

## **Management of Brown Bears (*Ursus arctos*) in Europe.**

Sybille A. Klenzendorf

(Abstract)

Successful conservation of brown bears (*Ursus arctos*) in Europe is associated with public acceptance of damages caused by bears. Recent increases in sheep depredation and beehive damage in central Austria resulted in the deaths of two bears there. Since bear numbers are low in most European populations, alternatives to the elimination of problem bears associated with damage incidents must be sought. The events described above led to the formation of the Bear Management Group responsible for designing a management plan for Austria that will outline procedures for dealing with bear damage and conservation strategies.

This study provides an overview of the magnitude and seasonal patterns of brown bear damage in Romania, Italy, Slovenia, Norway, Sweden, and Austria. It also illustrates how bears are managed in European countries by comparing different management strategies for dealing with brown bear damage, describing how bear management is organized, determining which organizations are involved, and explaining which duties these fulfill. Bear damage data were obtained from interviews with wildlife managers, hunters, and farmers in Romania, Italy, Slovenia, Norway, Sweden, and Austria, and from official records of their bear management agencies. Most damage incidents involved sheep and beehives in all countries. All countries offered a more or less well functioning damage compensation program to farmers. Conservation success, especially for small bear populations, seemed to be related to a good compensation program and reducing damage to livestock and property. Possible improvements of management strategies to reduce damage and increase conservation success in these countries were discussed.

The second part of this study was the assessment of the organizational structure of different bear management programs in Europe. Brown bear management in Europe

included a broad spectrum of goals, ranging from no protection, to regulated hunting, to total protection. In each country, different organizations were involved in bear management, including private and governmental organizations. For each study country, I outlined which organizations were involved in bear management, determined if a management plan existed, described if and how hunting and damage compensation were structured, explained how each country dealt with problem bears, and finally, detailed what kind of management problems each country encountered. I tried to find management patterns for bear management in Europe, including advantages and disadvantages of each approach and their effectiveness within the countries they were applied. Methods included a content analysis of interviews with wildlife managers, farmers, and local people in each country. Results showed that two general types of management approaches could be identified. Romania, Sweden and Southern Slovenia took a conservationist approach, which was characterized by economic use of their bear population. All of these countries had viable bear populations. Romania and Southern Slovenia included an additional characteristic of feeding bears, which could be viewed as a utilitarian management scheme. The second management approach, which was classified as the preservationist approach, was observed in Norway, Italy, Northern Slovenia, and Austria. This management strategy was characterized by year-long protection of bears, low population numbers, and no feeding of bears.

Further results of management differences in problem bear management, damage compensation, public education, and effectiveness of management approaches were summarized. The study provides a reference on bear management strategies in Europe.