

Integrating traditional and modern knowledge systems in improving agricultural productivity in Upper-Kitete village, Tanzania

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Abstract

This study examined the integration of traditional environmental knowledge systems (TEKS) and modern environmental knowledge systems (MEKS) for improving the productivity of arable land and pastureland in Upper-Kitete Village, Karatu District, Tanzania. Structured interviews were conducted with 100 adults (50 males and 50 females) selected from areas of the village with different land uses. In-depth interviews were also conducted with 21 respondents, and five focus group discussions were held, each with seven participants. Participants were asked questions regarding their knowledge and use of traditional and modern farming and livestock keeping practices for improving productivity. Participatory Rural Appraisal (PRA) techniques were employed in collecting primary data. Data were also collected from secondary sources. The findings of the study indicated that the community of Upper-Kitete Village live in a vulnerable ecosystem, characterised by varied landscapes and diverse wildlife and plants. As individuals and as a community, village residents use traditional and modern sources of knowledge in the classification of land and the uses to which it is put. Over time, specific land uses have been identified that are suited only to particular ecological conditions. The use of both traditional and modern environmental knowledge by farmers in Upper-Kitete is indicative of the community's potential to evaluate and adopt new technologies. The study found that agricultural productivity varied depending on the system of knowledge applied (TEKS alone, MEKS alone, or the integration of TEKS and MEKS). Findings also indicated that efforts are required in accurately documenting TEKS because respondents relied on memories and did not use standard measures when they described traditional practices. Based on the study's evidence, it is recommended that an information management system be developed (at policy level) for the conservation and sustainable management of land resources. The identification of knowledge would ideally proceed through three stages: i) identification of traditional environmental knowledge; ii) the setting of standards for its application; and iii) dissemination of information to the wider community. The integration of TEKS and MEKS also needs to follow a similar process.