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Self-organisation in Building Resilience to Climate Change in Smallholder African Agriculture

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Abstract

Building resilience seems to be an effective response to addressing increasing rainfall variability due to climate change and the uncertainties in the temporal and spatial manifestations of other climate change impacts in sub-Saharan Africa. Such an approach would contribute to reducing the vulnerability and increasing the adaptive capacities of smallholder farmers and their farming systems to climate change, and equally secure agricultural production. These goals become even more crucial, considering the net deficit production of African agriculture and the recurrent food crises in some sub-Saharan Africa regions.

In the discourse on social-ecological systems, resilience is conceptualised as having three characteristics, namely, buffer capacity, self-organisation and the capacity for learning. This paper explores how self-organisation contributes to these goals by using it as a conceptual and analytical lens. Self-organisation is based on the understanding that the degree to which farmers are connected and have control over their various resources determines the degree to which they can reduce their vulnerability and build their resilience to climate change. The criteria and indicators for self-organisation are elaborated. The paper shows how self-initiative, cooperation and networks, and reliance on own farm resources and farmer's own knowledge contribute to resilience.

Data was collected through interviews and focus group discussions in Kenya as well as through literature review. The case study is illustrative of smallholder agriculture in sub-humid and semi-arid areas of sub-Saharan Africa. The results provide insights for improving adaptive capacities in smallholder agriculture and also contribute knowledge on the usefulness of self-organisation as a concept in resilience research.

Keywords: Adaptation, Africa, agriculture, climate change, resilience, self-organisation, smallholder farmers