17 Synthesis: Environmental and Sociopolitical Conditions for Modern Reindeer Management in Europe’s North

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17.1 Introduction: Linking Practical and Scientific Knowledge

The intricate relationship between reindeer (*Rangifer t. tarandus* L.) and humans in the boreal, subarctic and arctic regions has attracted the keen attention of modern sciences since the early 20th century. Since the 1950s, various scientific traditions have shaped the emergence of separate foci dealing with the natural conditions of the animal and its environment on the one hand and the cultural and socioeconomic dimensions of human–reindeer relations on the other. This divergence of biological and anthropological interpretations of the circumstances of reindeer herding in specific ecosystems and cultural settings has also had an impact on management policies and practices. The measures had tended to rely mainly on results of research conducted by natural scientists. Such studies had focused mainly on natural status of pastures and reindeer, losses to predators, carrying capacity, “over-grazing”, and meat production. This type of research had to a large degree neglected the human element in the equation among people, livelihood, animals, and the socioeconomic and cultural significance. Until recently, little emphasis had been given to the intricate knowledge that the practitioners closest to the reindeer have of the animal, the environment, and the ensuing utilization by humans (Aikio 1978).

At the beginning of the 21st century, in the circumpolar North, *Rangifer* populations and their users, herders, and hunters alike are under extensive sociopolitical and economic pressures that have altered and will continue to alter their relationship with reindeer and their own position within northern nation states and their economies (Chap. 2; Forbes and Kofinas 2000; Anderson and Nuttall 2004). These encompassing transformations require extensive
and detailed attention by major research efforts joining practitioners and social and natural scientists (Chap. 3; Turi 2000).

The RENMAN project (“The Challenges of Modernity for Reindeer Management – Integration and Sustainable Development in Europe’s Subarctic and Boreal Regions”) was designed to overcome the separation of methodologies and approaches in research on reindeer herding and create an interdisciplinary context linking natural and social scientists – and the scientists with the practitioners, i.e., reindeer herders – under the auspices of this project funded by the European Union (Forbes 2004). The project initiators felt strongly that these integrating steps had to be taken to understand the emergent processes and the impact of rapid cultural and socioeconomic changes, as well as climatic change, on peoples and the environment in the circumpolar north. Such steps were clearly needed. Peoples relying even if only partially on herding reindeer for their livelihood are currently under continuous internal and external pressures to sustain the development and integrity of their cultural and socioeconomic practices (Jernsletten and Klokov 2002; Anderson and Nuttall 2004).

The objectives of the project were to introduce models and tools of participatory research that had already been successfully implemented in anthropological, educational, and medical research (Hall 1979; Hiebert and Swan 1999). This approach was feasible and manageable and seen as an important baseline for the participation of various actors in these studies and the ensuing integration of different sets of knowledge in and around reindeer herding and management (Chap. 3). The research thrust and problems pursued by the individual workpackages (Chap. 1) were aimed at fostering the integrated sustainable use of reindeer and related resources in northernmost Europe (Chaps. 4–14). Furthermore, recommendations and scenarios were to be developed and formulated for future reindeer herding practices and management in coexistence and conjunction with other expanding and competing land uses in the same area (Chaps. 3, 15, 16).

### 17.2 Issues of Sustainable Reindeer Herding and Management

The studies conducted under RENMAN (Chaps. 2–16; Forbes 2004) identified a number of issues and concerns that both practitioners and scientists found important without establishing priorities. These topics reoccurred during the research process, analysis, and discussions of results in which all project participants took part (February 2001 to January 2004). One cannot say there was always full agreement on all points. However, the topics discussed here represent the range of problems that reindeer herders and scientists detected in the contact and conflict among diverse land uses currently practiced in the rein-