



Impacts Of Urban Growth and Agricultural Innovation on Land Use Patterns in Gondia's Periphery

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Abstract

The rapid pace of urbanization and the adoption of innovative agricultural techniques have significantly altered land use patterns in peri-urban areas worldwide. This study examines these dynamics in the periphery of Gondia Municipal Area, India, exploring the multifaceted impacts of urban growth and agricultural modernization on local land use. Utilizing a mixed-methods approach, the research integrates remote sensing data, GIS mapping, surveys, and qualitative interviews with key stakeholders. Findings reveal substantial shifts from agricultural to urban land use, driven by population growth, economic development, and infrastructural expansion. Concurrently, newer agricultural practices, such as advanced irrigation techniques and mechanization, have increased land productivity but also raised concerns about environmental sustainability. The study highlights the socio-economic implications for local communities, including changes in livelihoods, income distribution, and land ownership patterns. Environmental consequences, such as biodiversity loss, soil degradation, and water scarcity, are also critically assessed. This research underscores the need for balanced land use planning and sustainable development policies that harmonize urban expansion with agricultural viability and environmental preservation. By providing comprehensive insights into the ongoing land use transformations, this study aims to inform policymakers, urban planners, and agricultural stakeholders in fostering resilient and sustainable peri-urban landscapes around Gondia.

