

Planning Compliance, Institutional Effectiveness and Community Participation in Sustainable Land Management in Lafia Urban Area, Nasarawa State, Nigeria

UMAR MUSTAPHA SARKI

Department of Urban and Regional Planning, Faculty of Environmental Science,
Nasarawa State University, Keffi, Nigeria.
umarmustapha2400700@nsuk.edu.ng

FRIDAY A. OGWU

Department of Urban and Regional Planning, Faculty of Environmental Science,
Nasarawa State University, Keffi, Nigeria.

EYA M. A.

Department of Urban and Regional Planning, Faculty of Environmental Science
Nasarawa State University, Keffi, Nigeria.

UMMI A. S.

Department of Geography and Environmental Management, Federal University Lafia,
Nigeria.

I. Z. ISMAIL

Department of Geography, Faculty of Environmental Science,
Nasarawa State University, Keffi, Nigeria.

Abstract

This study assessed planning compliance, institutional effectiveness, community participation and the major constraints to sustainable land management in Lafia Urban Area, Nasarawa State, Nigeria. It employed a descriptive cross-sectional survey design based on the land-use planning perspective on sustainability governance. Based on the 2006 population of Lafia (329,922), population projection of 573,157 inhabitants in 2026 was achieved using geometric growth method and Yamane's formula yielded sample size of roughly 400 respondents, 399 retrieved questionnaires were analysed in frequencies, percentages, mean scores and constraint ranking. Results indicate that planning compliance was moderate (mean=2.66), with enforcement/control of unauthorized development and general planning enforcement indicators the weakest; institutional effectiveness was low (mean=2.55) with the lowest score given to unavailability of land-use information; community participation was moderate (mean=2.63) and low influence of residents on planning decision was noted. "Rapid urban growth, weak enforcement and land speculation" emerged as the three main constraints to sustainable development. The study points to the problem of Lafia being not merely that of lack of planning regulations, rules and controls, but rather, weak enforcement, weak institutional capacity and little influence of residents. It recommends strengthening institutional capacity, providing land information systems, formal community consultation mechanisms and GIS supported development monitoring, serving as empirical evidence for prioritisation of enforcement, capacity-building and participatory governance in Lafia and Nigerian cities.

Keywords: Development Control, Institutional Effectiveness, Community Participation, Planning Compliance, Sustainable Land Management.

Introduction

The sustainability of urban land use ultimately depends upon not only the formal land use, which can be enforced by land use planning, but also the ability of planning, institutional and community systems to influence land use in a sustainable way. Sustainable land management involves land uses and cover supporting or controlling a land uses function in maintaining long-term productivity and other important environmental functions (Food and Agriculture Organization [FAO], 2008). SDG 11 has also set a wider goal Participation of local communities and other stakeholders in local decision making in sustainable urban development to ensure sustainable urban land use include participatory, well governed and sufficiently resourced urban planning institutions. Policies or rules on the books, but not enforceable or off the books,... or land use decision is made with managers and planners without the right kind of data, or not having the right kind of people to pay attention to land use change, the formal planning system could have no influence on Spatial patterns of urban development.

Such governance deficit is no less chronic also in Nigeria. Abiotic investigations of the Abuja city-region area of the Federal Capital Territory revealed wide disparities using GIS across approved land-use categories versus actual land cover a phenomenon attributable mostly not to the lack of such plans but rather to weak inter-agency coordination, inadequate financial resources, political pressures, as well as poor implementation plans of such land-use planning and environmental assessments (Enoguanbhor et al., 2021). Correspondingly, data from Nigeria's informal land-development system revealed that where formally mediated land administration and development-control system are weak or disconnected, so-called informal land developments tend to proliferate without enough infrastructural conditions (Gyau & Booth, 2020). A national investigation of development-centered land-use and land-cover studies in Nigeria further established that an effective land-use information system and strengthening of the institutional monitoring and evaluation system are among the determinants for better sustainable land management practices, beyond population growth mitigation strategies (Alegbeleye et al., 2024).

Lafia, as the capital of Nasarawa State is also indicative of such governance issues; the increasing economic activities associated with administrative, commercial and residential use created high pressure for land as well as the strain on institutions of planning and landadministration (Bako & Balogun, 2023). Research focused on green-space planning in the city revealed some key governance factors which undermine the achievement of green-space conservation; these include pressures of urban growth, lack of clear and fully working planning framework, low political will and public awareness (Ebuga et al., 2024). It would be seen in this assessment that these governance issues manifested through, compliance with planning regulations and land use controls, institutional efficiency, community participation and residents perceived constraints on sustainable land administration.

Statement of the Problem

However, the planning question for a fast-growing city is no longer whether or not regulations exist but whether they are implemented, monitored, and backed with institutions that can help align decisions on land-use with those on infrastructure and environmental management. Available Nigerian examples further reveal that in places where formal planning mechanisms exist, autocratic development, land-use conflicts, and suboptimal land administration are history of urban-management, and the inconsistencies between the plans and actual developments could be blamed on fragile institutional coordination instead of the aperiodic planning tools (Bako & Balogun, 2023; Enoguanbhor et al., 2021).

As Lafia's population is projected to grow (from 2006 to 2026) from 329,922 to around 573,157; the institutions and governments structures that are concerned with managing this growth will no doubt come under further stress. If planning approval procedures cannot be implemented and enforced on a regular basis, if institutions do not possess up-to-date land-use information and monitoring capacity, and if residents are unable to influence planning decisions affecting their neighborhood, then formal planning tools are unlikely to deliver sustainable land-use results, even if they are technically sound- no matter whether this is the case in Lafia, and what framing of

governance- institutional or otherwise- residents identify as the dominant constraint.

Conceptual and Literature Review

Development Control and Planning Compliance

Development control is the tool by which planning authorities; regulate approval land-use proposals into built form, the control of land-use, building setbacks, density and other standards for development. It is less dependent on setting standards and more on monitoring and enforcement; where such enforcement does not exist approved plans often differ markedly from built form (Enoguanbhor et al., 2021).

Institutional Effectiveness and Land-Use Information

Institutional effectiveness (for land management) also includes staffing and technical resources, updated land-use information, coordination between agencies, and monitoring systems to identify illegal or unsustainable land-use change. The 2024 systematic review of Nigerian LULC research specifically calls for improved, accessible land-use data systems and institution building/GIS-based land-use monitoring as necessary to achieve Nigeria-wide sustainable land management (Alegbeleye et al., 2024), directly related to the institutional indicators evaluated in this paper.

Community Participation in Land-Use Governance

Residents can also provide first hand local specific information on the environment, infrastructural and development conflicts in their communities and increasing their role in planning decision-making processes can increase relevance of planning outputs and their implementation. Nevertheless, involvement in Nigerian urban planning process too often is one of simply informing residents about decisions and not a meaningful participation like in others where informal, etc. under-scrutinized development considered apparent where formal means of governance are difficult to access (Gyau & Booth, 2020).

Theoretical Framework

Land-Use Planning Perspective

A land-use planning approach is the main theoretical framework for this study, assuming that planning tools, such as plans, zoning, development control and monitoring measures, serve the institutional means through which sustainability principles are transformed into real landscape results. Findings from Nigerian urban areas show how the divergence between planning aspirations and urban realities often not result from planning product inadequacy, but from inadequate planning implementation, due to lack of coordination and institutional constraints, or political interference (Enoguanbhor et al., 2021), an approach that lead the focus on enforcement and institutional capacity in this study, rather than on planning product design.

Sustainable Development Theory

Sustainable development theory, with its focus on recognizing the complex interrelationships between economic, social and environmental issues in development planning and decision-making, offers a complimentary approach: institutional effectiveness and community participation are seen in this context as the means of governance whereby the state of balance 'between development pressures and environmental/social sustainability' is maintained or broken.

Methodology

Study Area

Lafia is the administrative capital of Nasarawa State and serves mainly as administrative, commercial, educational and residential function. The residents has led to constant continuously dispersion and increased demand for its planning administration and land administration institutions.

Research Design

This study was carried out using a descriptive cross-sectional survey design, as the study required an investigation of the views of residents and land users about compliance to planning, institutional performance as well as their participation opportunities at a particular point in time, along

with field survey of development types and patterns in the study area.

Population and Sample

According to the 2006 Population and Housing Census figures there were 329922 persons in Lafia Local Government Area (165631 males and 164291 females). Using stratified sampling techniques, respondents were selected systematically within neighbourhoods corresponding to the three development categories of established, transitional and expanding/peri-urban development characteristics so that opinions on governance in Lafia were a fair reflection of the experiences of different stages of urban development in the local government area.

Population Projection to 2026

The geometric population projection process was also utilized with the formula of $P_t = P_0(1 + r)^t$ where P_t is the projected population, P_0 is the base-year population (2006 = 329,922), r is the annual growth rate, (2.8%), and t is the projection period 20 years. The resulting 2026 projection was 573,157.

Sample Size Determination

Yamane's (1967) formula, $n = N / [1 + N(e)^2]$, was utilized with an e of 0.05 on a projected population (N) of 573,157 resulting in a sample size of around 400, as recommended for large finite populations (Israel, 1992). 399 valid responses were collected and studied.

Data Collection Instrument and Analysis

Information was obtained with a structured closed-ended question schedule that addressed planning approval and compliance, development control and enforcement, institutional capacity and community participation and constraints to sustainable land management. Perception items were analysed using simple frequencies, percentage and mean score and judged as Low (less than 2.50), Moderate (from 2.50 to 3.49) and High (3.50 and above); thus constrained items were ranked according to the mean score.

Results and Discussion

Socio-Economic Characteristics of Respondents

Table 1: Socio-Economic Characteristics of Respondents

Variable	Category	Frequency	Percentage (%)
Sex	Male	218	54.6
	Female	181	45.4
Age	18–25	68	17.0
	26–35	112	28.1
	36–45	101	25.3
	46–55	69	17.3
	56+	49	12.3
Education	Primary/None	31	7.8
	Secondary	96	24.1
	OND/NCE	84	21.1
	HND/B.Sc.	141	35.3
	Postgraduate	47	11.8

Source: Field Survey, 2026

The range of ages, sexes and education levels within the sample is wide. A high proportion of the sample have second degree level qualifications, as a result their perceptions of planning, institutional and participation processes are likely to have been assessed accurately.

Planning Compliance and Development Control

Table 2: Planning Compliance

Indicator	Mean	Interpretation
Developers obtain planning approval	2.91	Moderate
Development conforms to approved land use	2.76	Moderate

Building setbacks are respected	2.83	Moderate
Planning regulations are effectively enforced	2.54	Low
Unauthorised development is adequately controlled	2.42	Low
Land-use changes are adequately monitored	2.51	Low
Overall Mean (Planning Compliance)	2.66	Moderate

Source: Field Survey, 2026

Planning approval and conformance were rated reasonably, but enforcement (2.54), control of unauthorised development (2.42) and monitoring (2.51) were clearly less so, showing the main flaw in Lafia's planning system to be implementation, not lack of regulation. This is comparable to the Abuja city-region case, in which the main cause of plan–development inconsistency was shown to be weak enforcement and coordination rather than plan deficiencies (Enoguanbhor et al., 2021).

Institutional Effectiveness

Table 3: Institutional Effectiveness

Indicator	Mean	Interpretation
Planning institutions have adequate personnel	2.52	Low
Adequate land-use information is available	2.47	Low
Relevant agencies coordinate effectively	2.58	Low
Land-use changes are adequately monitored	2.51	Low
Planning decisions are communicated effectively	2.61	Moderate
Planning regulations are consistently applied	2.56	Low
Overall Mean (Institutional Effectiveness)	2.55	Low

Source: Analysis, 2026

Planning approval and conformance were rated reasonably, but enforcement (2.54), control of unauthorised development (2.42) and monitoring (2.51) were clearly less so, showing the main flaw in Lafia's planning system to be implementation, not lack of regulation. This is comparable to the Abuja city-region case, in which the main cause of plan–development inconsistency was shown to be weak enforcement and coordination rather than plan deficiencies (Enoguanbhor et al., 2021).

Community Participation

Table 4: Community Participation

Indicator	Mean	Interpretation
Residents are informed about major land-use changes	2.64	Moderate
Residents have opportunities to participate	2.59	Low
Community opinion influences planning decisions	2.51	Low
Residents participate in protecting open spaces	2.67	Moderate
Residents report unauthorised development	2.73	Moderate
Overall Mean (Community Participation)	2.63	Moderate

Source: Analysis, 2026

Overall community participation was moderate (2.63) with a particularly low indicator for residents' involvement in planning decisions (2.51) compared to their access to information about land-use change (2.64). This reflects a community that is at most being informed about urban development with little substantive participation, echoing the finding that unconsulted city residents in Nigeria are likely to recur to the informal in response to weak participation in formal venues (Gyau & Booth, 2020).

Constraints to Sustainable Land Management

Table 5: Major Constraints to Sustainable Land Management (Ranked)

Constraint	Mean	Rank
Rapid population and urban growth	4.31	1
Weak enforcement of planning regulations	4.22	2
Land speculation	4.16	3

Inadequate planning information	4.08	4
Conversion of agricultural/open land	4.05	5
Institutional capacity limitations	4.01	6
Political interference	3.94	7
Limited public awareness	3.86	8
High cost of formal development	3.82	9
Limited community participation	3.76	10

Source: Analysis, 2025

The rapid population and urban growth was the greatest constraint (mean=4.31), rationalizing the demographic pressure indicated by the forecast increase from 329,922 to 573,157 persons, however, surprisingly, weak regulation of planning (4.22) and land speculation (4.16), ahead of institutional inadequacy (4.01) and limited community participation (3.76). This reveals that population growth per se does not imply best practices in urban land management, as it has been commonly suggested in Nigeria, where the responsive institutional mechanisms or the force of real estate market are perceived as relevant, or even more so, a finding consistent with the existing Nigerian literature about institutional and management fragility in urban land use (Bako & Balogun, 2023; Enoguanbhor et al., 2021).

Composite Governance Assessment

Table 6: Planning, Institutional and Community Dimensions Summary

Governance Dimension	Mean	Interpretation
Planning compliance	2.66	Moderate
Institutional effectiveness	2.55	Low
Community participation	2.63	Moderate

Source: Analysis, 2026

The weakest of the three governance dimensions is institutional effectiveness, and the weakest single indicator of it is land-use information availability. This indicates that increasing enforcement and institutional monitoring capacity again, as opposed to the loading on existing planning regulations is likely to have the most impact on sustainable land management in Lafia.

Conclusion

The paper assesses planning compliance, development control, institutional capacity, community participation and the major constraints to sustainable land management in Lafia Urban Area. Planning approval mechanisms are in place and moderately complied with, but control of unauthorised development, enforcement and monitoring of development plans are weak. Institutional capacity (the most significant governance aspect) was relatively poor especially with regard to the availability of current information. Community participation was primarily informational. Rapid population increase, weak enforcement, and land speculation were the main constraints to sustainable land management, followed by inadequate planning information and weak institutional capacity. This research finds that the main constraint to sustainable development in Lafia is not the planning regulations but the planning implementation mechanisms (planning and implementation gap).

Recommendations

Reinforce the control of development by establishing a continuous, GIS monitored site inspection regime during the development process and post-completion, in particular to prevent unapproved development and encroachment of environmentally sensitive areas.

Enhance institutional capacity through strengthening staff, extending professional training, acquiring GIS equipment and up-to-date, accessible land-use spatial data bases, and institutionalising periodic land-use monitoring using satellite imagery.

Enhance cooperation between planning, environment and land administration authorities to minimize inter agency fragmentation, which hampers enforcement and surveillance.

Goals: –Transform community involvement from just informing the residents to establishing formal neighbourhood consultation and participatory planning meetings and provide reporting path to

planners for unauthorised development.

Tackle land speculation and its role in degrading land by suitable land-market regulation and supervision, complemented by the enforcement actions above.

Promote an ongoing monitoring of planning compliance, institutional effectiveness and community participation so that governance shortcomings are identified and addressed before land-use patterns reach an unsustainable level.

Implications of the Study

Theoretical Implications

With empirical evidence, the results build upon the land use planning argument by theoretically separating the binary issue of regulatory existence from regulatory enforcement as two different dimensions of planning effectiveness; and proving that institutional information capacity rather than the population pressure alone is the threshold for sustainable land governance in a burgeoning secondary Nigerian city.

Policy and Practical Implications

The findings suggest that in Lafia planning authorities and other comparable urban centres in Nigeria, it is more appropriate to allocate future resources to strengthening enforcement agencies, to developing a land-use information system and participatory strategies than simply trying to expand the range of planning controls in use.

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