

# Spatial Assessment of the Adequacy of Polling Units in Oyo Federal Constituency, Oyo State, Nigeria

Amusa, I. A.<sup>1\*</sup>, Onosemuode, C.<sup>2</sup>, Aweda, T. O.<sup>3</sup> & Oyetayo, A. A.<sup>4</sup>

<sup>1</sup>Department of Cartography and GIS, Federal School of Surveying, Oyo, Nigeria

<sup>2</sup>Department of Environmental Management and Toxicology, Federal University of Petroleum Resources, Effurun, Nigeria

<sup>3</sup>Department of Computer Science, Federal School of Surveying, Oyo, Nigeria

<sup>4</sup>GIS Department, Independent National Electoral Commission, Abuja, FCT, Nigeria

\*Corresponding Author

DOI: <https://doi.org/10.47772/IJRISS.2026.10200499>

Received: 04 March 2026; Accepted: 10 March 2026; Published: 18 March 2026

## ABSTRACT

Elections are the foundations for which democracy thrives and are the basis for good governance. Polling units are the points where these elections take place. The study examined the adequacy of these polling units in Oyo Federal Constituency with a view to proffer lasting solutions to the protracted problem of voters been denied their civic rights of casting their votes during elections. This was possible using geospatial technologies. The study adopted Geographic Information Systems and Remote Sensing technologies adopting Vector data model. Primary and secondary datasets were used. Data used included the locations of the polling units, analogue map of the study area, satellite imagery of the area and attribute data of the spatial data. Database was designed and created using ArcGIS Pro as the implementation software. Spatial analyses were carried out and results generated. Findings from the results included maps showing locations of the polling units with clustered pattern using Average Nearest Neighbour tool of ArcGIS Pro, inadequate distribution of the available polling units and the locations of the proposed additional 37 polling units added to the existing 551. The concentration of the study was based on the geographic locations of the polling units and the accessibility of these polling units by the voters. The study was concluded with recommendations that include the use of demographic data to redistribute the polling units before the next general elections, also splitting overpopulated polling units to avoid overcrowding during elections etc.

**Keywords:** Polling units, Democracy, Election, Voters, GIS

## INTRODUCTION

The foundation of any true democracy is laid on good electoral processes through free, fair, credible elections that are acceptable to all stakeholders. Chinemerem and Dode (2024) described election as an official process of choosing a person for public position/office. Election according to Lawal (2018) is a major factor in Nigeria's political development since independence and also a key player in pre-independence era at the national and regional levels. Agah (2017) lamented the unfortunate situations in Nigerian democracy especially elections that are characterized by pessimism, uncertainty, fears for the safety of life and property, violent confrontations and struggles for power have from time immemorial become defining features of elections in Nigeria. The violent nature of the Nigerian election as reported by Alao (2021) has hindered Nigerian democratic development and also adversely affected the credibility of election results. Violence which is noted as one of the vices during election has been a basic feature in Nigerian elections since colonial times (Ugwuoke *et al.*, 2020). The electoral body in Nigeria is the Independent National Electoral Commission (INEC).

In recent democracies, fostering active citizen participation in electoral processes stands as a fundamental pillar of governance as stated by Biu *et al.*, (2024). Democracy aims to bring the greatest amount of enjoyment to the largest number of members of the community (Odigbo *et al.*, 2023). Despite the benefits derivable from actively participating in elections, lots of factors are also responsible for citizens' low turnout during elections. Tracey (2016), Mataka and Nkandu (2020), Oyoru (2023) adduced reasons that include socio-economic factors like unemployment, poor infrastructure, and electoral corruption can cause low turnout of voters. Growing insecurity before elections was the reason given by Jenkins (2021). These reasons and others cause some polling units to record low voters' turnout especially in the last general election of 2023 conducted in Nigeria. The loss of hope in the electoral process is another reason for the low turnout of voters at the polls. Chatham House (2023) stated that the youth comprised more than 70% of over 9 million new voters added to the register before 2023 general election and insisted on the need to rebuild the confidence of the electorate by erasing the impression that election in Nigeria is a mere symbolic exercise.

"Polling Units (PUs) constitute the primary structure for elections in Nigeria. The exact location of the 176,846 PUs nationwide is not only important for the purpose of electoral planning, timely delivery of election materials and opening of polls on Election Day, it is also very useful for voters and election observers" (INEC, 2023). Elections take place at polling units around the country. These polling units were defined differently by various authors. Emakoji and Nwoha (2017) defined polling unit as a designated location where registered voters cast their votes on election days; while Herbert *et al.*, (2021) defined polling units as isolated places with significant structures established by the electoral body. The polling units serve dual purpose as registration centres and voting units. The essence of suitable polling units in an electoral process cannot be over emphasized so much that INEC has to create additional 56,872 polling units before the 2023 general elections, thereby converting all polling points to polling units. The new 56,872 polling units and existing 119,974 centres made up 176,846 registered polling units across the country (Premium Times, 2021). This decision of increasing the polling units faced a lot of criticism from certain interests before the election. Oyo State according to the report had 6,390 polling units and Oyo Federal Constituency (Figure 1) had 551 polling units.

The geographical extent of Oyo Federal Constituency is between longitudes 3° 41' 43.021" and 4° 06' 02.866" East of the Greenwich Meridian; and between latitudes 7° 38' 06.598" and 8° 37' 07.807" North of the Equator. The study area is located in Oyo State of Nigeria with four local government areas: Afijio, Atiba, Oyo East and Oyo West. They are under Oyo Kingdom headed by Alaafin who is the paramount ruler of the Oyo Town with other towns like Ilora, Awe, Akinmoorin, Jobele, Fiditi, Iware and others. The current population is estimated at about 866,484 from the 2006 population estimates of 562,501 (NPC, 2009).

Okosun (2016) stated that irregular citing of polling units in Nigeria remain one of the barriers for a free, credible and fair elections as this tend to be afflicted by highly connected people, high government officials and most cases the traditional rulers. INEC (2019) indicated in their guidelines that locations of polling units should not include places of worship, palaces of traditional rulers and private homes such that unnecessary inducement of electoral officers can be avoided to produce a credible result after the election. It was noticed that polling units are located in these places despite the guideline from the electoral body.

Geographic Information System (GIS) is a veritable and properly tested tool that can be used in the electoral process at every stage of the process that include voter registration before the elections, election period and post election period. GIS technology was applied in the management of elections by Omoleke and Maduekwe (2017). Dawodu *et al.* (2023) appraised the technical capabilities in the areas of visualization and analytical advantages that involve replacing non-spatial 'voter's address file' systems with election district and voter location data in a GIS format. Biu *et al.* (2024) assured that GIS can be used to enhance voter turnout and foster civic responsibility in electoral processes while leveraging on spatial data and analytical tools of GIS which enables targeted outreach, facilitates informed decision-making, and promotes inclusive participation. Nickerson (2015), Anastasiadou *et al.*, (2021) and Dawodu (2023) stressed the need for election officials and community organizers to identify areas with low voter registration or turnout and implement targeted outreach initiatives to mobilize voters using spatial analysis of GIS.

Anastasiadou *et al.* (2021), Merivaki (2020) and Dawodu (2023) opined that GIS promotes transparency, accountability, and integrity in electoral processes by enabling the visualization and analysis of electoral data,

facilitating evidence-based decision-making and targeted interventions. Okolie *et al.*, (2018) aligned with the opinion of other researchers that believed that a typical GIS can combine thematic layers of population and land use to yield meaningful relationships or scenarios critical to decision-making processes which makes GIS an excellent tool for the management and analyses of elections at all stages.

The aim of the study is the assessment of the adequacy of polling units in Oyo Federal Constituency with a view to solve the perennial problem of elections that exclude a certain percentage of the eligible voters and locations within the study area during elections because of non-provision of enough polling units. The specific objectives include identification of the present polling units, the use of geospatial tools to assess whether they are adequate or not and make necessary provision where they are not provided.

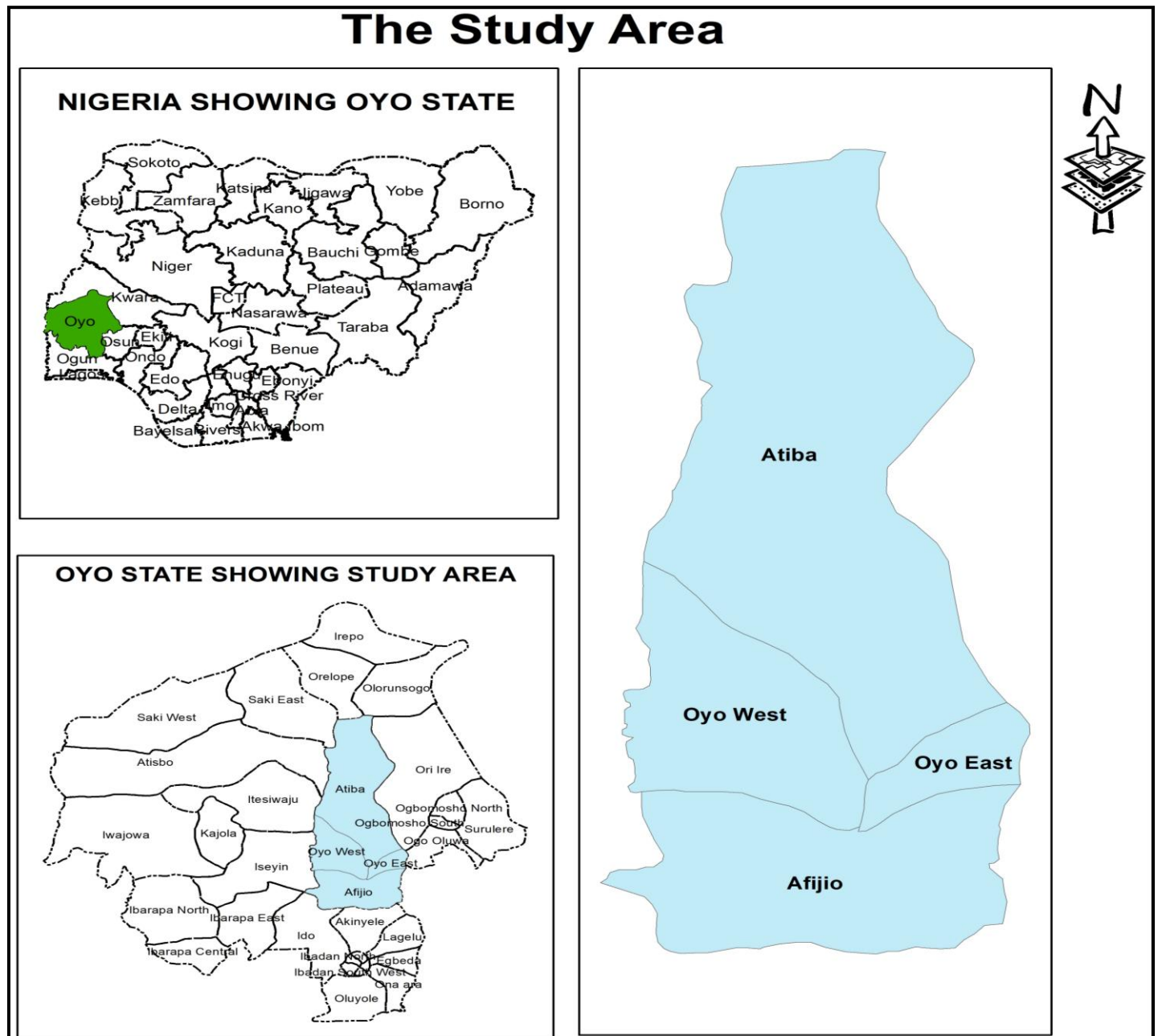


Figure 1. Location Diagram of the Study Area

## MATERIALS AND METHODS

### Data and sources

The datasets used were those that met the required standards sourced from organisations that are custodians of such data. The imagery used as the backdrop of the created map layers was downloaded from Google Earth

Pro online. Other features like the rivers and roads in the study area were extracted from the imagery with a resolution of 3.0m which was adequate for the process. The locations of the INEC offices were coordinated using Garmin GPSMap 78sc Handheld GPS with an accuracy of about 3.0m. The geographic coordinates indicating the locations of the polling units were provided by the INEC national office in Abuja. The shapefile of the boundary delineating the study area comprising of the four local governments was from the Office of the Surveyor-General of the Federation, Abuja. Attribute data of features were sourced using oral interview and observations.

## Methods

The study adopted vector data model. The model allows features to be represented in various shapes. The polling units as points, the rivers and the roads as polylines and the boundaries of the local governments and the Federal Constituency as polygons. The satellite imagery was downloaded from Google Earth Pro online. The study area was divided into smaller rectangular polygons and was georeferenced with the coordinates extracted from the imagery. The polygons automatically fell in place as soon as the units were georeferenced one after the other using ArcGIS Pro as the implementation software. The local government area boundary was gotten online. The locations of the polling units from the INEC office were saved in Microsoft Excel. This was converted to a format acceptable by ArcGIS Pro in Tab delimited format. This formed one of the various map layers in the application.

Furthermore, the roads, rivers and other features' shapefiles were created using ArcCatalog in the ArcGIS software. The datum used was WGS UTM Zone 31 while those in other projections were projected into WGS UTM Zone 31 using the software's 'Data Management Tool'. The created shapefiles were added to the data view of the software where the roads and other features were extracted using head-on digitizing method from the imagery of the study area. The digitized entities' tables were populated with the information from the oral interview, questionnaires, records from the INEC office and direct observations called attribute data. This is also the process of linking the geometric data with the semantic (attribute) data.

The various spatial analyses performed included buffering of the polling units with the 1Km standard set out by INEC. Buildings within these buffer zones are considered to be adequately served based on this criterion. Further to this is the determination of the spatial distribution using Average Nearest Neighbour Tool. Fishnet was also used to grid the study area into squares based on the 1Km distance criterion from the polling units to cater for the areas without polling units.

## RESULTS AND DISCUSSION

Chinemerem and Dode (2024) in their recommendations for the next general election in Nigeria advised that the issue of disproportionate allocation of voters to polling units which was also flagged in one of the reports by election observers in 2023 should be avoided, and noted that it is important to create more polling units to ensure that none exceeds the stipulated 750 voters' maximum limit. The introduction of GIS in elections was reported by The European Union Support to Democratic Governance in Nigeria (EU-SDGN) in 2023 to boost easy location of polling units before the 2023 general elections. The lopsidedness or inadequacy in the locations of the polling units have disenfranchised eligible voters at the polls in Nigeria which have resulted in electoral violence with dire consequences on the life of the electorate, officials of the Independent National Electoral Commission (INEC) and materials (Yusuf & Saminu, 2024).

### Determination of Locations of Polling Units

The data from the INEC Office as the body saddled with the conduct of elections in Nigeria and keeping records of voters in the country was translated into a map as shown in Figure 2. The map shows the locations of the polling units, the INEC Offices in the constituency, the roads linking the polling units that allows access to the polling units and the voters. The total number of polling units is 551 as shown in Table 1. The locations of the polling units were based on the factors that include population of the voters, accessibility to the polling units and availability of open space to accommodate the massive turn outs during elections. These sets of criteria were solely at the discretion of INEC as the body saddled to manage elections in Nigeria.

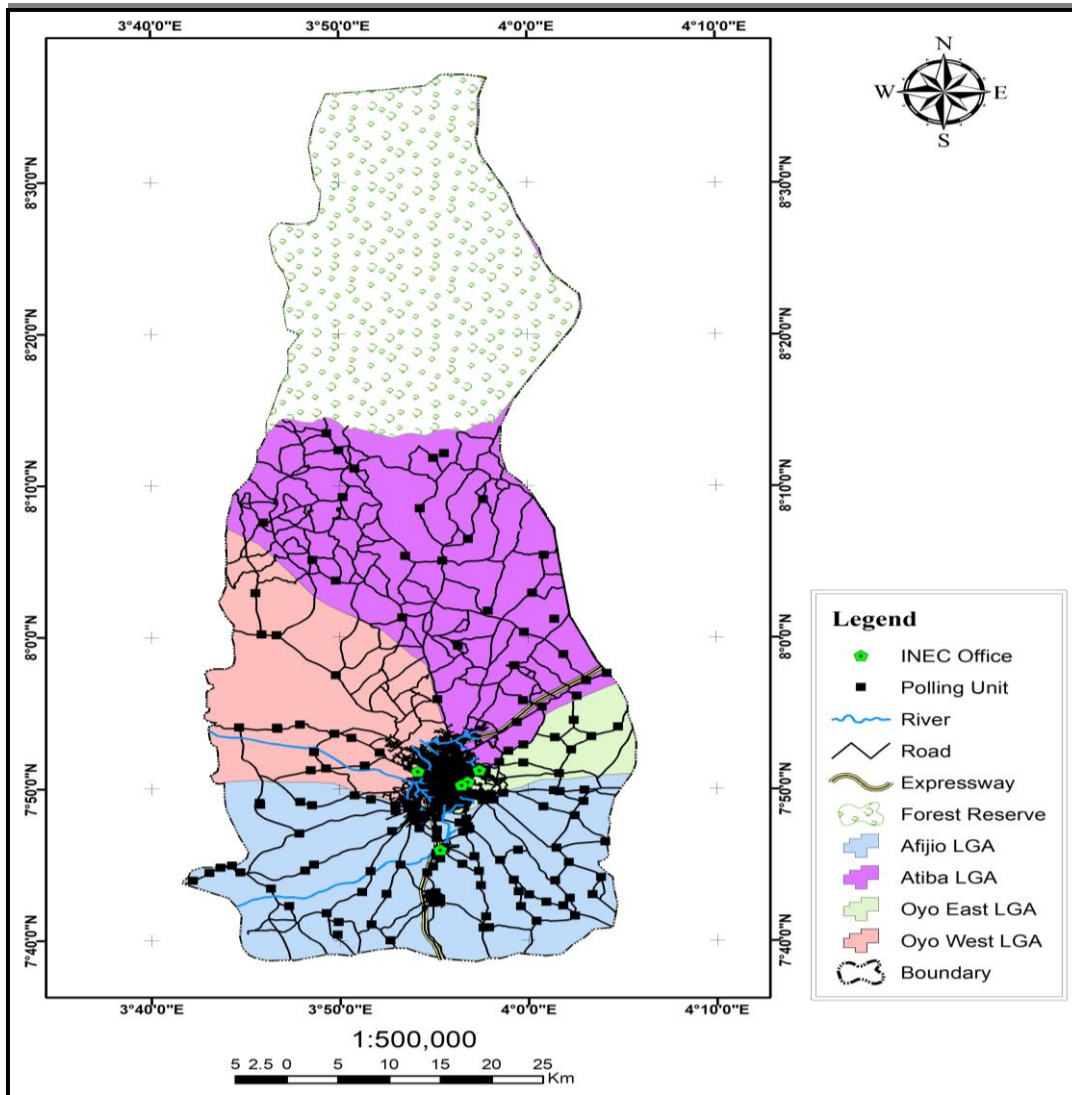


Figure 2. Locations of polling units within the Study Area

(Authors’ Laboratory Work, 2025)

Table 1. Distribution of Polling units in Oyo Federal Constituency

Local Government	Polling Units	Total Voters	Percentage
Afijio	95	52,468	18.56
Atiba	168	86,238	30.50
Oyo East	149	71,507	25.29
Oyo West	139	72,506	25.65
Oyo Federal Constituency	551	282,719	100

Sourced from INEC Office, 2025

### Determination of Spatial Distribution of Polling Units

It is expedient to note that the spatial distribution of the polling units should be known. The reason why violence erupts around a polling unit is the clustered nature of the polling units as observed during the field reconnaissance around the study area. This is evident in some polling units where the polling units are separated by a feeder road of less than 6m. This study shows the distribution of the polling units using Average Nearest Neighbour (ANN) tool. The distribution exhibited clustered pattern (Figure 3) especially in the urban centres within the study area like Owode, Araromi, Dacamca, Cele Tuntun, Pakoyi, Agunpopo, Ilora, Kosobo, Akesan and the semi-urban centres spread around the periphery of the study area. Figure 4 is the summary of ANN

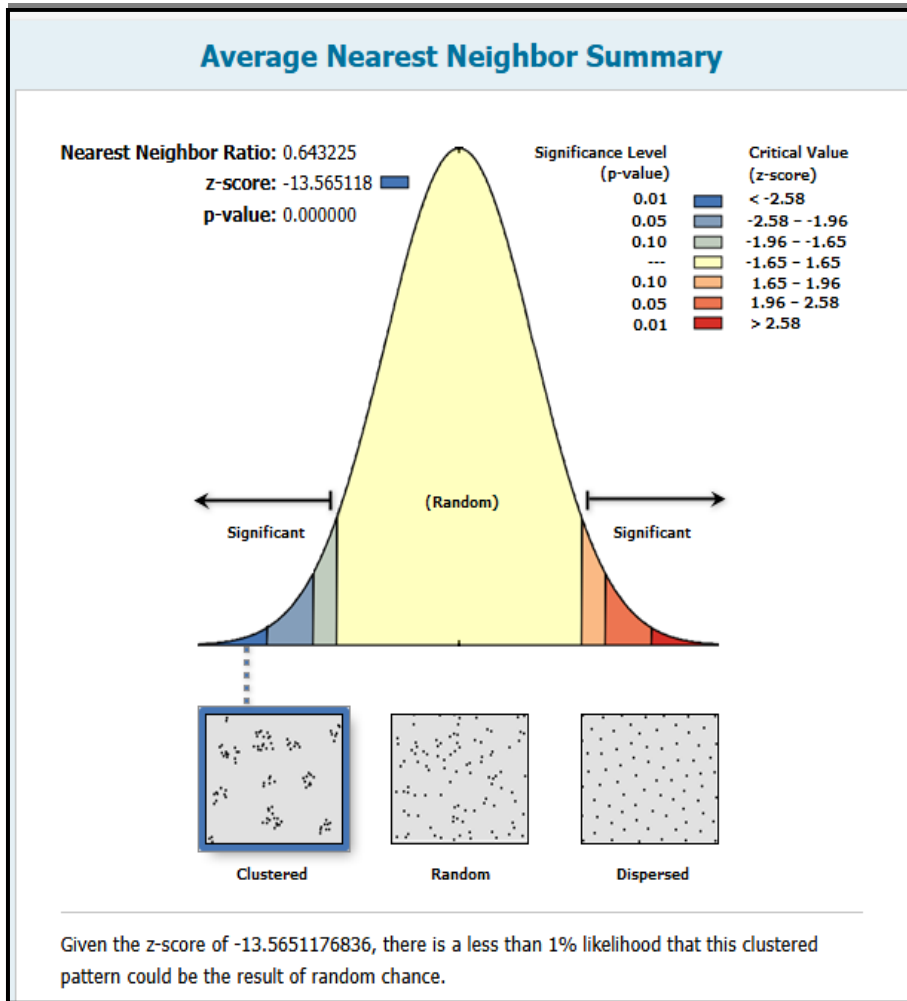


Figure 3. Distribution Pattern of Polling Units

<b>Average Nearest Neighbor Summary</b>	
<b>Observed Mean Distance:</b>	785.4534 Meters
<b>Expected Mean Distance:</b>	1221.1173 Meters
<b>Nearest Neighbor Ratio:</b>	0.643225
<b>z-score:</b>	-13.565118
<b>p-value:</b>	0.000000
<b>Dataset Information</b>	
<b>Input Feature Class:</b>	Polling Unit
<b>Distance Method:</b>	EUCLIDEAN
<b>Study Area:</b>	2355981273.850545
<b>Selection Set:</b>	False

Figure 4. Summary of Average Nearest Neighbour

### Determination of Compliance with the National Standard of Locating Polling Units

The polling units that complied with the coverage radius of 1Km which served as the National standard in Nigeria were determined using buffering tool in ArcGIS Pro. Buffering is the area of coverage around an

object or a phenomenon (Nwilo, 2011) and had been applied in solving spatially referenced problems by Nwilo *et al.*, (2011) in mapping gully erosion; Onosemuode and Abodurin (2016) in waste management; Ali and Onosemuode (2023) in distribution of health care facilities; Amusa *et al.*, (2017) in urban planning; Ifuwe and Onosemuode (2024) in mapping of sensitivity index after oil spillage; while Tata *et al.* (2023) and Ekpa *et al.* (2023) used buffering for elections related problems.

Buffering of 1km around the polling units was carried out to show the number of buildings within that area of influence of the polling units. The buffer results show the locations of voters relative to the polling units with reference to the national standard of 1Km around the polling units as against the 500m for International Standards. The national standard as stipulated by INEC (2019) was adopted. The concentrations of the polling units and the buildings from where the voters come out to vote are mainly in the urban centre. The Proximity tool in ArcGIS was used to create the buffer distance of 1Km around the polling units.

The “selection by Location” tool was used to separate the buildings within the buffer zone from the other buildings outside the buffer zone (Figure 4). The target layer is the building and the source layer is the buffered layer. The selected buildings by default will show in blue colour which can be exported as a map layer to produce the required results. Maps of polling units within and outside the polling units are shown in Figures 5 and 6.

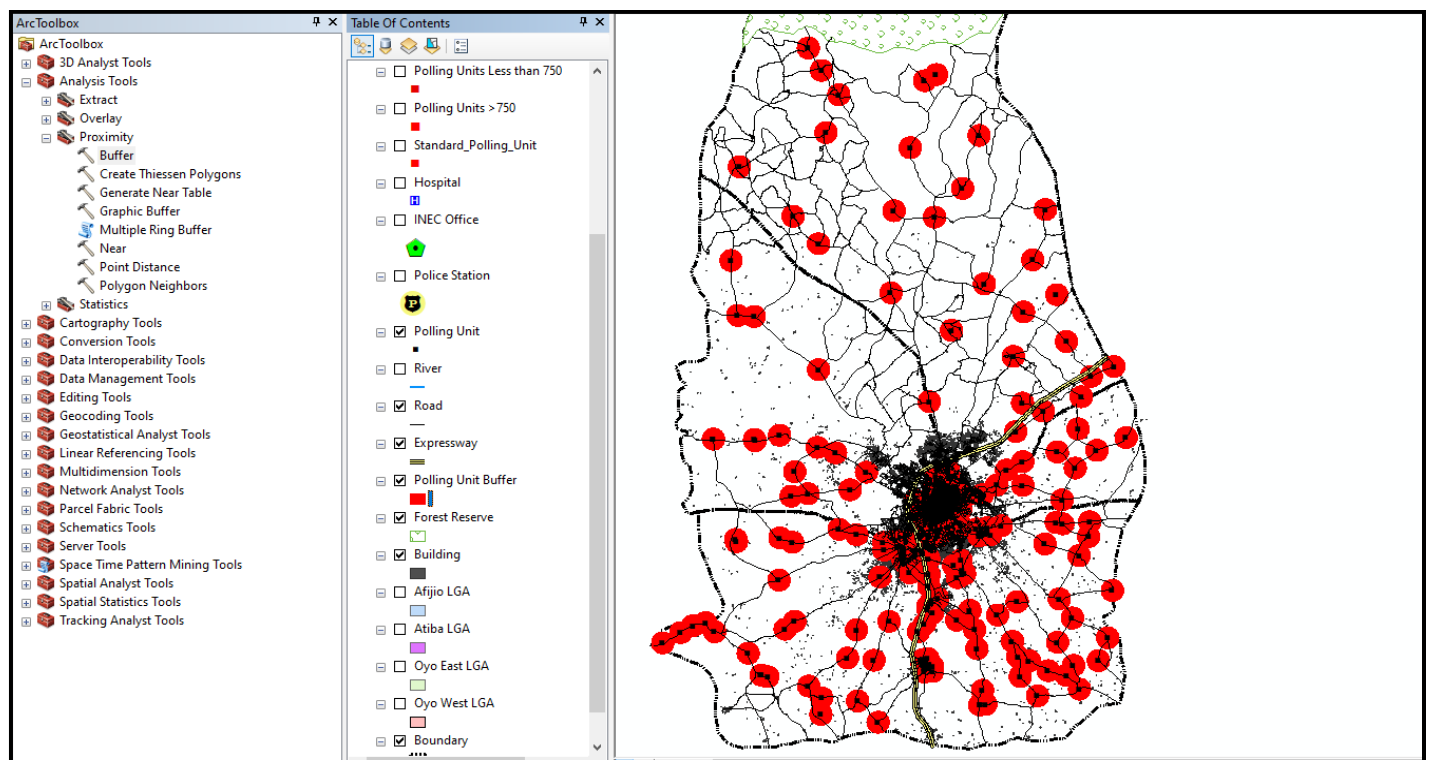


Figure 4. Result of the buffering of the Polling Units by 1000m

A total of 131,435 buildings used for various purposes were considered within the study area. The result showed 85,341 buildings are within 1km buffer zone representing 54.01% of the total buildings. This implies that 46,094 buildings (45.99%) are outside the buffer zone. Table 2 is the summary of the results of the buildings within and outside the specified distance of 1Km.

Table 2. Buildings within and outside the buffer zones

S/N	Buildings	Number	Percentage
1	Within 1Km Buffer	85,341	54.01
2	Outside 1Km Buffer	46,094	45.99
	TOTAL	131,435	100.00

Source: Laboratory Work, 2025

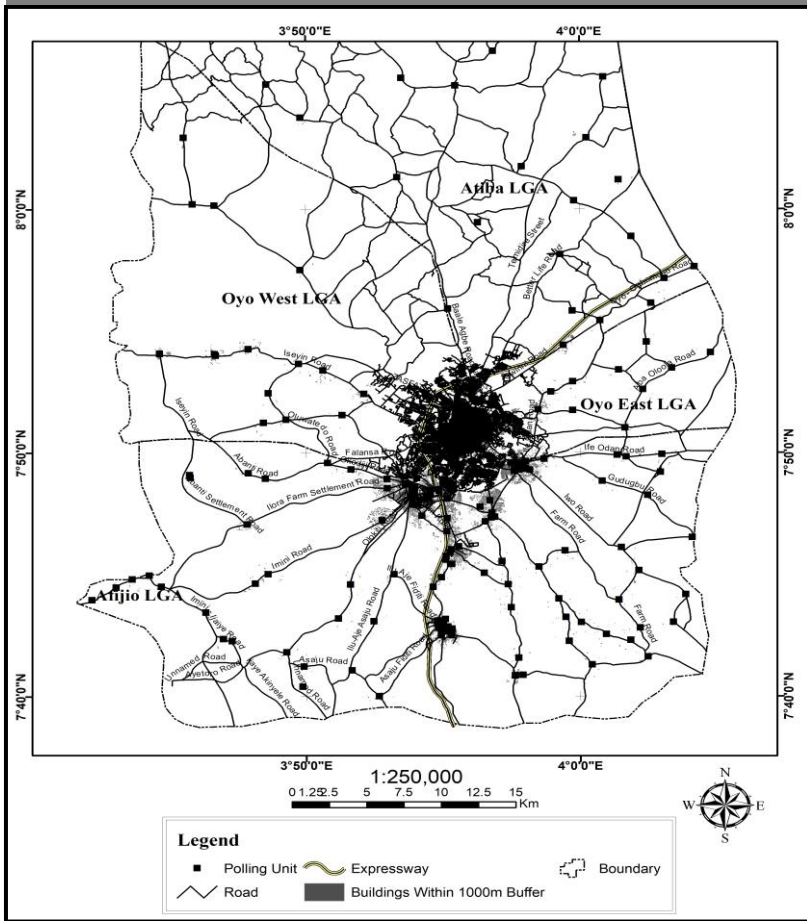


Figure 5. Map of buildings within 1Km buffer of polling units

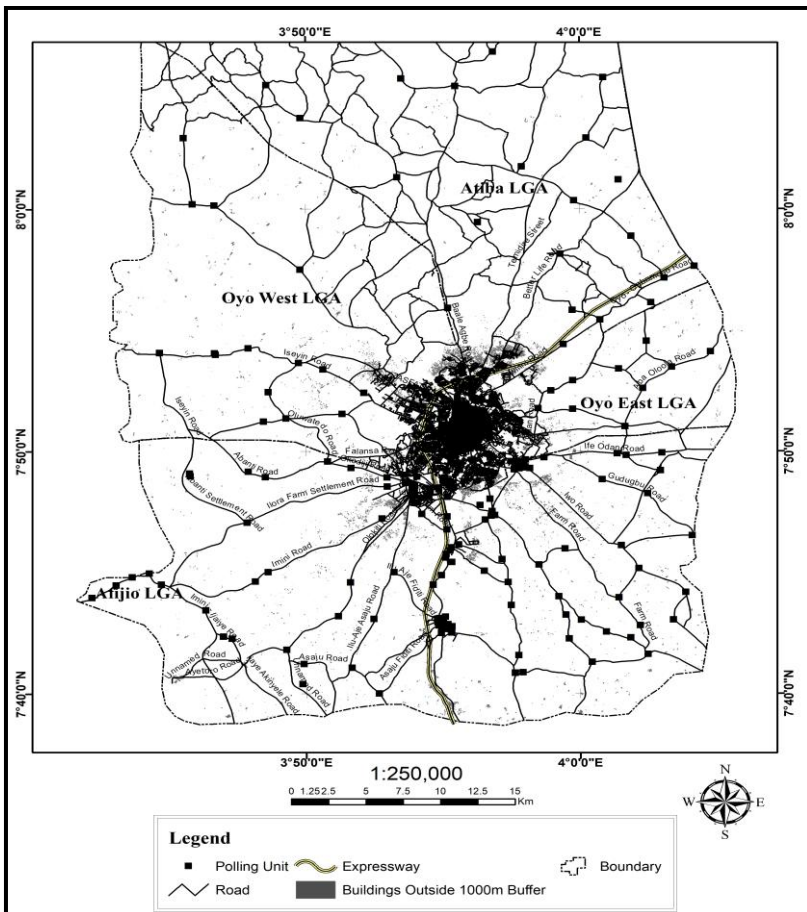


Figure 6. Map of buildings outside 1Km buffer of polling units

## Location of New Polling Units

Overlay operation was adopted to determine the locations of new polling units where there are no polling units within the 1Km radius specified by INEC as the national standard (Figure 5). The process involved overlaying two layers in order to come up with a new layer of information. Fishnet tool was used with the outcome subjected to another process using “Convert Features to Point” which converts the polygons derived from fishnet to central point indicated as green dots (Figure 7). The buffered zones formed the base on which the grids from the fishnet were overlaid to generate areas that are not adequately served by the existing polling units.

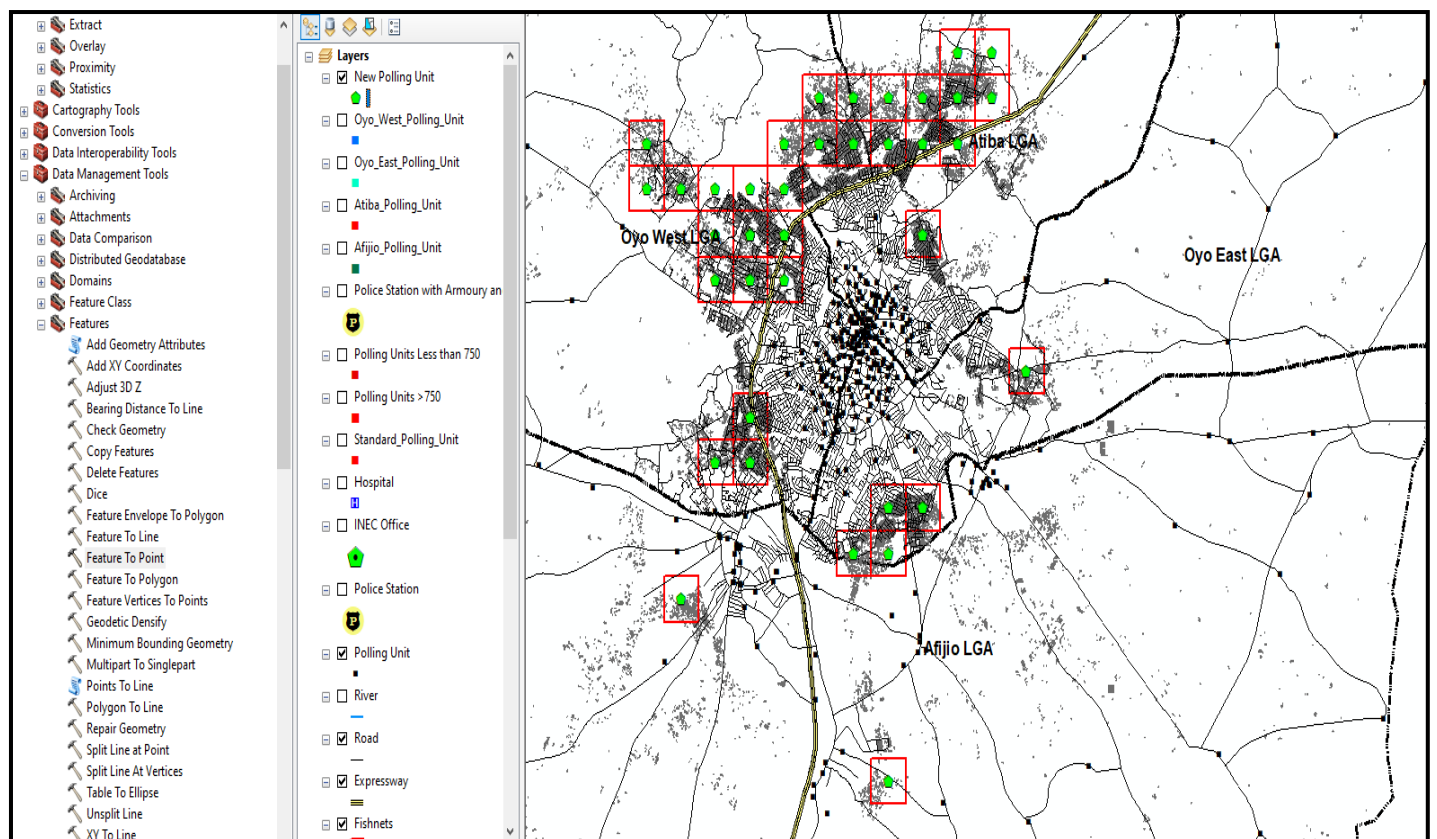


Figure 7. Locations of suggested polling units

37 suitable points where the proposed polling units can be cited for people to perform their civic duties during elections were generated in the study area (Figure 8). Afijio will have additional 2, Atiba to have 11, Oyo East is 5 and Oyo West is 19. The new polling units are subject to availability of eligible voters in the study area and willingness to register. This will make the number of polling units in the study area to be 588 (Table 3).

Table 3. Proposed Polling units in Oyo Federal Constituency

Local Government	Existing PUs	Proposed PUs	Total
Afijio	95	2	97
Atiba	168	11	179
Oyo East	149	5	154
Oyo West	139	19	158
<b>Oyo Federal Constituency</b>	<b>551</b>	<b>37</b>	<b>588</b>

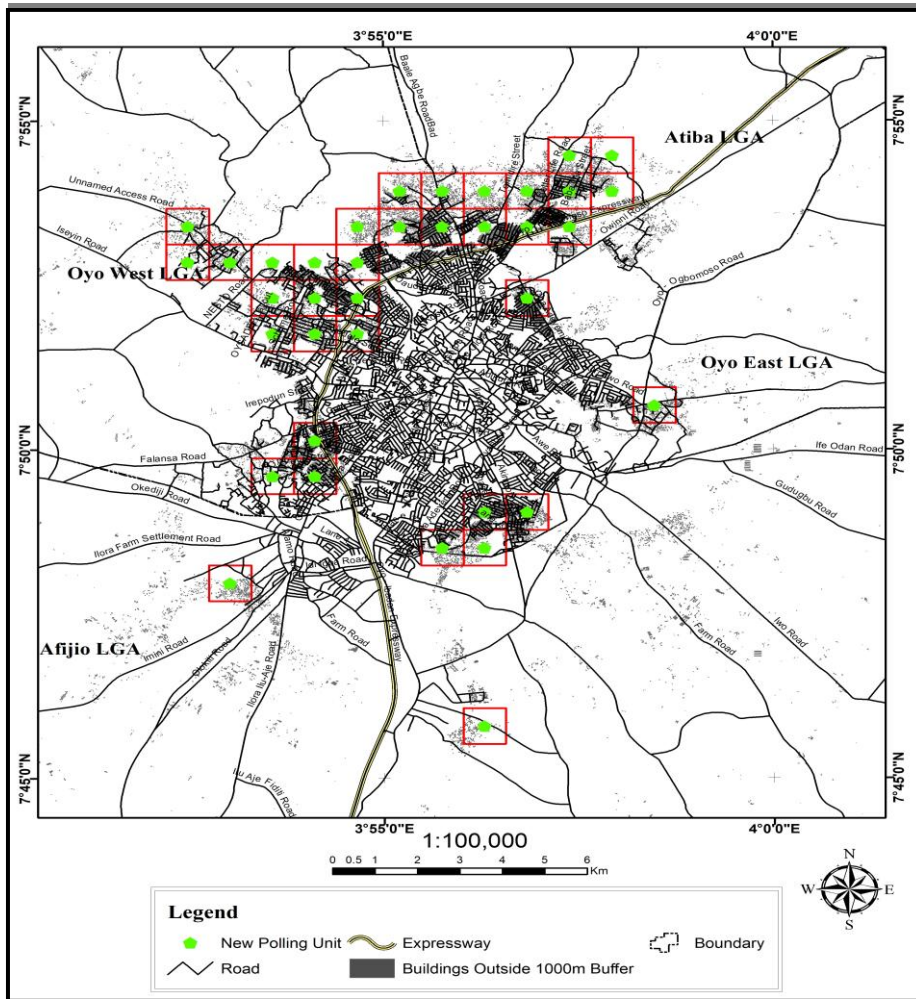


Figure 8. Locations of proposed polling units

## CONCLUSION

The situation of inadequacy of polling units or lopsidedness in the locations of the polling units have been part of the reasons most eligible registered voters were disenfranchised at the polls in Nigeria at almost every elections. These have resulted in electoral violence and continued to hinder conduct of credible elections in Nigeria with dire consequences on the life of the electorate, officials of the INEC and the credibility of the results from such elections. The study was able to identify the locations of the existing polling units and indicated areas where new polling units can be cited for easy access of voters during elections. However, the population data of each locality were not available which would have enhanced distribution of the proposed polling units.

## RECOMMENDATIONS

Recommendations from the findings include but not limited to the following.

1. It is recommended that polling units should be located where they are maximally utilised during elections by considering demographic distribution of the eligible voters before placing polling unit in an area.
2. It is adequate and will be of immense benefits to the nation if the proposed population census in Nigeria is locality based and not lumped together as local government. This will enhance planning and management of future elections, economic planning and aid the government at the grassroots to be able to have demographic data for developmental plans.
3. The agency of government like the National Orientation Agency (NOA) with offices in all the 774 local government areas of the federation should sensitize the populace on the need to be registered as potential voters in their various localities.

4. The international standard of 500m can be considered or given a trial during any available by-election before the actual 2027 general election in sparsely populated areas so that the residents around the areas can be encouraged with the reduction in walking distance from the polling units.
5. It is also important to adopt the use of geospatial technologies in the day-to-day activities of INEC as electoral body in the country as these tools have been proven to be proficient in solving spatially referenced problems including election related problems.
6. Polling units located in religious and privately owned facilities should be relocated as this will discourage inducements of electoral officers during elections.

## REFERENCES

1. Agah, B. E. (2017). Electoral Violence and Democracy in Nigeria's Fourth Republic: A Study of Delta and Oyo States. Being a Ph.D. thesis submitted to the Postgraduate School of Delta State University, Abraka in Partial Fulfillment of the Requirements for the Award of Doctor of Philosophy (Ph.D.) Degree in Political Science of the University
2. Alao, A.A. (2021). Electoral Violence in Nigeria's Fourth Republic: Implication for Democratic Development. *Journal of Administrative Science*. **18** (2), 320-344. Available online at [http://jas.uitm.edu.my/images/2021\\_DEC/JAS17.pdf](http://jas.uitm.edu.my/images/2021_DEC/JAS17.pdf)
3. Ali, P.O. & Onosemuode, C. (2023). Geospatial Analysis of Distribution and Adequacy of Primary Health Care Facilities in Warri Metropolis. *World Journal of Engineering Research and Technology (WJERT)*. **9** (10), 21-36. ISSN 2454-695X
4. Amusa, I.A., Ibe, P.O. & Akolo, F.O. (2017). Appraisal of Abuja Master Plan using GIS: A Case Study of part of Abuja Phase I, Federal Capital Territory, Abuja, Nigeria. *World Scientific News*. WSN **77** (2), 144-162
5. Anastasiadou, M., Santos, V., & Montargil, F. (2021). Which technology to which challenge in democratic governance? An approach using design science research. *Transforming Government People Process and Policy*. **15** (4), 512-531, ISSN: 1750-6166 <https://doi.org/10.1108/tg-03-2020-0045>
6. Biu, P.W., Oliha, J.S. & Chimezie, O. (2024). Leveraging GIS for Enhanced Community Engagement in Elections: A Review of Practices, Impact, and Civic Responsibility. *Engineering Science & Technology Journal*. **5** (2), 471-482. P-ISSN: 2708-8944, E-ISSN: 2708-8952. [www.fepbl.com/index.php/estj](http://www.fepbl.com/index.php/estj). DOI: 10.51594/estj/v5i2.825
7. Chatham House (March 31, 2023). Nigeria: Trust and turnout define 2023 elections. <https://www.chathamhouse.org/2023/03/nigeria-trust-and-turnout-define-2023-elections>
8. Chinemerem, A. N. & Dode, R.O (2024). International Election Observers' Perception of Nigeria's 2023 General Election: lessons for 2027. *African Journal of Politics and Administrative Studies (AJPAS)*. **17**(1): 584-602
9. Dawodu, I. (2023). Geo-enabled Election for Efficient Management of Election Processes in Du District of Plateau. *World Journal of Advanced Engineering Technology and Sciences*, **10** (2), 010-017. <https://doi.org/10.30574/wjaets.2023.10.2.0272>
10. Dawodu, I.A., Okeke, F.I., Faruk, M.U. & Kuriwa, Y.I. (2023). Geo-coding of Voter's Residential Address: A Panacea to Election Malpractice in Jos South LGA of Plateau State, Nigeria. *Journal of Psychology and Political Science*. **3** (6), 56 - 62. DOI: <https://doi.org/10.55529/jpps.36.56.62>. ISSN: 2799-1024
11. Ekpa, A.U., Udoh, I.B. & Eyoeffen, I.E. (2023). Spatial Mapping of Polling Units using Open-Source Software. *International Journal of Environment and Geoinformatics (IJECEO)*, **10** (4), 170-178. doi. 10.30897/ijegeo.1306318
12. <https://www.premiumtimesng.com/news/headlines/468074-inec-creates-56872-new-polling-units-bans-voting-in-mosques-churches-palaces.html>. Published on the 21<sup>st</sup> June, 2021 and accessed on the 3<sup>rd</sup> December, 2025
13. Ifuwe, C. & Onosemuode, C. (2024). Environmental Sensitivity Index Mapping for Environmental Sustainable Cleanup along NAOC Pipeline, Asemoku, Delta State, Nigeria. *Journal of Geographic Information System*, **16**, 148-165. doi: [10.4236/jgis.2024.162010](https://doi.org/10.4236/jgis.2024.162010).
14. Independent National Electoral Commission (2024). Report of the 2023 General Election. Published by Independent National Electoral Commission. Plot 436 Zambezi Crescent Maitama District, Federal

- Capital Territory (FCT), Abuja, Nigeria. ISBN 13-978-55464-8-4. Available online at [www.inecnigeria.org](http://www.inecnigeria.org) and accessed on 12<sup>th</sup> May, 2025
15. Independent National Electoral Commission Nigeria Official Portal (2019). Regulations and guidelines for the conduct of elections. INEC Portal. Available on [https://www.inecnigeria.org/elections/regulations and guidelines for the conduct of elections/](https://www.inecnigeria.org/elections/regulations-and-guidelines-for-the-conduct-of-elections/)
  16. Jenkins, S. (2021). Security and the politics of fear in African elections. University of Birmingham, *Democracy in Africa*. Accessed on the 12<sup>th</sup> September, 2024
  17. Lawal, T. (2018). *Election Crises and Democratic Consolidation in Nigeria since 1999*. A paper presented at The 2018 International Academic Research Conference in Vienna. Pp355-361
  18. Mataka, B. & Nkandu, M. O. (2020). The effects of voter apathy on the growth of electoral democracy in Zambia with special focus on Kabwe central constituency. *Global Journal of Advanced Research*. 7 (3), 81-87
  19. Merivaki, T. (2020). “Our voter rolls are cleaner than yours”: balancing access and integrity in voter list maintenance. *American Politics Research*, 48(5), 560 - 570. <https://doi.org/10.1177/1532673x20906472>
  20. National Population Commission (2009). 2006 Population and Housing Census of the Federal Republic of Nigeria (Result Published in the Official Gazette) pp. 39
  21. Nickerson, D. (2015). Do voter registration drives increase participation? For whom and when? *The Journal of Politics*, 77 (1), 88-101. <https://doi.org/10.1086/678391>
  22. Odigbo, J., Ezekwelu, K. C., & Okeke, R. C. (2023). Democracy’s discontent and the resurgence of military coups in Africa. *Journal of Contemporary International Relations and Diplomacy (JCIRD)*, 4(1), 644-655
  23. Okolie, C., Adesina, E.A., Irvbogbe, H & Umar, (2018). A Review of Geographic Information Systems applications to Election Mapping in Nigeria. Conference: Contemporary Issues and Sustainable Practices in the Built Environment - School of Environmental Technology International Conference (SETIC) 2018 at Minna, Niger State, Nigeria. Volume 2, April, 2018
  24. Omoleke, M & Maduekwe, N.I. (2017). The Use of Geospatial Technology for Managing Elections in Nigeria: Issues and Challenges. *International Journal of Innovation and Research in Educational Sciences*. 4 (4), 509-513. ISSN (Online): 2349–5219.
  25. Onosemuode C. & Abodurin, W. A. (2016). The Use of Geoinformatics in Site Selection for Suitable Landfill for Poultry Waste: A Case Study of Amo Farms, AWE AFIJIO, Oyo State. *International Journal of Sciences*. 5 (4), 9-24. DOI: 10.18483/ijSci.988; Online ISSN: 2305-3925; Print ISSN: 2410-4477
  26. Oyoru, R.A. (2023). An Assessment of Factors Responsible for Low Voter Turnout in Nigeria: A Literature Review. *Kashere Journal of Politics and International Relations*. 1 (1), 297-303
  27. Tata, H., Olatunbosun, V. A., Taiwo, O. E. & Titilade, A. S. (2024). Mapping and Spatial Distribution of Polling Units to Enhance Voting Progress in Akure North Local Government Area, Ondo State, Nigeria. *African Journal on Land Policy and Geospatial Sciences*. 7 (1), 148-158. eISSN: 2657-2664. <https://doi.org/10.48346/IMIST.PRSM/ajlp-gs.v7i1.43063>
  28. The European Union Support to Democratic Governance in Nigeria (2023). The technology of finding polling units. Available at [www.eusdgn.org](http://www.eusdgn.org) and accessed on 27<sup>th</sup> January, 2025
  29. Tracey, L. (2016). Do you want my vote? Understanding the factors that influence voting among young South Africans Pretoria: Institute for Security Studies.
  30. Ugwuoke, C. O., Ajah, B. O. & Chukwuemeka, O. D. (2020). *Developing patterns of violent crimes in Nigerian democratic transitions*. In: Aggression and Violent Behavior, pre-print, 101457
  31. Yusuf, A.B. & Saminu, A. (2024). Electoral Violence, Insecurity and the Credibility of the 2023 General Election in Nigeria. *Kashere Journal of Politics and International Relations*. 2 (1), 38-47.