thead>
<tr>
<th>Art. 17 reporting</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reporting period</strong></td>
</tr>
<tr>
<td><strong>Population size</strong></td>
</tr>
<tr>
<td><strong>Population trend</strong></td>
</tr>
<tr>
<td><strong>Habitat occupied</strong></td>
</tr>
<tr>
<td><strong>Habitat suitable</strong></td>
</tr>
<tr>
<td><strong>Habitat trend</strong></td>
</tr>
<tr>
<td><strong>Overall assessment</strong></td>
</tr>
</tbody>
</table>

www.carpathianbear.pl
MAIN LACKS

(1) Reliable **monitoring** methods
(2) Use of **scientific knowledge** in management
(3) Implementation of existing **legislation**
(4) **Coordination and communication** among institutions and sectors involved, also with neighbor countries
Brown bear distribution and numbers in the Polish Carpathians in 2009-2011

Western segment (14, 34)

Eastern segment (46, 61)

Observations of bears in Polish Carpathians in 2009-2011
- family groups
- single individuals
- damages
<table>
<thead>
<tr>
<th>Lp.</th>
<th>Nadleśnictwo</th>
<th>Wilki</th>
<th>Rysie</th>
<th>Niedźwiedzie</th>
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<tr>
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<td>Tuszyma</td>
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<tr>
<td>26</td>
<td>Ustrzyki Dolne</td>
<td>54</td>
<td>30</td>
<td>19</td>
</tr>
</tbody>
</table>

Ogółem RDLP w Krośnie | 519 | 262 | 167 |
Method to estimate population size-explanations by the State Forest Administration

The number of protected animals, such as bison, bears, wolves, lynx and beavers, are assessed by the method of “year-round observations”, based on the observation cards filled by employees of every Forest District and hunters of the corresponding hunting club. In order to avoid counting the same individuals, “arrangements” are done between neighbor Forest Districts and/or National Parks.
Movements of 6 bears in the Polish and Slovakian Tatras

Hair sampling sites in the Polish and Slovakian Tatras (TPN, TANAP)

# Estimations of bear numbers in the Polish TPN, Slovakian TANAP and the whole Tatra National Park

<table>
<thead>
<tr>
<th>Estimates</th>
<th>Polish Tatra</th>
<th>Slovakian Tatra</th>
<th>Whole Tatra</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. collected samples</td>
<td>143</td>
<td>228</td>
<td>371</td>
</tr>
<tr>
<td>No. genotyped samples</td>
<td>48</td>
<td>47</td>
<td>95</td>
</tr>
<tr>
<td>No. unique genotypes</td>
<td>30</td>
<td>24</td>
<td>42</td>
</tr>
<tr>
<td>No. genotypes found more than once</td>
<td>6</td>
<td>5</td>
<td>18</td>
</tr>
<tr>
<td>Total no. bears in 7-month period</td>
<td>47.4 (±11.5)</td>
<td>60.4 (±21.4)</td>
<td>63.5 (±9.2)</td>
</tr>
</tbody>
</table>

Mean number of damage claims from 2005 to 2012

Factors affecting the number of bear damage claims

The number of claims per bear are related to:

- Compensation schemes
- Management practices
- Human land-use

The number of claims per bear are NOT related to:

- Bear population size
Human-bear relations

Damages to properties

Money spent in bear damage compensations in Poland (2003-2010)

- Mean: 17,000 euro/year
- Maximum: 62,000 euro/year
- Minimum: 0 euro/year

Selva et al. 2011. Management plan for the brown bear Ursus arctos in Poland. University of Life Sciences, Warsaw
Chrońmy Przyrodę Ojczystą
Main threats Carpathian population

Habitat (infrastructure)
Disturbance
Low acceptance

Action 1 Europe
Protection of bear habitat and enhancement of connectivity within each population and between populations

Action 1 Carpathian population
Promote naturalness of bear feeding habits and provide guidelines for supplementary feeding practices

Action 1 Poland
Conservation of brown bear habitat and ecological connectivity
Suitable bear habitat - low human pressure

Occurrence & Reproduction

Low no. human settlements
Low human density

Movement

Low density of roads and settlements
Far away from roads and settlements


Main threat: HABITAT LOSS

- Habitat loss and fragmentation by transport infrastructures
- The lack of urban spatial planning in Poland
- Development of winter sport infrastructures
- Blocking ecological corridors and disruption of habitat connectivity
- Importance of keeping large unfragmented areas in bear habitat

---------- HIGHLIGHT!
Roadless areas as secure bear habitat

HABITATS DIRECTIVE (1992)
Art. 6. HABITAT CONSERVATION AND PROTECTION
Art. 12. PROTECTION OF BREEDING SITES

CARPATHIAN CONVENTION (2003)
Art. 5. SPATIAL PLANNING
Art. 8 SUSTAINABLE TRANSPORT AND INFRASTRUCTURE
Art. 9 SUSTAINABLE TOURISM
SCB Roadless Areas Initiative Goes Global

With an assist from Google, an initiative of the SCB Europe Policy Committee to protect the world’s remaining roadless areas is gaining momentum in scientific forums and conferences around the world, most recently at the Convention on Biological Diversity in Hyderabad, India.

Chapter 3

WHY KEEP AREAS ROAD-FREE? THE IMPORTANCE OF ROADLESS AREAS

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4University of York, UK
5Division of Biological Sciences, Humboldt University, Berlin, Germany

HANDBOOK OF ROAD ECOLOGY

By Nuria Selva, posted on November 9, 2012

INSE 2014 Declaration

Protect remaining roadless areas

We, the participants of the INSE 2014 International Conference, acknowledge that

- the mobility of people and goods is important for economic development; transportation facilities such as roads, railroads and canals bring benefit to people and are essential components of present-day human societies,
- transportation infrastructure with its associated traffic exerts substantial pressures on biodiversity that extend far from individual transportation corridors and may interact and even accumulate at network level,
- even minor infrastructure is of significance as it prepares for exploitation of natural resources and secondary development,
- the detrimental environmental impacts of traffic and transportation infrastructure can only in part be mitigated effectively, but not entirely avoided.

Roadless areas (RLA) are of particular importance for biodiversity conservation, because they
- are the least disturbed natural areas in the world,
- are characterized by high ecological value, integrity and connectivity,
- act as refuges for native and endangered wild animals and plants,
- provide vital ecosystem services such as clean water and air, opportunities for recreation, and protection against pests and invasive species,
- are more resistant to and resilient from catastrophic events,
- help species to adapt to new conditions created by climate and landscape change.

Thus, roadless areas far exceed roaded areas in the ecological benefits they provide.
The dispersal of lwo

3650 km in 21 months
63 border crossings (4 per month)
238 road crossings (3 per week)
Go beyond numbers
Focus on habitat

Thanks for your attention