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"Solidarity in a competing world — fair use of resources"

The Future of Smallholder Societies in the Okavango Basin - Socio-Economic Transitions in Three Case Studies

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Abstract

The Okavango River Basin (ORB) is a sparsely populated nearly pristine water-based environment shared by three countries of southern Africa: Angola, Namibia and Botswana. Population growth and a general desire for a consumption-based lifestyle lead to changes in resource use and rural livelihoods, as farming is the main livelihood source and land use in the ORB. Empirical analyses of farming systems and socio-ecological societies were conducted for three case studies, one in each country. We aim to understand from a transition perspective what characterises the current systems, which factors may shape their transition pathways, and towards which state they may develop under the current conditions. Data was collected from 2011 to 2013 at the household level using household surveys and explorative farmer interviews and at the basin scale via stakeholder interviews following a stakeholder analysis. Methods of analysis comprise livelihood analysis, farming system analysis and in the case of Botswana and Angola Material-&-Energy-Flow-Accountings.

Results show that stratification among rural households of the ORB increases with population density and cash availability. Furthermore, relative household wealth is a decisive determinant of farming strategies and for reaching food self-sufficiency. Poorer households are dependent upon agricultural production and have to invest their scarce resources primarily into farming. For them, increasing crop failures resulting from soil degradation lead to an increasing danger of falling into a poverty trap. In addition, the societies in all case studies are at a point of transition. In the next decades and resulting from population growth, increasing environmental degradation and cash market integration, both the Angolan and Namibian case studies may turn to more intensive forms of agriculture. A comparison of agricultural efficiency indicators reveals that Conservation Agriculture may be a solution for sustainable intensification for Namibian but, due to unfavourable input-output relations relative to the traditional systems, not for Angolan smallholders. In the Batswana research area, the advent of a tarred road may spur economic diversification and the abandonment of arable agriculture by many households. Our results suggest that without policy intervention, societies within the ORB may continue on a pathway of gradual resource degradation.

Keywords: Degradation, farming system analysis, smallholder farming, socio-ecological transitions, Southern Africa, sustainable intensification

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