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SOCIAL AND ENVIRONMENTAL EFFECTS OF LAND USE CHANGES IN IJAGUN, OGUN STATE

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Abstract https://doi.org/10.65760/sjgs.v4.i2.4

Land use changes come with their social and environmental consequences. Rapid land use changes in Ijagun, a medium-sized settlement in Ogun State, Nigeria, is driven, largely, by the expansion of the Tai Solarin Federal University of Education located in the town. This paper analyzes the growth of Ijagun between the year 2000, when the University was established, and 2025. It further investigates the social and environmental effects of the land use changes that have taken place in the town during the period. Data for the study was collected through satellite imageries and questionnaire administration to a purposively selected sample of 200 Ijagun residents. Using the supervised maximum likelihood classification technique, the Landsat imageries were analyzed to extract land use classes and for change detection. The social and environmental effects were extracted from the questionnaire responses and analyzed quantitatively. Findings reveal that built-up areas increased markedly by 417% from 0.70 km² in 2000 while vegetal cover decreased from 5.23km² (76.4% of the land cover) to 3.11 km² in 2025. Major social effects of the land use changes identified were population congestion and housing shortages, increased vehicular traffic and cost of living, increased rent, social vices and crime, and increased opportunities for income diversification. The environmental effects were waste management problem, water shortages, noise and air pollution, erosion and loss of farmlands. While land use change reflects modernization and growth in Ijagun, the negative effects of the change underscore the urgent need for effective planning, environmental management, and infrastructural development.

Keywords: *Land Use / Land Cover; Urban Development; Environment and Development; Remote Sensing and GIS; Ijagun.*

Introduction

Land is constantly shaped and redefined through the interaction between human activities and natural processes. As urbanization, industrialization, and agricultural intensification increase, land is subjected to continuous transformation often leading to significant changes in land cover and usage. These land use changes can result in deforestation, loss of biodiversity, soil erosion, urban sprawl, displacement of vulnerable groups and alteration of water systems (Seto et al., 2017; Adewoyin et al., 2020; Adegbile et al., 2021; Gbana et al., 2026). Primarily, land-use expresses how humans organize space to extract resources, build infrastructure, or preserve ecological functions. Therefore, land-use change is a global phenomenon with far-reaching environmental and socio-economic consequences. Across the world, natural ecosystems are increasingly being converted to urban areas, infrastructure, mining, and agricultural zones in response to population growth, urban expansion, and economic development (Assede et. al., 2023; Atieku and Segbefia, 2024).

According to the Food and Agriculture Organization (FAO, 2020), more than 30% of global land surface has undergone significant modification over the last 50 years. This transformation has resulted in biodiversity loss, increased greenhouse gas emissions, soil degradation, deforestation, and a reduction in water quality. The United Nations Economic Commission for Africa (UNECA, 2018) notes that African peri-urban regions face increasing ecological stress due to poor enforcement of land use regulations and rising demand for land for residential and commercial purposes. In Nigeria, land use dynamics have been heavily influenced by economic restructuring, urban growth, migration, and the expansion of tertiary education institutions. As urban centers expand outward, adjoining rural or semi-rural communities commonly known as peri-urban areas become hotspots of land transformation. Agricultural lands are converted into residential layouts, markets, schools, and religious centers, often without formal planning. These changes are associated with the loss of arable land, displacement of rural dwellers, fragmentation of natural ecosystems, and increased social inequality (Olayiwola et al., 2016; Aderoju & Adepoju, 2021). While such development is sometimes viewed as progress, its uncoordinated nature often results in environmental degradation and socio-economic disruption.

As such, understanding land not merely as a physical space, but as a living and contested resource, is crucial for evaluating its changing functions and the resulting social and environmental consequences. Ijagun in Ogun State provides a relevant case study. Situated within the Odogbolu Local Government Area, Ijagun was traditionally an agrarian settlement. However, in recent years, it has witnessed considerable changes in land use due to the presence of the Tai Solarin Federal University of Education (TASUED) and accompanying population influx and real estate development to cater for the population. Farmlands and forests are increasingly being replaced with residential habitations, commercial establishments, and transportation infrastructure. These developments, though beneficial in terms of access to housing and commerce, have begun to alter the environmental and social landscape of the community. Vegetation loss, unregulated waste disposal, increased human activity, and pressure on existing infrastructure have begun to reshape the local environment. Socially, the community is undergoing cultural and economic shifts, as indigenous residents interact with incoming populations, and competition for land intensifies. These evolving dynamics call for a critical assessment of the effects of land use change, both to understand current challenges and to promote sustainable planning in Ijagun and similar communities.

Land-use change in peri-urban areas such as Ijagun is occurring rapidly and with limited regulatory oversight. Over the past decade, a significant portion of Ijagun's agricultural and undeveloped land has been converted for residential and commercial purposes. This transition is being driven by the growth of the Tai Solarin Federal University of Education, which attracts students, staff, and investors seeking accommodation and business opportunities. While this transformation may have boosted Ijagun's socio-economic growth, it may have also introduced new challenges. One major concern could be the loss of agricultural land, which may threaten local food production and traditional livelihoods (Seto et al., 2017; Gbana et al, 2026). Additionally, land tenure insecurity is growing, as informal transactions and encroachments often occur in the absence of adequate land documentation. This can lead to disputes and loss of ancestral land rights, particularly for vulnerable groups who may lack formal education or access to legal services.

Environmental degradation is another emerging concern. Although Ijagun has not experienced severe flooding, other environmental issues such as deforestation, topsoil loss, improper waste disposal, erosion and disruption of natural vegetation associated with many urban centers (Adewoyin, 2017a; Adegbile et al., 2021) have been observed. These changes compromise ecological balance and may lead to long-term consequences if not addressed. Moreover, the

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community is experiencing demographic changes, with an influx of non-indigenous people altering its sociocultural space. This rapid social transformation sometimes leads to tensions over resource use, creates housing pressure, and constitutes strain on communal facilities, including healthcare (Adewoyin, 2017a; 2017b; Uchegbu et al., 2023). Rising incidence of crime is another social issue that is associated with such transformation (Sanni et al., 2018). Despite these significant transformations, there has been a few scholarly works on the environmental and social effects of land use change in Ijagun. The aim of this study, therefore, was to examine the social and environmental effects of land-use changes in Ijagun, Ogun State from 2000 to 2025.

Methodology

Study Setting

Ijagun is a rapidly urbanizing settlement in Odogbolu Local Government Area (LGA) of Ogun State, southwestern Nigeria (Figure 1). It lies approximately between latitudes 6°47'N and 6°50'N and longitudes 3°55'E and 3°57'E, with an estimated total area of about 6.95 km². The settlement is situated along the Sagamu-Ore-Benin Expressway and is bounded by settlements such as Imaweje, Ijele, and Ososa. It is strategically positioned within the Ijebu region, about 10–15 km from Ijebu-Ode town, placing it in close proximity to major transportation corridors and the influence of Lagos metropolis. Ijagun houses the Tai Solarin Federal University of Education (TASFUED) which was established in 2005. Historically, Ijagun was a small agrarian settlement inhabited predominantly by the Ijebu subgroup of the Yoruba ethnic group. The establishment and expansion of TASFUED along the Ijagun-Imaweje axis has been the dominant driver of transformation in the town, turning the once predominantly farming settlement into a vibrant semi-urban area. The university campus, covering a significant portion of the landscape, has attracted students, staff, investors, and commercial activities, leading to increased demand for residential, commercial, and institutional land uses.

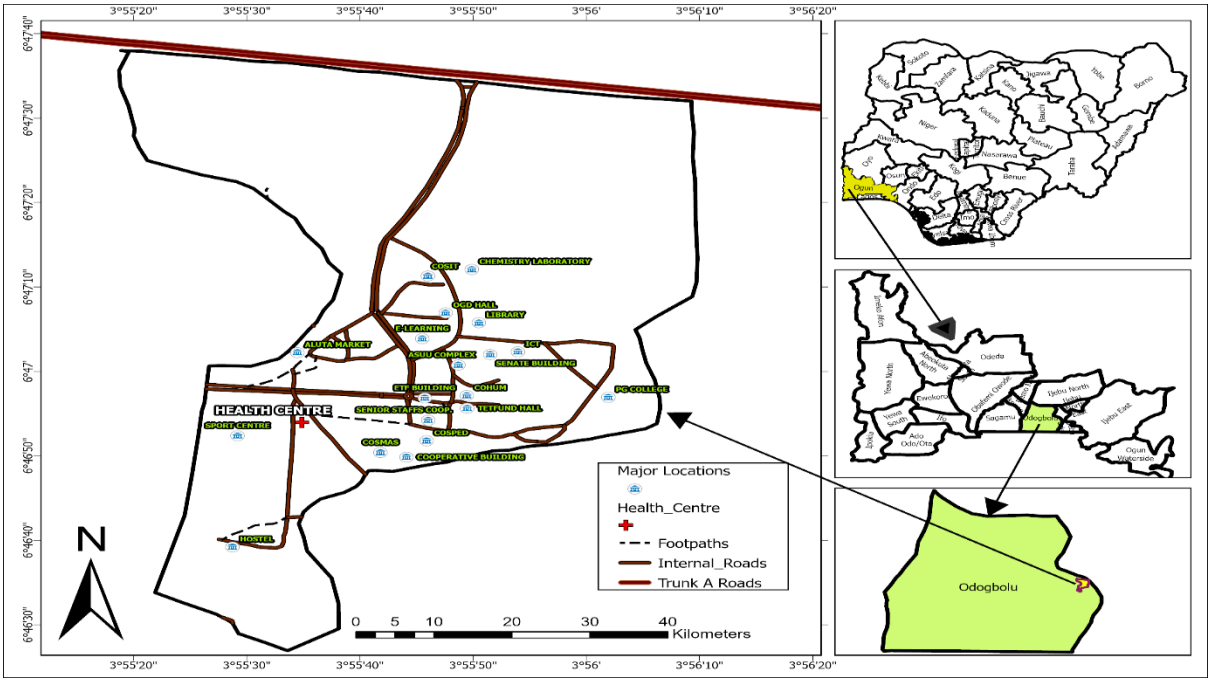

Figure 1: Map of the Study Area in it National and Subnational Settings.
Source: Authors' 2026

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Data Types and Sources

The study entailed two major components. First was an analysis of the growth of Ijagun measured by the change in its spatial extent between 2000 and 2025. The second was to determine the social and environmental effects of the change. For the first part, secondary data were employed. The data were Landsat satellite images for 2000 (Landsat 7 Enhanced Thematic Mapper Plus – ETM+) and 2025 (Landsat 8 Operational Land Imager – OLI). For the second part, data was collected using a structured questionnaire. The questionnaire was designed to elicit feedback from a purposively selected sample of Ijagun residents who had lived in the settlement for a minimum of 10 years and who could give an historical account of both the environmental and social changes the town had witnessed in the study period.

Data Analysis

The satellite imageries were pre-processed and classified using the Supervised Maximum Likelihood Classification (MLC) and interactive supervision features in ARCGIS 10.7 version. The classification process involved the selection of representative training samples based on spectral characteristics, visual interpretation of false colour composites, and knowledge of the study area. The number of pixels in each of the identified classes was thereafter computed to determine the spatial extent of the land use and land cover (LULC) types in each of the study year. The adoption of a uniform classification scheme for both years ensured effective temporal comparison and facilitated the assessment of land use and land cover changes in the study area. Change detection between the years was determined using a threshold of reflectance and the mean deviation from the threshold. For the primary data component, responses from the questionnaire were coded appropriately and analysed using the simple frequency feature of SPSS version 27.

Results

Land Use Change

Between 2000 and 2025, four major land use and land cover classes were identified within Ijagun. These were;

1. Built-up Area – Areas dominated by residential, commercial, and infrastructural developments, including paved surfaces and settlements.
2. Bare Land – Areas with little or no vegetation cover, consisting mainly of exposed soil and sand surfaces.
3. Deep Vegetation (Forest and Swampy Areas) – Areas characterized by dense vegetation cover, including forested zones and swampy environments.
4. Leafy Vegetation (Grasslands and Under-developed Land) – Areas covered by grasses, shrubs, and sparsely vegetated or under-developed lands.

An analysis of the change in land use between 2000 and 2025 reveals a landscape that has undergone a profound structural change over a twenty-five-year period. In 2000, the study area of approximately 6.85 km² was overwhelmingly vegetated, with Deep Vegetation and Leafy Vegetation (Figure 2) jointly constituting 76.4% of total land cover (Table 1). Built-up Area, by contrast, occupied a marginal 10.2% (0.70 km²). This is visible in Figure 2 as isolated red patches clustered around Ijagun town, the periphery of the TASFUED Campus, and the Sagamu–Benin Expressway corridor near the Con Oil petrol station. Bare Land surfaces, representing land in transitional or

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exposed states, accounted for 13.4% (0.92 km²) of the total area and were distributed as scattered brown fragments across the landscape rather than as a dominant class as shown in Figure 2.

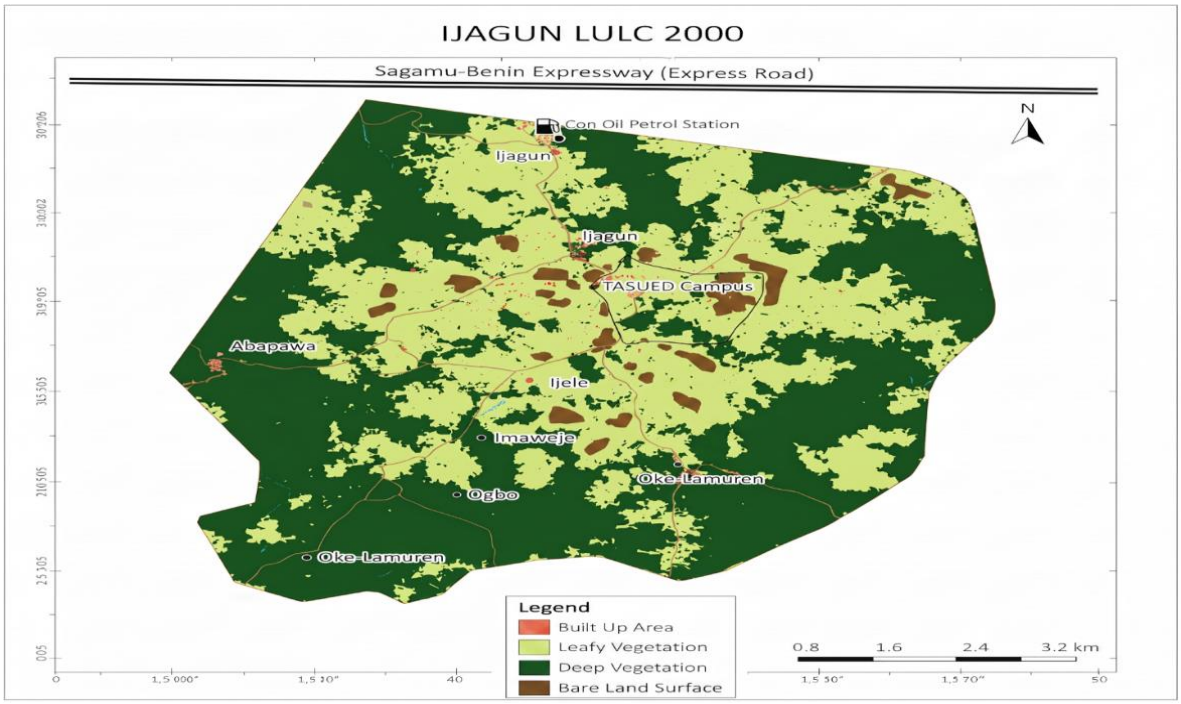

Figure 2: Land Use / Land Cover Map of Ijagun, 2000
Source: Authors' Analysis, 2026

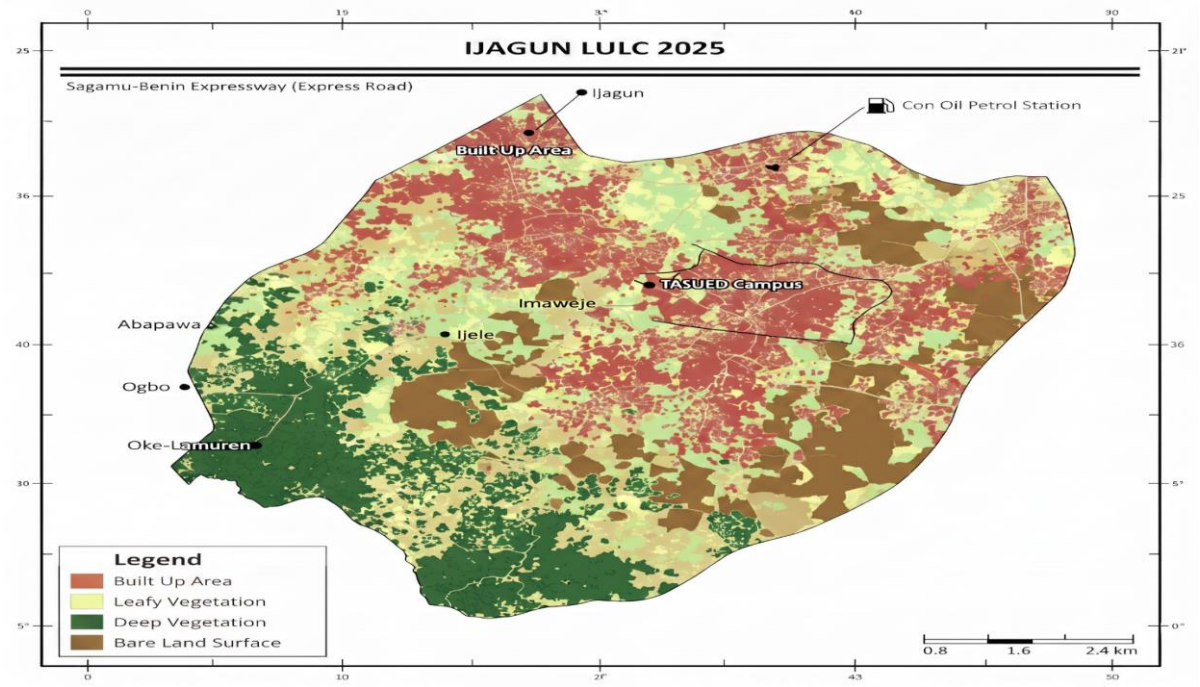

Figure 3: Land Use / Land Cover Map of Ijagun, 2025
Source: Authors' Analysis, 2026

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By 2025, this configuration had reversed almost entirely. Across a marginally expanded study extent of 6.95 km², built-up area rose to 3.62 km², or 52.1% of total land cover - an absolute gain of 2.92 km², representing more than a fivefold expansion in real terms. This growth is visually evident in Figure 3 where the red and pink built-up polygons have coalesced into a continuous urban matrix radiating outward from Ijagun, TASFUED Campus, and Imaweje into the previously vegetated core of the study area. Correspondingly, Deep Vegetation declined from 38.7% of the total area to 19.6% with the remaining stands surviving chiefly along the southern and southwestern margins near Oke-Lamuren and Ogbo. Leafy Vegetation followed a similar trajectory, declining from 36.6% to 25.2% of the total area persisting only as fragmented, non-contiguous patches rather than the extensive cover observed in 2000. Notably, Bare Land Surface also diminished from 13.4% to 3.1% of the land cover. The pattern is analytically significant in that, rather than remaining idle or transitional, previously bare land appeared to have been directly absorbed into built-up development, indicating that the urbanization process in Ijagun has proceeded with minimal lag between land clearance and construction. The year-on-year changes in the land use / land cover extent are summarized in Table 1.

Table 1: Land Use/Land Cover Distribution in Ijagun (2000 and 2025)

Land Cover Type	2000 Area (km²)	2000 (%)	2025 Area (km²)	2025 (%)	Change (km²)
Built-up Area	0.70	10.2	3.62	52.1	+2.92
Leafy Vegetation	2.54	37.1	1.75	25.2	-0.79
Deep Vegetation	2.69	39.3	1.36	19.6	-1.33
Bare Land Surface	0.92	13.4	0.22	3.1	-0.70
Total	**6.85**	**100.0**	**6.95**	**100.0**	+0.10

Source: Authors' Analysis, 2026

Social and Environmental Effects

Majority of the respondents who gave their perspectives about the social and environmental effects of land use changes in Ijagun were aged 30 to 39 years (52.5%) while those aged 50 and above were 20 (10%). Of the 200 respondents, 55% were females, 104 (52.0%) were married and 76 (38%) were single / never married. Half of the respondents (50.5%) had higher education, 85 (42.5%) had secondary education while only four (2.0%) had no formal education. In terms of occupational distribution, 96 of the respondents (48%) were either into trading or business. Forty (20%) were civil servants and the others were students, artisans and farmers as illustrated in Table 2.

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Table 2: Sociodemographic Characteristics of Study Population

Variables	Number N=200	Percentage (%)
Age		
<30	45	22.5
30-39	105	52.5
40-49	30	15.0
50+	20	10.0
Gender		
Male	90	45.0
Female	110	55.0
Marital Status		
Single/ Never in Union	76	38.0
In Union/Living with a man	104	52.0
Divorced / Formerly in Union	10	5.0
Widow / Widower	10	5.0
Highest Education		
No education	4	2.0
Primary	10	5.0
Secondary	85	42.5
Higher	101	50.5
Occupation		
Student	19	9.5
Trader	45	22.5
Civil Servant	40	20.0
Artisan	27	13.5
Farmer	18	9.0
Business	51	25.5

Source: Authors' Analysis, 2026

The questionnaire to elicit the respondents' viewpoints on the social and environmental effects of land use changes in Ijagun was designed as an open-ended questionnaire to allow the respondents express their opinions freely and based on their knowledge of the growth and development of the settlement for a minimum of 10 years. From the analysis of the responses, seven major social effects were identified while the major environmental effects identified were six. As shown in Table 3, nearly all the respondents (98%) agreed that Ijagun had witnessed congestion and housing shortage in the period of study. Increased vehicular traffic was also identified as a major social effect by 74% of the respondents. Following closely as a major social effect was the increase in cost of living in the town. More than 70% of the respondents attributed the increase in prices of goods and services to local factors consequent on the influx of more people into the town.

Similarly, rent on accommodation and shop spaces witnessed an increment as noted by 68% of the respondents and almost an equal number of respondents opined that the town had witnessed an increase in social vices. The vices they listed included excessive alcohol, drugs and substance abuse, indecent dressing, indiscriminate smoking of cigarettes in open places and internet fraud. Although identified as a social effect is the increase in the occurrence of crime in Ijagun. However, less than half of the respondents (42%) shared this opinion. More than 60% of the respondents opined that the growth and development of Ijagun had necessitated a change in source of income and livelihoods for many inhabitants of the town. They believed that many people had left primary activities like farming to other occupations like running a business centre, eatery and hairdressing / barbing.

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The number one major environmental effect the respondents identified was waste management (71%). Indiscriminate waste dumping, insufficient waste management facilities, lack of designated dumpsite etc. were the components the respondents identified. Almost an equal percentage of the respondents ranked noise pollution as the second most important environmental effect in the settlement. This, they believed came with increased population and the social activities the students engage in. Water shortage was also identified as a major environmental effect with 66% of the respondents stating that alternative water sources are being explored to supplement existing water sources in the face of increased population. With accommodation and shops springing up across the town without provision for adequate drainage, erosion has become another environmental effect of urban growth in Ijagun according to 57% of the respondents. Air pollution was also identified but by a little less than half of the respondents (48%). The last major environmental effect the respondents identified was the loss of farmland (38%).

Table 3: Major Social and Environmental Effects Identified by the Respondents

Rank	Effects	Percentage Response (%)
	Social	
1	Population Congestion / Housing Shortage	98
2	Increased Vehicular Traffic	74
3	Increased Cost of Living	73
4	Increased House / Shop Rent	68
5	Increased Social Vices	67
6	Change in Income Sources	61
7	Increased Crime	42
	Environmental	
1	Waste Management Problem	71
2	Noise Pollution	70
3	Water Shortage	66
4	Erosion	57
5	Air Pollution	48
6	Loss of Farmland	34

Source: Authors' Analysis

Discussion

The findings of this study reveal that Ijagun has witnessed significant land-use changes over the past twenty-five years, with agricultural lands increasingly converted into residential estates, student hostels, commercial shops, and institutional facilities. This transformation is largely driven by the presence and expansion of Tai Solarin University of Education (TASUED), which has attracted students, staff, and investors into the community, a phenomenon referred to as studentification (Smith, 2002). These findings are consistent with the observations of Ifaturoti et al. (2022) and Adewoyin and Imaikop (2025). Ifaturoti et al. (2022) particularly noted that university expansion in Ogun State accelerated land conversion within a 5km radius of campuses, resulting in the loss of more than half of agricultural land within a decade. Similarly, Olayiwola et al. (2016) documented how peri-urban communities in Nigeria often experience farmland conversion into residential layouts and commercial centres, driven by urban sprawl and population influx.

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The case of Ijagun therefore reflects broader national trends, confirming that peri-urban settlements are hotspots of land transformation. However, while global studies such as Seto and Reenberg (2016) emphasize industrialization and large-scale infrastructure as primary drivers of land-use change, the Ijagun case highlights the importance of educational institutions as more immediate catalysts. This divergence underscores the contextual uniqueness of peri-urban Nigeria, where institutional growth rather than industrialization is the dominant force shaping land-use dynamics. The institutional growth and its attendant population influx as a major driver of the land use changes in Ijagun corresponds with what Lambin and Geist (2006) and Wang & Wu (2020) describe as direct (proximate) and indirect (underlying) factors of land use change. Direct factors refer to deliberate human physical activities on land or property at the local level, such as decisions made by individual farmers, households, or communities. In contrast, indirect factors are broader forces that influence land use indirectly such as demographic, economic, institutional, environmental, social, and cultural factors.

Socially, the study revealed several consequences of land-use change in Ijagun. These include congestion and housing shortage, increased cost of living, change in sources of income and livelihoods, increase in social vices and crime. This aligns with the findings in a study by Afolabi et al. (2024). These consequences are usually attributes associated with many medium and large-sized urban settlements (Adewoyin et al., 2018; Sanni et al, 2018). This implies that with the land use changes, Ijagun is becoming more urbanized and the social effects of such urbanization could be largely negative if appropriate measures are not taken to mitigate them. Similarly, Aderoju and Adepoju (2021) documented how peri-urban expansion in Nigeria leads to social inequality and loss of livelihood opportunities. The Ijagun case confirms this, as indigenous families reliant on subsistence farming are marginalized by speculative land sales and real estate development.

However, the study also noted positive social impacts, such as increased economic opportunities through commerce and increase in demands for services. This partially contrasts with the literature, which often emphasizes negative consequences. For example, Chigbu et al. (2017) stress that land-use change exacerbates social inequity, but the Ijagun findings suggest a more dualistic reality. While some groups are displaced, others benefit economically from new markets and rental income. Thus, the social impacts in Ijagun both converge with existing literature on displacement and inequality, and diverge by highlighting economic opportunities, pointing to the complex, multi-layered nature of land-use change.

The environmental impacts observed in Ijagun include loss of farmland, noise and air pollution, water shortage, erosion and waste management problems. These outcomes resonate strongly with the literature. For instance, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES, 2019) identifies land-use change as the leading driver of biodiversity loss globally, while Adegbile et al. (2021) highlight that uncontrolled urbanization in Nigerian cities has resulted in wetland conversion, flooding, and ecosystem degradation. In Ijagun, although flooding has not been severe, other environmental issues such as topsoil loss from erosion and waste mismanagement are evident. This partially contrasts with findings from Lagos and Abuja, where flooding is a dominant consequence of land-use change. The difference may be attributed to Ijagun's topography and hydrological conditions, which mitigate flood risks but expose the community to soil erosion and vegetation decline.

Adelekan (2020) examined the relationship between land use change and flooding in Lagos, finding that the conversion of wetlands into housing estates without adequate drainage infrastructure has increased flood risks in low-income neighbourhoods. Similarly, in the Niger Delta, land conversion

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for oil extraction has caused massive deforestation, soil contamination, and community displacement (Okonkwo & Eze, 2019). These studies underscore the environmental consequences of land use decisions and demonstrate how poor governance, weak enforcement of land policies, and limited community participation intensify the negative effects of land transformation. In Ijagun, however, this is not the case. Furthermore, the study's observation of unregulated waste disposal adds a new dimension to the literature. While many studies emphasize deforestation and biodiversity loss, fewer focus on waste management challenges in peri-urban communities. The Ijagun case therefore expands the discourse by showing how rapid land conversion without planning leads to solid waste crises, which in turn compromise environmental health and community well-being.

Conclusion

The land use changes in Ijagun have, consequent on urban expansion as a result of the Tai Solarin Federal University of Education, have facilitated increased business opportunities and diversification of livelihood sources. They have also resulted in a number of negative social and environmental consequences. While land use change reflects modernization and growth in Ijagun, the negative effects of the change underscore the urgent need for effective planning, environmental management, and infrastructural development.

References

Adegbile, M. A., Akinyele, K., & Olajide, O. (2021). *Land use dynamics and ecological risks in peri-urban Nigeria*. Nigerian Journal of Environmental Management, 25(1), 30–45.

Adelekan, I. O. (2020). *Vulnerability of poor urban coastal communities to flooding in Lagos, Nigeria*. Environment and Urbanization, 32(2), 145–162.

Aderoju, O. M., & Adepoju, A. O. (2021). *Urban encroachment and land use change in southwest Nigeria: The case of peri-urban towns*. Journal of Planning and Environment, 11(2), 22–34.

Adewoyin, Y. and Imaikop, P.U. (2025). Spatial and Temporal Analysis of Urban Spatial Structure using Geographic Information Systems (GIS) and Remote Sensing – The Case of Nsukka, Nigeria. Contemporary Issues in Planning and Environmental Studies, 1(2), https://doi.org/10.5281/zenodo.17867292

Adewoyin, Y., Chukwu, N.A. and Sanni, L.M. (2018) Urbanization, Spatial Distribution of Healthcare Facilities and Inverse Care in Ibadan, Nigeria. Ghana Journal of Geography, 10(2): 96-111, https://dx.doi.org/10.4314/gjg.v10i2.7

Adewoyin, Y., Mokwenye, E.M. and Ugwu, N.V. (2020) Environmental Ethics, Religious Taboos and the Osun-Oshogbo Grove. Journal of Cultural Heritage Management and Sustainable Development, https://doi.org/10.1108/JCHMSD-01-2020-0019

Adewoyin, Y. (2017a). Gender Mainstreaming, Solid Waste Management and Urban Health in Nigeria. In Adeboyejo et al (eds) Sustainable Environmental Planning and Management in Nigeria. Ogbomoso: Faculty of Environmental Sciences, Ladoke Akintola University of Technology, PP 209 – 220.

Adewoyin, Y. (2017b). Health, Spatial Justice and Regional Planning in Nigeria. In Emenike, G.C. and Nzeadibe, T.C. (eds) Readings in Human Geography. Port-Harcourt, Uniport Press; PP 159-172.

Afolabi, H., Ben, O. O., & Badiora, A. (2024). Factors Influencing Compliance with Physical Planning Regulations in Gated Communities of Ibadan Municipality, Nigeria. *International Journal of Real Estate Studies*, *18*(2), 130-141.

Assede, E. S., Orou, H., Biaou, S. S., Geldenhuys, C. J., Ahononga, F. C., & Chirwa, P. W. (2023). Understanding drivers of land use and land cover change in Africa: A review. *Current Landscape Ecology Reports*, *8*(2), 62-72.

Atieku, J. N., & Segbefia, S. K. (2024). Land Degradation: A Global Challenge and its Effects on Humankind and the Environment, with a Special Focus on Ghana. *Indiana Journal of Humanities and Social Sciences*, *5*(7), 58-64.

Chigbu, U. E., Schopf, A., & de Vries, W. T. (2017). *Land tenure and the gendered use of land in Africa: A review*. Land Use Policy, 66, 1–8.

FAO. (2020). *Global assessment of land use systems*. Rome: Food and Agriculture Organization.

Gbana, S.D., Adewoyin, Y. & Agan, P.N. (2026). Analysis and Implications of Land-Use and Land Cover Changes in Southern Taraba State, Nigeria (1990-2020). *Mega Chad International Journal of Geosciences*, 2(1): 42-49.

Ifaturoti, T. A., Bakare, R. A., & Adebayo, A. A. (2022). *Educational institutions and land transformation in Nigeria: The case of TASUED, Ogun State*. Nigerian Journal of Urban Development, 5(3), 64–79.

IPBES. (2019). *Summary for policymakers of the global assessment report on biodiversity and ecosystem services*. Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services.

Lambin, E. F., & Geist, H. J. (2006). *Land-use and land-cover change: Local processes and global impacts*. Springer.

Okonkwo, N. A., & Eze, P. C. (2019). *Urban sprawl and the decline of agricultural livelihoods in peri-urban Enugu, Nigeria*. Journal of Rural and Urban Studies, 13(2), 55–69.

Olayiwola, L. M., Adeleye, O. A., & Ogunshakin, L. O. (2016). *Urban expansion and loss of agricultural land in Nigeria: Implications for sustainability*. Journal of Sustainable Development in Africa, 8(3), 134–151.

Sanni, L. M., Adewoyin, Y., Bako, A. I. & Akande, S.O. (2018) Urban Crime Prevention and Adaptation Measures in Ilorin, Nigeria. Tanzania Journal of Development Studies, 16 (2): 34-48

Seto, K. C., & Reenberg, A. (Eds.). (2016). *Rethinking global land use in an urban era*. MIT Press.

Seto, K. C., Fragkias, M., Güneralp, B., & Reilly, M. K. (2017). *A meta-analysis of global urban land expansion*. PLOS ONE, 6(8), e23777.

Smith, D. P. (2002). *Patterns and processes of studentification in Leeds*. Regional Review 12(1): 14.

Uchegbu, S. N., Ezeaku, C. T., & Madu, E. A. (2023). *Infrastructure planning and service delivery in rapidly urbanizing Nigerian towns*. Journal of Planning and Urban Development, 10(1), 19–33.

UNECA. (2018). *Land policy in Africa: Guidelines for development and implementation*. United Nations Economic Commission for Africa.

Wang, W., & Wu, F. (2020). *Land value capture in China: Development, policy, and theoretical implications*. Urban Studies, 57(5), 1003–1022.

https://doi.org/10.65760/sjgs.v4.i2.4