



地理学报(英文版) 2004年第14卷第4期

### The causes and environmental effects of land use conversion during agricultural restructuring in Northeast China

作者: LIU Yansui GAN Hong

During the last decade of the 20th century, extensive conversion in agricultural land use took place in Northeast China. The goal of this study is to ascertain its spatial distribution and regional differentiation, determine its causes, and analyze its environmental impact. Especially we attempt to elucidate how institutional constraints have facilitated the change at a time of agrarian restructuring when newly emerging free market was hybridized with the former planned economy. Information on six categories of land use was mapped from interpretation of Landsat TM images recorded in 1990, 1995 and 2000. Most of land use changes took place during the first half of the decade, coinciding with abrupt and chaotic changes in government directives. Farmland was changed mainly to woodland, water body and built-up areas while woodland and grassland were converted chiefly to farmland. Spatially, the change from farmland to woodland was restricted to the west of the study area. The change from grassland to farmland took place in the grazing and farming interlocked west. These chaotic and occasionally conflicting changes were largely caused by lack of stability and consistency in agricultural land use policies promulgated. They have exerted adverse impacts on the local environment, including land degradation, increased flooding, and modified climate regime.

Paper (PDF)

**关键词:** land use conversion; agricultural restructuring; remote sensing; environmental effects; Northeast China doi: 10.1360/gso40412