
Keywords: 7SI/Brown bear/harvest/harvest quota/hunting/Malme/management/mortality/population size/trend/Ursus arctos

Abstract: This report explain the decision of the Ministry of Environment and Spatial Planning to apply the annual-harvest quota of 100 bears proposed by the Slovenian Forest Service for the year 2006. This quota is higher than in the previous years. The facts specified are: previous trend of the brown bear mortality in the wild, damage caused by the brown bear to farmed livestock, bees, agricultural crops and to other property, brown bear monitoring and the population-size assessment.
Management and protection with brown bear population in Slovenia proceed from the 19th century when in most parts of Europe brown bears were being persecuted and exterminated.

Thanks to the knowledge and close to nature adjusted management with all natural resources in the past, Slovenia is at the present one of the rare country in Europe with stable and one of the most vital brown bear population with an expanding habitat and strongly increasing numerically.


Adopted documents and present management reflects our truly and sincere effort to achieve close to nature sound coexistence between brown bear and people living in the areas with constant or casual present of brown bear.

Cull for the year 2006 was adopted in accordance with result of attentive monitoring on the condition of brown bear population in the last decade. The decision also follows the fact that in the year 2006 ascertainable damage trend and conflict situations involving bears are significant higher.

To define the extent of necessary annual reduction of brown bear specialist of Slovenian Forest Service must write down the proposal, with all the technical reference and data
available at the moment. Among all data which indicates on a current state of a brown bear population especially the following data must be taken into account:
- the previous trend of the brown bear mortality in the wild (harvest and losses) and the mortality analysis for the last year,
- trend and analysis of the damages found to be caused by brown bear,
- trend of the conflict situations involving bears, as recorded by the Intervention group for problems involving brown bears,
- data derived from the brown-bear monitoring conducted by the Slovenian Forest Service and the Hunters Association of Slovenia in 2000, 2001, 2002, 2003, 2004, and 2005, with an emphasis on the monitoring performed at the permanent monitoring places,
- daily monitoring of brown bear in the special-purpose hunting-districts Jelen ("Deer") and Medved ("Bear"), as well as the
- theoretical fundamentals and practical experience gathered by the Slovenian Forest Service's experts studying animals in the past.

Proposal of Slovenian Forest Service for reduction of brown bear population for 2006 is based on the facts specified below:

1. Previous trend of the brown-bear mortality in the wild

A survey of the bear mortality in the wild in the seven hunting years from 1994/95 through 2000/01 (each beginning on 1 April of the current year and ending on 31 March of the following year) – from 1994 through 2000 – and in the five calendar years from 2001 through 2005, by gender and weight:

<table>
<thead>
<tr>
<th>Number of bear deaths</th>
<th>BY GENDER</th>
<th>BY WEIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>males</td>
<td>females</td>
</tr>
<tr>
<td>Hunting year 94/95</td>
<td>19</td>
<td>20</td>
</tr>
<tr>
<td>Hunting year 95/96</td>
<td>23</td>
<td>8</td>
</tr>
<tr>
<td>Hunting year 96/97</td>
<td>29</td>
<td>17</td>
</tr>
<tr>
<td>Hunting year 97/98</td>
<td>29</td>
<td>20</td>
</tr>
<tr>
<td>Hunting year 98/99</td>
<td>37</td>
<td>21</td>
</tr>
<tr>
<td>Hunting year 99/00</td>
<td>33</td>
<td>23</td>
</tr>
<tr>
<td>Hunting year 00/01</td>
<td>38</td>
<td>21</td>
</tr>
<tr>
<td>Calendar year 2001</td>
<td>34 (6)</td>
<td>20 (3)</td>
</tr>
<tr>
<td>Calendar year 2002</td>
<td>73</td>
<td>42</td>
</tr>
<tr>
<td>Calendar year 2003</td>
<td>45</td>
<td>26</td>
</tr>
<tr>
<td>Calendar year 2004</td>
<td>49</td>
<td>29</td>
</tr>
<tr>
<td>Calendar year 2005</td>
<td>50</td>
<td>45</td>
</tr>
<tr>
<td>Total 94/95-2005</td>
<td>453</td>
<td>289</td>
</tr>
<tr>
<td>Percentage share (%)</td>
<td>60</td>
<td>38</td>
</tr>
</tbody>
</table>

During the whole previous year, 80 bears were harvested / lost in the core area, 11 in the marginal area, 1 in the transit (corridor) area and 3 in the region of exceptional presence of
bears. A large number of bears were harvested in the northern part of the core area, where also the number of damage cases was highest, as well as in those parts of the core region in which the human population density is the highest.

The share of losses is markedly high in recent years – it amounts to more than 20% of the total mortality number. In 2005, there were 21 losses due to traffic; in addition to these, there were 19 traffic accidents involving bears that were not found afterwards. During the last 6 years, 87 bears died in collisions with vehicles: 9 on highways, 39 on local roads, and 39 on railways.

Among the bears harvested/lost in 2005, there is a strong preponderance of those with a body weight of less than 100 kg (in 72.3 % cases of all known bear deaths), while the bears weighing 101 to 150 kg accounted for 23.4 % of bear deaths, and those weighing above 150 kg for 4.3 %. These percentages are quite close to the orientation levels defined in the Strategy.

In 2005, among the 95 bears harvested or lost, only 9 were females of the age of reproductive maturity. 78 % of the bears harvested or lost were not sexually mature yet (cubs of the year, yearlings, bears aged two or three years). These data show that the reproductive part of the population has not been affected much by the harvest and losses.

2. Damage caused by the brown bear to farmed livestock, bees, agricultural crops and to other property (in line with the compensation-payment methodology)

The number of damage events of 2005 is larger than the one of 2004 by a factor of 1.74, and is higher than any other annual number of the period in which the damage has been assessed by the Slovenian Forest Service and the compensations paid from the state budget. The main reasons are: the (excessive) size of the brown-bear population, sudden cessation of the feeding of feedingstuffs of animal origin, and the fact that in the forests less natural food was available in 2005.

Most of the damage was caused in the core habitat (primarily in its northern part) – as defined in the Brown Bear Management Strategy in Slovenia – with a clear trend of geographic expansion into the marginal habitat, corridor habitat, and area of exceptional presence of bears; this coincides with the monitoring results and assessments of the brown-bear population size.
3. Brown-bear monitoring and the population-size assessment

Also in 2005, monitoring of brown-bear population was organized by the Slovenian Forest Service and the Hunters Association of Slovenia. At all census sites, the censuses were performed on the same day (night), once in spring (in May) and twice in autumn (in August and in October). The censuses were carried out on all feeding stations for bears and other free-ranging species, and at the locations where it was very probable that bears would appear. **In conformity with the Life Natura III project and the demands of the European Commission, from all previously existing census stations a network of permanent census-stations (167) has been established, at which it is obligatory to perform the census.** As a rule, each census station is two kilometres away from the closest settlement, and three kilometres from the next census station. The network of permanent census stations has been established in order to make it possible to establish trends of population parameters within a (longer) time period.

It is not possible to mutually compare all the censuses (and the numbers of bears counted in them), because they differ in the duration of observation. It is, however, possible to compare the results of the 2000, 2001, 2002 censuses – a detailed analysis is given in the framework of the above-mentioned Life Natura III project (the corresponding studies are kept by the Slovenian Forest Service and the Biotechnical Faculty – Department of Forestry and Renewable Forest Resources). The censuses for the 2003, 2004 and 2005 are in the line of the result of the project Life Natura III and demands of the European Commission.

All the monitoring have shown that the number of cubs per female (cubs-of-the-year and yearlings) is very stable, amounting in most cases to approximately 1.8 – 2.0 cubs per female; the lowest number recorded so far is the one of October 2003 (only 1.70 cubs per female), and the highest the one of May 2000 (2.33 cubs per female).
The brown-bear censuses of 2005 were organized in the same way as those of previous years. Because of the sufficient reliable data acquired with this method the counting will remain one of the main part of monitoring the trends of the brown bear's population parameters.

4. Proposal of a harvest plan for the brown bear for 2006

On the basis of the performed analyses of the population parameters, with regard to the estimation of the actual bear-population size in Slovenia (500 - 700 animals) and on the basis of the condition of the population (a growing trend of the population size), we agreed with Slovenian Forest Service proposed annual-harvest quota of 100 bears, which includes also five bears designated for translocation into the French Pyrenees and exceptional removal of the problematic bears (Article 16 (b),(c)).

We think that the proposed annual-harvest quota is justified, also with regard to the LIFE NATURA III project (reproduction rate, cub-survival rate, sex structure and age structure of the past harvests, etc.).

It also protects the population itself from the negative publicity (in the local environment) which this species has experienced in the recent few years. Negative attitude of local communities, combined with the feeling that the situation is not controlled by the State can encourage poaching and thus undermine our policy about already achieved positive co-existence of bear and man.

The proposed reduction of brown bear population is such that both goals of the Strategy, the long-term preservation of the species and making possible the coexistence of man and bear, are accomplished. In the marginal and transit-area and in the area of exceptional presence of the bear we also met the goal, which is preventing the geographic expansion of the bear population's range into those areas in which the bear was not present in the past, where its presence would affect very much the human activities in the natural environment, and where the conflict events would result in a negative attitude of the people towards the bear.

We would like to emphasize that practically all Slovenian experts and scientists (Adamič, Jerina, Kos etc.) took active part in the LIFE III project “Conservation of Large Carnivores in Slovenia – Phase I (Ursus arctos)”.

On the basis of the result of the project we can assure you that conservation and management with Slovenian brown bear population is based on the currently available and reliable data.
Nevertheless we are always widely open to all reliable information and data about Slovenian brown bear population from all the expert and scientists which can participate to sustainable management with brown bear population.

Conservation and sustainable management with brown bear population is always a dynamic process connected and sometimes also depending from the tolerance of the people who live in the area of brown bear natural habitat. Perfect examples are recently the problems when France attempted to translocate five Slovenian brown bear in French Pyrenees and the last suddenly appearing of brown bear in Germany.

Because of the close to nature sound management brown bear was never exterminated from our territory. Even more our close to nature sound management recently enables also a new re-introduction of brown bear in Italy, Austria and France.

Sustainable preservation of brown bear population in Slovenia is not and was never endangered due to implemented or foreseen cull plans. All interventions in brown bear population are carefully planed and implemented. The evidence of our proper decisions is stable and vital brown bear population in Slovenia.

We believe that truly expressed worry and great awareness on importance of conservation of the brown bear population to welfare for all people in Europe will conduct to establishing again the natural conditions for a new colonization of brown bear in the areas in all Europe from which he was cruelly exterminated.