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Adaptive Management of Agrobiodiversity in Biocultural Landscapes: Experiences from the Field

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Abstract

Agrobiodiversity makes up part of the adaptive fabric of biocultural landscapes. In many areas, high levels of agrobiodiversity remain amid socio-economic transformations. These systems are characterised by continuous change. Farmers consciously or unconsciously influence diversity and the processes of adaptation through various management practices. In this study, we combine agrobiodiversity conservation approaches and social-ecological systems thinking to explore the adaptive management of agrobiodiversity in eight distinct biocultural landscapes around the world, including pastoral, agroforestry and high mountain sites in Bolivia, Cuba, India, Iran, Nepal, Sri Lanka, Thailand, Zimbabwe. Adaptive management is a process of community decision-making about diversity that integrates new experiences and knowledge into management practices to increase resilience, and involves adjustments in response to new experiences and observations. Adaptive management largely depends on the collective engagement of community members through local institutions that can take different forms, from specific management plans to shared sets of beliefs. Data were collected in household surveys, focus group discussions, and through participant observation and other methods. The results of our study show the evolution of local institutions that guide the processes of adaptation in the face of climate change and uncertainty, and ensure equitable sharing of resources. Better understanding of adaptive management of agrobiodiversity can help identify constraints and opportunities for strengthening climate change resilience through the strategies of diversification, conservation and restoration. We provide recommendations for initiatives targeting landscapes that comprise the global biocultural heritage and serve as reservoirs of crop genetic resources of critical importance for future food security and sustainable development.

Keywords: Adaptive management, agrobiodiversity, biocultural landscapes, resilience