

Conceptualising and measuring buffer capacity: Assessing dimensions of resilience to climate change in African Agriculture

Chinwe Ifejika Speranza

Resilience is increasingly gaining attention in responses to reducing vulnerability and coping with and adapting to social-ecological variability. However, few methodological and thematic examples exist on how resilience can be assessed. This paper addresses these limitations in two ways: Methodologically it discusses the challenge of conceptualising and measuring buffer capacity, a characteristic feature of resilience, for social-ecological research. Thematically, it examines how the practices of conservation agriculture by farmers in Kenya contribute to buffer capacity and by extension to resilience. Data was collected through interviewing 41 purposely selected conservation agriculture farmers in the Laikipia region of Kenya. Results show that various conservation practices increase buffer capacity, evaluated by farmers in economic, social and ecological dimensions. Through conservation agriculture practices, farmers have been able to improve their productivity and incomes, improve their environment and social relations. The findings also indicate that certain contexts and development actor constellations can enable smallholders to increase their own food security and produce for the markets. Methodologically, the buffer capacity/resilience profiles can be further refined into a decision support system that enables extension services to gain an overview of farmer adaptation practices and that highlights which practices need to be supported to increase the buffer capacities and /resilience of agriculture to climate risks.