Center for Community-Based Resource Management (CBRM)

Natural Resources Institute, University of Manitoba

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Case Study Name:		Factors driving deforestation in common-pool resources in northern Mexico	
Author:		Perez-Verdin, G., Kim, Y., Hospodarsky, D., & Tecle, A.	
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Region:		Latin America and the Caribbean	
Country:		Mexico	
Ecosystem Type:		Forestry	
Social Characteristics:		Rural communities, indigenous	
Scale of Study:		Community	
Resource Type:		Forestry	
Type of Initiative:		Research driven project	
Community Based Work:		Resource management (Community-based forestry)	

Summary:	The theory of collective action has been extensively used to explain the relationship between common-based property regimes and the conservation of natural resources. However, there are two key components of the theory that literature reports as puzzles in which no consensus exists about their effect on the performance of common-pool resources. These are group size and heterogeneity. This study analyzes the effects of these two key components on the effectiveness of community-based forestry, called ejidos, to protect their forest resources in northern Mexico. We used a multinomial logit model to determine the contribution of 16 explanatory variables to the dependent variable, a measure of success of ejidos defined by the presence of deforested, degraded, or forested conditions. The results show that corn yield, marginality, percent of forest area, total population, a forest value index, distance to markets, roads and towns, were all statistically significant in driving deforested conditions. Deforestation becomes more attractive for poor communities and as corn yield and distance to towns, roads, and markets decrease. In general, group size and heterogeneity had no significant effects on the presence of deforested conditions. Deforestation is driven by resource-specific characteristics, such as location and soil productivity, not by ejidos' attributes, such as total area or number of members. We argue that current institutional policies focusing on the structure of property right arrangements should be shifted (1) to provide better technology for land cultivation; (2) to reduce the marginality problem in poor communities; and (3) to strengthen local institutions.