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Processes Associated with Afforestation near Public Lands

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ABSTRACT

This paper empirically examines patterns of afforestation in vicinities immediately surrounding National Park/National River and National Forest lands. The public lands (Ozark National Forest and Buffalo National River) are found on the Ozark Plateau and represent different management mandates. A spatial lag model is presented comparing two LANDSAT images in conjunction with sociodemographic measures covering the same time period. The findings here make two important points. First, the public land boundaries are shown to act as ecological switches. Second, results underscore the importance of understanding how publicly managed lands with different mandates function within the larger social as well as geophysical landscape matrix. Empirical evidence demonstrates that public lands set aside for "preservation" (Buffalo National River) are associated with greater afforestation, whereas public lands set aside for "conservation and use of natural resources" (Ozark National Forest) are surrounded by less afforestation.

KEYWORDS

Landcover Change; Afforestation; LANDSAT; Spatial Lag Regression; Public Lands

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