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Impacts of Multifunctionality of Livestock Keeping on Biodiversity Preservation

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Abstract

The paper highlights the multifunctionality of livestock in selected Namibian and South African communities. Livestock is a crucial endowment for subsistence-oriented farmers. It affects their life in various ways and is more than a source of monetary income. This has impacts on biodiversity management as well as on development efforts.

Research in the BIOTA project has shown that population growth and biased institutional incentives, such as centralisation tendencies, increase the pressure on natural resources. All four researched rural communities in Namibia and South Africa recognise the disappearance of certain plants and animals and experience consequences for their economic and social well-being. Overgrazing is one major reason for the loss of biodiversity. The observed farmers are, however, very resistant to reduce stocking rates. Multifunctionality of livestock is one explanation for this behaviour, which has been assessed using a mix of concepts and instruments. These include economic, psychological and sociological approaches. The aim to derive a non-monetary utility function for subsistence farmers in one community has been achieved by applying the instrument of conjoint measurement. The research shows that livestock keeping is the common form of investment and risk mitigation, a means of production and transport and a source of food. It strongly affects access to social capital. The families and communities prevent livestock sales by group members through informal social sanctions. Transaction costs for substituting various livestock functions are very high for most communal farmers. Efforts to implement alternative livelihood strategies which reduce the stocking rate need to consider these complex opportunity costs of livestock reduction. Many farmers, however, recognise the environmental costs of high livestock numbers in stating that the reduction of even one animal will increase the water and fodder supply for the rest of the herd. Thus, typical common property resource problems are prevalent in the research region. In the long run livestock will fulfil its functions only if natural capital can be preserved.

Due to the multifunctionality of livestock, commercialisation and income diversification is no simple alternative to the maintenance and reestablishment of regulated common property management. Strong institutions are essential to conserve biodiversity.

Keywords: Biodiversity, common property, livestock functions, management