Chapter 15

National Game Management Database of Hungary

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ABSTRACT

Advances in ecological science and increasing public environmental awareness have resulted in changes in the management of renewable natural resources. To achieve sustainable use of wildlife, managers need reliable data on populations, habitats, and the complexities of ecological interactions. The National Game Management Database (NGMD) was first mandated by the Hungarian Game Management and Hunting Law in 1996. In this paper, the authors summarize the origins, characteristics, development, and results leading to the final establishment of and uses for the NGMD. Goals of the NGMD are to store data on game populations and game management, provide input to spatial analyses and mapping, and to facilitate decision-making and planning efforts of game management administration. It contains information on the populations of game species, data from annual game management reports, trophy-scoring data, maximum allowed and minimum huntable population size, and maps and long-term game management plans for each GMU and the 24 game management regions. In Hungary, the NGMD was the first operating database in wildlife management and nature conservation providing full GIS capabilities, supporting geographical analyses.

INTRODUCTION

In the last half century, advances in ecological science and increasing public environmental awareness have resulted in changes in the management of renewable natural resources. Managers are now expected to apply ecological theory, principles, and knowledge to management of wildlife species and their habitats (Brainerd, 2007; Morrison et al., 1998; Sinclair et al., 2006; Walters, 1986). A major goal for today’s wildlife biologists and game managers is to conserve natural resources...
and manage wild populations on ecologically sound bases. Wild animals and their habitats are limited resources that can be renewed and used sustainably if management is based on population demographics and productivity. In the case of game species, sustainable or “wise” use of their populations is the most important objective of management (Damm et al., 2008; Ebner, 2007; Potts et al., 1991).

In order to achieve sustainable use of wildlife resources, game management should be based on intrinsic population attributes, as well as environmental characteristics and processes affecting wildlife populations (Csányi, 2007b). It is important to plan at different temporal and spatial scales for natural resource management (Csányi, 1998, 1999a). To plan effectively, managers need reliable, accessible and well designed data on the managed populations, their habitats, and the complexities of ecological interactions (Braun, 2005).

The National Game Management Database of Hungary was first mandated by the Hungarian Game Management and Hunting Law in 1996. Since then, the database has contributed significantly to several aspects of game management; from plan development to wildlife ecological research and education. This work has been conducted through the Institute for Wildlife Conservation at Szent István University. Management and research conducted utilizing the database have supported the conservation of the famous Hungarian game populations, benefiting both hunters and the public, and has improved understanding and acceptance of ecologically sound wildlife management.

The following paper summarizes the origins, characteristics, development, and results leading to the final establishment of and uses for the National Game Management Database.

ECOLOGICAL AND HISTORICAL BACKGROUND

Sustainable use of wild populations is a priority in international conservation treaties and relevant European Union (EU) legislation (Brainerd, 2007; Ebner, 2007; European Communities, 1979, 1992). However, this is not a new concept; in many countries sustainable use of forests, fish, and game is a century’s old tradition. In Hungary, the first elements of modern, “sustainable” game management were established in the late 19th century, along with efforts to integrate forestry, agriculture and game management - three interdependent branches of renewable resources (Csányi, 1994; Tóth, 1991).

An annual harvest (culling) plan is fundamental to game species management. Harvest plans were introduced into Hungarian game management in the 1950s. In the 1970s, the next development was to include a compulsory long-term (10-year) game management plan (Csányi, 1998; Tóth, 1991). Incorporating ecological principles into the management of game populations can be facilitated by identifying relatively homogenous regions in which to base game management planning. Theories supporting regional management first appeared in Hungarian game management literature in the 1960s, summarized as “landscape based game management” (Bencze, 1979; Tóth, 1991). Twenty-four game management regions were established in the 1990s based on available data on game management and environmental variables (Csányi, 1993, 1998, 1999a).

To achieve such far-reaching goals as sustainable use of wildlife populations, balanced management of game and habitats, and conservation objectives, we need comprehensive, organized, and detailed information. For hunted species, this data must include information on population size...
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