

Environmental Impact Assessment in Developing Urban Economy: A Perspective of Challenges Impeding Public Participation in Traditional City of Bida, Nigeria

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Abstract

Evidences reveal that broad-based social capital and social inclusion has been failing in the practices of public participation in Environmental Impact Assessment for the development of urban economy in less-developed countries. The impact of broad-based failing on urban economy is intensified by series of factors namely; organic community development, lack of successful development control and behavioural attitude of populace among others. For a traditional city which needs a high number of infrastructural developments as part of socio-economic and environmental management, public participation as a module of decision-making process, is more complex, due to micro-based factors as challenges in traditional cities of Africa. To date, studies on public participation center expansively on macro-based factors with little or no concentration to examine micro-based factors on government-based projects. This study therefore, tends to identify challenges causing broad-based deterioration by focusing on examining the micro factors impeding public participation in government-based projects. In this study, quantitative research method using questionnaire survey was adopted with 344 questionnaires were administered to examine micro-factors hindering citizens to participate in Environmental Impact Assessment. The sampled frame includes; planning officers, traditional leaders, youth leaders and household heads. Standard multiple regression analysis was adopted to recognize factors affecting citizens to participate in urban planning and management. This study suggests areas of encouraging broad-based participation and apparently could be used by the environmental planning practitioners and law makers in the traditional cities of developing countries, like Bida in Niger State, Nigeria.

Keywords: *Citizen Participation, Environmental Impact Assessment, Traditional City and Urban Development.*

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Background to the Study

During the decades of the 1950s and 1960s, it became increasingly clear that many industrial and developmental projects were operating at unforeseen and undesirable environmental consequence. On 1 January, 1970, the United State of America had the distinction of becoming the first country in the world to adopt legislation requiring Environmental Impact Assessment (EIA) on major projects. Since then, the growth of EIA legislation has been spreading across the world (Barendreg, et al, 2024).

The engagement and support of local residents in effort to explore problems with the aim to incorporating local initiatives and ideas in designing and implementation process are the genesis of EIA (Solomon, and Hoberg, 2014). EIA is therefore been described as a technique or process by which information about environmental effect of a project is collected by the developers, interested NGOs and beneficiaries and then government inform the public whether the project is or not feasible (Adedoyin, 2014). This implies that, EIA can be perceived as a tool seeking to ensure developmental projects are handled in a way, that impact arising from its activities can be predicted (positive and negative) before its implementation. The significant of EIA is enormous, owing to its role in long term advantages to the development and management process of human communities. Some of its (EIA) significance are; its exerting pressure on project sponsors or donors to effectively address the negative impact of project in question; its effectively pulling the attention of authorities to the concern of local residents; it is a forum that ensures extending and improving public awareness of environmental issues; and it promotes building and strengthening indigenous empowerment in government and private initiative project among others (To, and Chung, 2014).

Despite axiomatic desirability and increasing interest in participation, there has been insignificant motivation and involvement by the local residents in EIA schemes. Passive attitude and non-participation were revealed in some previous studies (Vicente, et al., 2015; Nadlifatina et al., 2015; Choudhury, 2014; and Chi, 2013). However, these studies focused more on macro factors and limited attention on micro factors in traditional cities of developing countries. A traditional city refers to the pattern of urban settlement development that human civilization has built which emerged for many centuries before the development of automobile or railroads (Encyclopaedia, 1975). This implies that, settlements are relatively unplanned and they developed through human colonizing environment with major socio-economic activities surrounded by residential houses. This study is set out to examine challenges of citizen participation in EIA for the development of urban economy in traditional city of Bida, Nigeria, with a view to promoting liberty and integrity of public participation in planning.

Literature Review

Environmental Impact Assessment and Citizen Participation in Nigeria

The basis for citizen participation in EIA process in Nigeria was promulgated in the Environmental Impact Assessment Act. No. 86 of 1992 (Adedoyin, 2014). In the Section 7 and 22 (3) of the Act stipulates that government agencies, members of the public, experts in any relevant discipline and interested groups should be given opportunity to examine and

comment on the EIA of a proposed project. Section 25 provides that Federal Ministry of Environment (FME) should publish a notice capturing the date and place where the mandatory report shall be made available to the public as well as the deadline and the address for submitting comments on the conclusion and recommendations of the report. Section 37 provides that; mandatory report shall be subjected to review panel and FME shall ensure that; (a) the information required for assessment by a review panel is obtained and made available to the public and (b) hold public hearing in a manner that can offer citizens opportunity to participate in the assessment. However, despite the Act that establishes the EIA in Nigerian Environmental Planning Legislation (EPL), it has been observed that the process is not effective, owing to the challenges steaming from individual residents of communities and partly from the government (chado, 2017).

The significance of EIA cannot be over emphasized. It is a procedural strategy in development control process in human environment. It can effectively facilitate conflict management, because it discloses some issues which could not be known until project implementation process or post implementation of a project. In the contemporary society, EIA is part of new Alternative Dispute Resolution (ADR) strategy by preventing social, economic and environmental disasters in the course of development planning. In this study, factors impeding citizen participation in EIA process in the contemporary world are broadly categorized into two; macro and micro factors. Macro factors are those barriers that steaming from government and its agencies namely; lack of consultation with professional bodies, lack of communication between government and inhabitants of planning communities, lack of legal framework, inadequate capacity of government to motivate residents of planning community to participate, lack of transparency, and late preparation of EIA scheme. Micro factors are those barriers emanating from individual residents namely; cultural, socio-economic and environmental factors (Adedoyin, 2014) and (Q. Xue, 2024). Macro and micro barriers are observed to be intertwined (Bull, et al., 2010). This implies that, micro barrier is directly impeding citizens from participating; however macro barrier is systematically exacerbating micro barriers by reducing citizens' interest to participate, limit access to information and consequently deteriorating the liberty and integrity of public participation practices. However, this study extensively focused on the Micro-based factors impeding citizens in EIA schemes, which are referenced to individual challenges in participatory process.

Challenges of Citizen Participation in Environmental Impact Assessment

In developing countries like Nigeria, despite the promulgation of citizen participation in the Nigerian Environmental Planning Legislation (NEPL), the programme is yet to operate effectively, which could be traced to individual barriers in Nigerian society, especially traditional oriented communities. These barriers are cultural, socio-economic, and environmental factors, which are discussed below.

Cultural factor: This is one of the prime factors affecting citizens to participate in EIA scheme, owing to its attributes namely; education background, skill and experience, efficacy, and trust among others. In the cities of developing countries, inhabitants are dominated by

low or non-formal education and some belief that they do not possess qualification to participate in EIA of large-scale project (Adedoyin, 2014). This is because, some impact assessment scheme requires skilled and experienced participants in which majority of local residents feel they do not possess. Some people lack efficacy, by haven a feeling that he/she cannot contribute significantly in the process for the development of their communities (Trang, et'al 2024) and (Kakonge, 1996).

Socio-Economic Factor: This factor contributes to passive or non-participation by the local residents by considering its attributes namely; socio-ethnic differences, marginalization, time and money, length of living, household ownership and limited information among others (Chi, 2013 and Trang, and Gerard, 2024). In the contemporary world, some people failed to participate due to socio-ethnic differences (Trang, et'al 2024). This implies that, some people participate passively, because they are not in the same social class with leadership of the programme or project. In a democratic country, some citizens feel they are marginalized by the authorities and any programme from government will not have their support or contributions (Haruna, 2010 and John. and Natalie. 2023). It was revealed that, efficacy affects the interest of citizens by having a feeling that, they are just few months/years or they are ordinary tenants in the community and their voices may not be recognized in making decisions for the development of community (Nadlinfatin, et al., 2015).

Environmental Factor. This barrier ranges from condition of existing amenities, social cohesion to security of life and property. As a rational being, people always consider how effective is the government in maintaining the existing social amenities as a benchmark in motivating citizens to participate in government-initiated projects (Chado 2017 and Doko, 2022). In most African nations, poor maintenance culture has become endemic disease in government administration which is affecting citizen to participate in government initiative projects (Chirenje, et al., 2013 and Ocheni, et al., 2013). Cordial relationship among inhabitants, especially between the leaders and citizens has a long way in motivating citizens to participate in developmental programmes (Bloomberg, and Sandfort, 2012). This implies that, if leaders could not maintain intimate cohesion in the community, any programme or policy that requires public support may result in passive or non-participation by the citizens (Ho, et al., 2015 and Hattley, 2013). A conventional wisdom perceived challenges of citizen participation from two dimensional angles namely; long- and short-term visionary impact. This implies that, citizens actively participate if the impact from a project is expected in near future time (i.e., within one year) and reverse could be the case (John, and Natalie, 2023).

Methodology and Study Area

In this study, questionnaire survey instrument was used in data collection. A total of 344 questionnaires were administered with random sampling method in selecting respondents, which comprises of planning officers, traditional leaders, youth leaders and household heads. In data analysis, standard multiple regression analysis was adopted to identify factors affecting citizens to participate in environmental impact assessment in planning and development of urban economy.

Bida traditional city and indeed African traditional cities possessed characteristics of three ecological zones, resulted from antecedent of settlement development namely; pre-colonial, colonial and post-colonial (Haruna, 2010). For a traditional city of this magnitude requires more re-developmental projects and policies to facilitate development of urban economy. This development could be more effective through citizen participation which is a challenge in the traditional cities. Geographically, the metropolitan ancient city of Bida is located between latitude $9^{\circ} 1' E$ to $9^{\circ} 8' E$, and longitude $5^{\circ} 7' N$ to $6^{\circ} 4'$ (Haruna, 2010). As earlier mentioned, the traditional political leadership system of this ancient city is Emirship, and Emir is addressed as Etsu Nupe. The authority of traditional administration divides Bida town into three distinct parts, each is named after the three Fulani royal family as their areas of authority. These names are; Usman Zaki for the Bida North East, Mansaba for the Bida North West, and Umar Majigi for the Bida South. The entire city is divided into North and South by river Landzun, which flows from West to the North-East. The city is further divided into two by the major roads from north to the south called Mokola and Majigi roads; and further divided east and west by Masaga and Takowasa roads (Fig. 1)

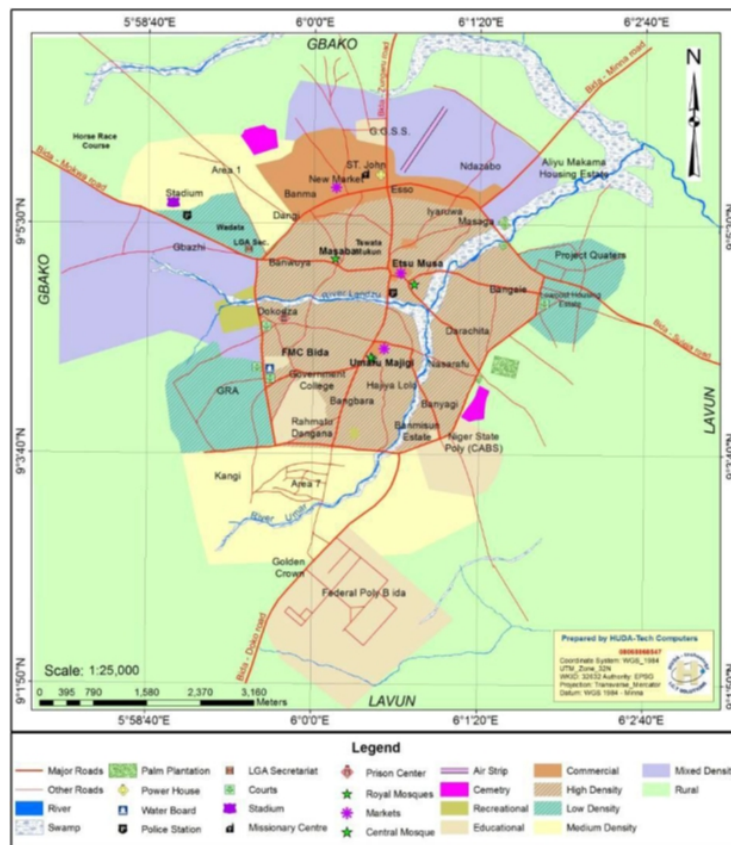


Figure 1: Bida Township map showing land use and population density.
Source: Bida Local Government Council, Town Planning Department, 2023

Result and Findings

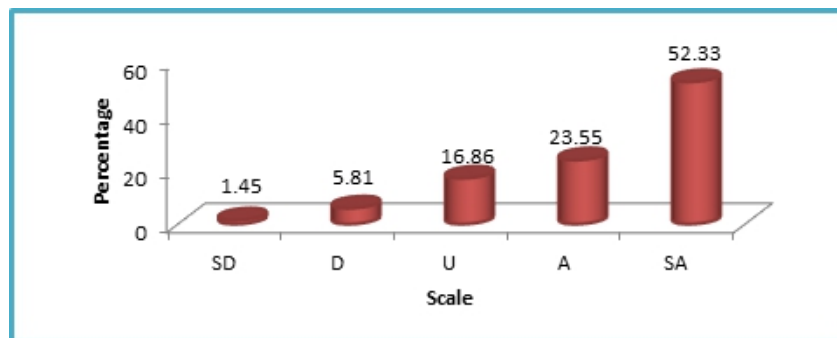
Suitability of data needs to be established in adopting standard multiple regressions (SMR) in exploring the challenges affecting citizen participation in the context of micro-based factors in traditional cities of developing countries. Coefficient matrix results provide values for tolerance and variance inflation factor (VIF). Tolerance value shows how much variability of a given variable is explained by any other variable in the model and value must not be less than 0.10 (i.e. $\geq .10$). VIF indicates correlation of each independent variable with dependent variable and must not be greater than 10 (i.e. ≤ 10), as stipulated by Pallant, (2011) and Creswell, (2014). In this study, tolerance value ranges from .972 to .828 and VIF ranges from 1.208 to 1.029 (table 1). This is an indication that, variables did not violate the assumption of SMR, which implies that they are suitable to be retained or considered for further regression procedure. If significant value (sig. value) is less than .05, it implies that such variable or factor have substantial contribution to the prediction of dependable variable. In this study, five factors made substantial unique contribution; education, experience, socio-ethnic differences, status of amenities, and social cohesion (Tab. 1). The remaining variables have made less contribution in the prediction of dependable variables regarding impeding factors affecting citizens to participate in EIA for development of urban economy.

Table 1: Coefficient Matrix of Factors affecting citizen Participation in EIA

Challenges	Standardized Coefficient	t. value	Sig. Value	Collinearity Statistics	
Variable/factor				Beta	Tolerance
Education qualification	.136	2.682	.008	.792	1.263
Skill and orientation	.049	.969	.333	.790	1.265
Experience	.151	3.062	.002	.842	1.187
Trust	.064	1.269	.205	.810	1.234
Ethnic diversity	.244	4.964	.000	.851	1.175
Marginalization	.022	.450	.653	.863	1.159
Time and money	.017	.332	.740	.784	1.276
Household ownership	.045	.933	.352	.882	1.134
Length of living	.002	.050	.960	.870	1.150
Status of amenities	.157	2.920	.004	.712	1.405
Social cohesion	.137	2.589	.010	.732	1.367
Security of life & property	.087	1.657	.099	.751	1.331

Discussion of Findings

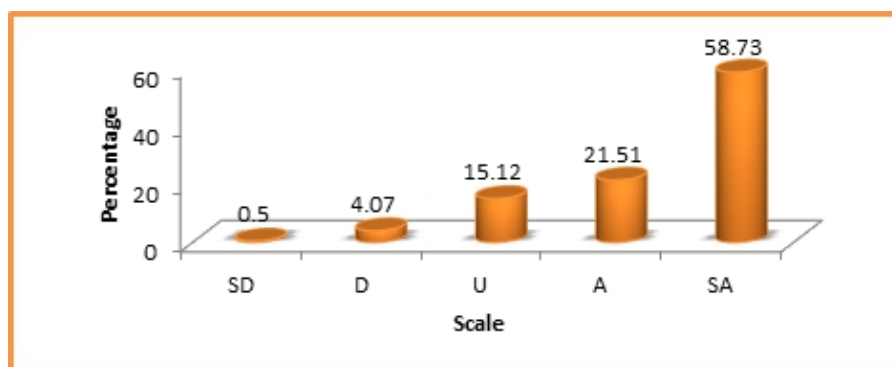
Cultural Factor: The result on cultural factor shows the majority (52.33%) strongly agree that, cultural factor is affecting the interest of citizens to participate (figure 1). This indicates majority are of the view that, cultural factor in relation to its attributes namely; education background, experience, and trust among others are challenges affecting citizen to participate in EIA projects. The result is supported by some previous researches in public participation which were of the view that, cultural factors are among factors militating against interest of citizens to participate in government-based initiative programme or policy in developing human communities (Azizan, 2012 and Eneji, 2009).



SD = strongly disagree, D = disagree, U = undecided, A = agree, and SA = strongly agree

Figure 2: Cultural Factors Affecting Citizens in PP

Socio-economic factor: The results in this section shows majority (58.73%) strongly agree that socio-economic factor is a challenge affecting citizens to participate (figure 2). This implies majority were with the opinion that, socio-economic variables which comprises of differences in social and ethnic groups, marginalization by the authorities, household ownership, time and money, and length of living in the community are among the factors influencing the interest of citizens to participate in planning. This study produces results which shared similar opinion with some earlier authors who were of the view that, these factors apparently affect citizens in participating for urban development initiative programme (Commodore, 2013 and Ziersch, 2011).

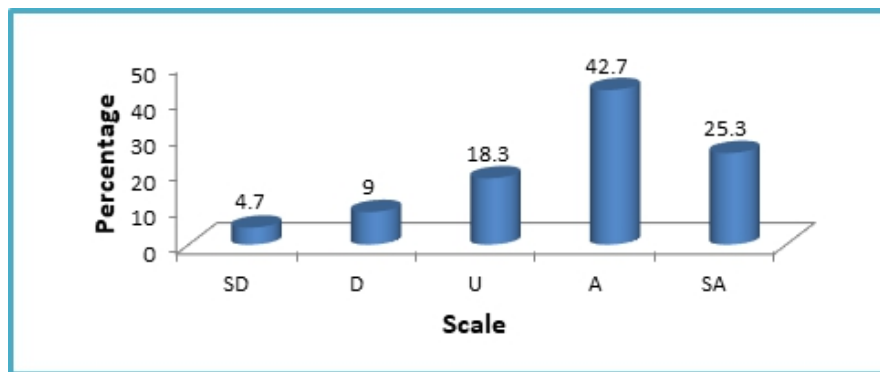


SD = strongly disagree, D = disagree, U = undecided, A = agree, and SA = strongly agree

Figure 3: Socio-economic Factors Affecting Citizens in Public Participation

Environmental Factor: This section provides majority (42.7%) agree that, environmental factor is a challenge affecting the interest of citizens to participate in urban development (figure 3). This reveals majority have the opinion that, environmental variables which includes; status of existing amenities, cordial relationship among the citizens and safety of life and property among other variables are factors militating against the interest of citizens to

participate in planning for the development of urban economy. The result is supported by some great analysts in citizen participation, who are of the view that unity is very important in raising the interest of citizens (Chado, 2017, Bloomberg, and Standfort, 2012; and Hattely, 2013). These authors further argued that, cordial relationship between leaders and their citizens has a long way in promoting citizens' participation. Security was identified as a factor, if the project or policy will have positive impact on the life or property, there will be tendency of high compliance and support by the citizens, however if reverse is the case, less people will participate (Mandarano, 2015 and Commodore, 2013).



SD = strongly disagree, D = disagree, U = undecided, A = agree, and SA = strongly agree

Figure 4: Environmental Factors Affecting Public Participation

Conclusion

This study examines the micro-based factors impeding citizens to participate in EIA in the traditional city of Bida, Nigeria. In overall contexts, standard multiple regression analysis predicts five critical factors namely; education qualification, experience, socio-ethnic differences, status of amenities, and social cohesion as the impeding forces affecting individuals to participate in project initiated by government. Alarming from this study shows that, stakeholders in urban development which comprises of planning officers, traditional leaders, youth leaders, and government agencies should focus on these variables in public participation initiative to enable EIA scheme achieve its objectives. These findings could principally help practitioners and law makers to gain more understanding of citizen participation in EIA and how to make it more effective and helpful in the development of urban economy in African countries, especially traditional cities like Bida, Nigeria.

Reference

- Adedoyin, L., (2014). *Public participation in environmental impact assessment: A case study of project in Lagos*, Nigeria, Family Youth and Community Sciences.
- Anol, B. (2012). *Social science research: Principles, Methods, and Practices. Second edition*, Published Under Commons Attribution-NonCommercial-Share Alike 3.0 Unported Licence. South Florida, USA.
- Arnstein, S. R., (1969). A ladder of citizen participation, *Journal of the American Institute of Planners*. 35, 37–41.
- Awang, Z. (2012). *Research methodology and data analysis. Second edition*, Dee SEGA Enterprise 37A, SS15/4, 47500 Subang Jaya Selengor Darul Ehsan, Malaysia.
- Azizan, M. (2012). *Public participation short comings in tourism planning: The Case of Lankawi Islands*, Malaysia. *Journal of Sustainable Tourism*. 20(4) p. 585-602.
- Barendreg, L., Bendor, R. & Eekelen, B. F. (2024). Pulic Participation in Futuring: A systematic, *Review Community Development Journal*, 48(1), 20–30
- Bartlett, J. E., Kotrlik, J. W., & Higgins, C. C. (2001). Organizational research: Determining appropriate sample size in survey research, *Information, Technology, Learning, and Performance Journal*, 1(19), 43-50.
- Bloomberg, L. & Sandfort, J. R. (2012). In Commons: supporting community-based leadership, *Community Development Journal*, 43(1), 12–30.
- Bull, R. P. & Evan, J. (2010). The importance of context for effective public engagement: Learning from the governance of waste. *Journal of Environmental Planning and Management*. 53(8), 991-1009.
- Chado, J. (2017). *Public participation efficiency in planning for urban development in Bida*, Nigeria PhD. Thesis, University of Technology Malaysia
- Chi, S. F. C. (2013). Public participation in environmental impact assessment for public project: A Case Study of Non-participation, *Journal of Environmnetal Planning and Management. Article View*: 100.
- Chirenje, L.; Giliba, E. & Musamba, E. B. (2013). Local community's participation in decision-making through planning and budgeting in African Countries, *Chinese Journal of Population Resources and Environment*. 11(1), 10-16.
- Choudhury, N. (2014). Legality and legitimacy of public involvement in Infrastructure Planning: Observation form Hydropower Project in India, *Journal of Environmnetal Planning and Management*. 57(2), 297-315.

- Commodore, B. M. (2013). *Barriers to African American community involvement in transportation planning in a Southern State*. Ph.D., Thesis, Faculty of Public Policy and Administration, Walden University USA.
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative and mixed methods approaches fourth edition*, SAGE in Publications.
- Doko, G. M (2022): Electricity distribution system planning fundamental: Load forecasting Planning. Lecture Note (unpublished). Dept. of Electrical/Electronic Technology, Niger State Polytechnic, Zungeru
- Eneji, V. C. O. et al., (2009). Problems of public participation in biodiversity conservation: The Nigerian Scenario, *Impact Assessment and Project Appraisal*, 27(4), 301–307
- Haruna, N. A. S (2010). *A study of constraints in partisan politics among women who sought for election in bidu local government area*, (Unpublished) M.Sc Thesis, Bayero University Kano, Nigeria
- Hatley, P. J., (2013). *Preserving place : A grounded theory of citizen participation in community-based planning*. Ph.d., Thesis. Department of Geography, Environment and Planning. College of Arts and Sciences, University of South Florida.
- Ho, S. S. Liao, Y. & Rosenthal, S. (2015). Applying theory of planned behaviour and media Dependency theory: Predictor of Public Environmental Behaviour Intentions in Singapore, *Journal of Environmental Communication*, 9(1), 77-99.
- John, H. & Natalie, B. (2023). Social approach: Perspective and examples, *Journal of Environmental and Communication*, 3(1), 70-80.
- Kakonge, J. O. (1996). *Problem with public participation in environmental impact assessment process: Example from Sub-Sahara, Africa*, United National Development Programme Resident Representative. P.O. Box 301, Maseru 100, Lesotho.
- Kingston, R., (2007). Public participation in local policy decision-making: The role of Web-based Mapping, *Cartographic Journal, The*, 44, 138–144.
- Krejci, R. T. & Morgan, D. W. (2006). Determining sample size for research activities, *Journal of Educational and Psychological Measurement*. 30(3), 607- 610.
- Magee, Y. (2012). *Public participation in local governments' urban planning processes and decision-making*, Ph.D., Thesis. Walden University.
- Mandarano, L. (2015). *Civic engagement capacity building: An assessment of the citizen planning academic model of public outreach and education*, SAGE Journals of Planning Education and Research.

- Muse, S. A. (2014). Military rule: Consequences on public participation in Nigeria, *Projournal of Humanities and Social Sciences*. 2(3), 113–124.
- Ocheni, S. et al., (2013). A review of the project cycle and project implementation at the third tier level of government in Nigeria: A theoretical reflection, *Mediterranean Journal of Social Sciences*, 4(2),
- Ojigi, L. M. (2012). An evaluation of the efficiency of the land use Act 1978 of the Federal Republic of Nigeria and its implications in Minna and Environs. *FIG Poplin, A.* (2012). Playful Public Participation in Urban Planning: A Case Study for Online Serious Games. *Computers, Journal of Environment and Urban Systems*.36 (3),
- Pallant, J. (2011). *A step-by-step guide to data analysis using SPSS Programme: SPSS survival manual fourth edition*, SAGE Publications.
- Seltzer, E., & Mahmoudi, D. (2012). Citizen participation, Open innovation, and crowdsourcing: challenges and opportunities for Planning. *Journal of Planning Literature*, 28, 3–18.
- Simon, E. B. (2013). *Public participation in brownfield redevelopment: The role of public participation in State administered voluntary Cleanup Programm*, Ph.D., Thesis. Graduate School of Clemson University.
- Solomon, G. H. & Hoberg, G. (2014). Setting boundaries of participation in environmental impact assessment. *EIA Review*. 45(67-75).
- To, W. M. & Chung, A. W. L. (2014). Public participation in environmental impact assessment in Hongkong Sar, China *Using Web 2.0: Past, Present and Future*, *Journal of Environmental Policy and Management* 16(1) p. 1-13.
- Trang, L. & Gerard, T. K (2023). *Social perception in developmental planning*, SAGE Journals of Planning Education and Research.
- Troyer, L., Watkins, G., & Silver, D. S. (2007). Time dependence in micro social interaction: An elaboration of information exchange theory and initial empirical test, *Journal of Sociological Focus*, 40(2), 161-181.
- Vicente, F.; Fidelis, T. & Mendez, G. (2015). Public participation in environmental impact assessment between Spain and Portugal, *Journal of Environmental Assessment Policy and Management*. 7(2) 1-21