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## Assessing regional performance of agroecology – comparing two contrasting case studies in Burkina Faso

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### Abstract

Agroecology is suggested as a holistic sustainable solution for farmers in Burkina Faso to overcome challenges such as climate change. However, it remains unclear to what extent agroecology is yet part of regional farming systems. The purpose of this study was to assess the level of agroecology implementation in two contrasting regions. We utilised the first step of the Tool for Agroecology Performance Evaluation (TAPE), a comprehensive tool that measures the multidimensional performance of agroecological systems towards the ten elements defined by the Food and Agriculture Organisation (FAO). The study was conducted in two rural regions in Burkina Faso, one in the Northern dry zone, one in a more humid zone in the Southwest. The tool was applied in a two-day multi-stakeholder workshop (one per region) with farmers and other stakeholders. With an in-depth knowledge and understanding of the case study context, participants decided conjointly on the validity of a set of given statements describing the regional situation. The findings reveal a mixed level of performance regarding the application of the 10 agroecological elements. Farmers in the southern region state a higher diversity of their production as compared to the north (e.g. crops, trees, animals and diversity of activities, products and services). Also the application of synergies (e.g. crop-livestock integration, agroforestry), the perceived resilience of the farming systems (e.g. stability of income), the preservation of culture and food traditions and the conditions to support human and social values were perceived stronger in the southern region. Only the element “circular and solidarity economy” was seen stronger in the Northern region, while the remaining elements were reflected equally in both regions. We conclude that conditions in regions with harsh climates, limited crop options and challenges with agroforestry and crop-livestock integration may weaken resilience. However, such conditions can enforce networks among farmers that create a circular and solidarity economy. The application of the TAPE tool can serve only as a rough diagnostic instrument to assess the performance of agroecology. Therefore, farms should be individually assessed in order to understand the advantages of agroecological practices and interrelations as compared to older mainstream practices.

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