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Local and Scientific Knowledge on Natural Resource Management - A Case Study from Northwestern Namibia

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Abstract

In today's complex web of socio-economic, political and environmental changes, natural sciences approaches might offer insufficient understanding of the dynamics underlying the socio-ecological systems. Local knowledge is an important key to understand pastoralists' strategies of sustainable resource management. It is especially interesting to investigate how local knowledge is produced and used in a highly unpredictable system, characterised by non-linear dynamics. Pastoralism is the dominant form of land use and economy in the arid north-western part of Namibia. Therefore the sustainable management of natural resources is important to guarantee future subsistence in this region. Local knowledge is embedded in power relations as well as in specific conditions and is one framework in decision-making processes. Pastoralists adopt and reject management options on the basis of perceived indicators in order to cope with the variability of natural resources in space and time. Anthropological and ecological data are compared and synthesized to gather new insights concerning range management and decision-making processes regarding mobility. By contrasting the data of the in- and outsiders' view, the similarities and differences between the scientific knowledge and local knowledge on range management will be shown. Our comparison of local and ecological perspectives is based on the perception of OvaHerero pastoralists on a Communal Conservancy and the range ecologists' view. It focuses on three core aspects of range management: **(i)** Indicators for range assessment, **(ii)** Important fodder plants, **(iii)** The perception of environmental change in selected grazing areas. Synergistic effects between both concepts of knowledge will help to gain a better understanding of local management strategies. Thus our interdisciplinary approach not only contributes to the interpretation and understanding of ecological processes in the highly stochastic and sensitive environment of African arid savannahs. It is also valuable for identifying crucial aspects of a successful management of natural resources in drylands. Thus sustainable management strategies, that meet the introductory mentioned challenges can be improved.

Keywords: Cognitive Anthropology, local Knowledge, Namibia, Natural Resource Management, Range Ecology, Savannah