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Changes in Traditional Cultivation and Use of Maguey (*Agave* spp.) and Nopal (*Opuntia* spp.) in the Upper Mezquital Valley of Mexico: Relevance for Sustainable Livelihoods

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Abstract

A large share of the inhabitants of the Upper Mezquital Valley (Mexico) belongs to the Nāhñu indigenous group. In this semi-arid and highly marginalised region, livelihood strategies have for centuries been closely intertwined with maguey (*Agave* spp.) and nopal (*Opuntia* spp.) cultivation, turning these natural resources into intrinsic to the population's cultural identity. However, traditional resource-use patterns have been increasingly disrupted due to the displacement of traditional and locally produced items by industrial products. The absence of local markets in combination with growing structural inequalities has led the inhabitants of the region to search for alternative livelihood strategies. By applying the sustainable livelihoods approach, this study explores the changes of traditional maguey and nopal cultivation and use during the last two decades in the Nāhñu community of San Andrés Daboxtha, as well as the drivers and impacts of these changes, as perceived by community members.

Field research revealed a growing neglect of maguey and nopal cultivation since the early 1990s, resulting in the further deterioration of the resource base through the strong decline of maguey and nopal stocks. This neglect was explained, among others, through migration to the United States and the associated flow of remittances that turned traditional resource-use patterns into seemingly obsolete livelihood strategies. In contrast, one cooperative producing maguey syrup has enabled its mainly female members to maintain and enhance their livelihood resource base through the creation of a slowly growing market and the continuous access to reforestation programs.

Increasingly difficult conditions in the United States have recently led large numbers of migrants to return to the Upper Mezquital and try to add value to the raw materials available in the region. Formerly neglected agricultural practices have thereby served as safety net for these migrants to return to. The reversal of migratory flows bears both opportunities and challenges; overexploitation of maguey was represented a major concern. Departing from the outlined findings, we discuss the promotion of agroecological practices as a strategy to contribute to the sustainable use of maguey and nopal as means of securing local livelihoods.

Keywords: Agroecology, biological resilience, cultural resilience, indigenous, Mexico, migration