

# Public Open Space Conversion: Costs and Implications in the Sampled Urban Areas of South-Eastern Nigeria

Umunakwe, Henry C<sup>1\*</sup>, Ogbaa, Samuel I.<sup>2</sup>, Nwanekezi, Silver C.<sup>2</sup> and Diogu, Elizabeth O.<sup>3</sup>

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<sup>1</sup>Department of Urban and Regional Planning, School of Environmental Studies, Abia State University, Uturu, Abia State, Nigeria.

<sup>2</sup>Department of Urban and Regional Planning, School of Environmental Sciences, Federal University of Technology, Owerri, Imo State, Nigeria.

<sup>3</sup>Department of Architecture, School of Environmental Sciences, Federal University of Technology, Owerri, Imo State, Nigeria.

## ABSTRACT

This study examined the costs and implications of public recreational open space conversion in South-eastern Nigeria. The study considered the educational status of respondents of the sampled Communities and the costs of public open space conversion in the sampled areas of South-eastern Nigeria as the key objectives. The research adopted the field investigations method via case study approach which involved descriptive survey research design through field observation, questionnaire administration and oral interviews. Quantitative and qualitative data research methods were employed using descriptive and inferential statistics. It was astonishing to discover that the level of interest in recreation and open space activities in the areas under investigation nears zero although the level of education and awareness of recreational facilities is on the increase. Also, there is an increase in environmental costs as a result of the conversion of public recreational open space in South-eastern Nigeria. Costs of public open space conversion from the study area include low property values, increased social vices, loss of urban aesthetics, environmental insecurity and loss of employment opportunities. Public recreational open space conversion has resulted in environmental insecurity, making people more aggressive and antagonistic as a result of frustration and urban aggression which often accompanies insufficient nerves and brain relaxation for a well-directed thought and self-composition. There is therefore the need to make public spaces functional in order to attract increased value, aesthetics, employment, and decreased social vices and environmental insecurity. Therefore, up to 25% of every developable area should be reserved for recreational and open space activities.

**Keywords:** Recreation, Open Space Conversion, Environmental Costs, Costs Implication, Public Open Space.

\*Corresponding author. Email: [henryumunnakwe3@gmail.com](mailto:henryumunnakwe3@gmail.com). Mobile: +2347036906677

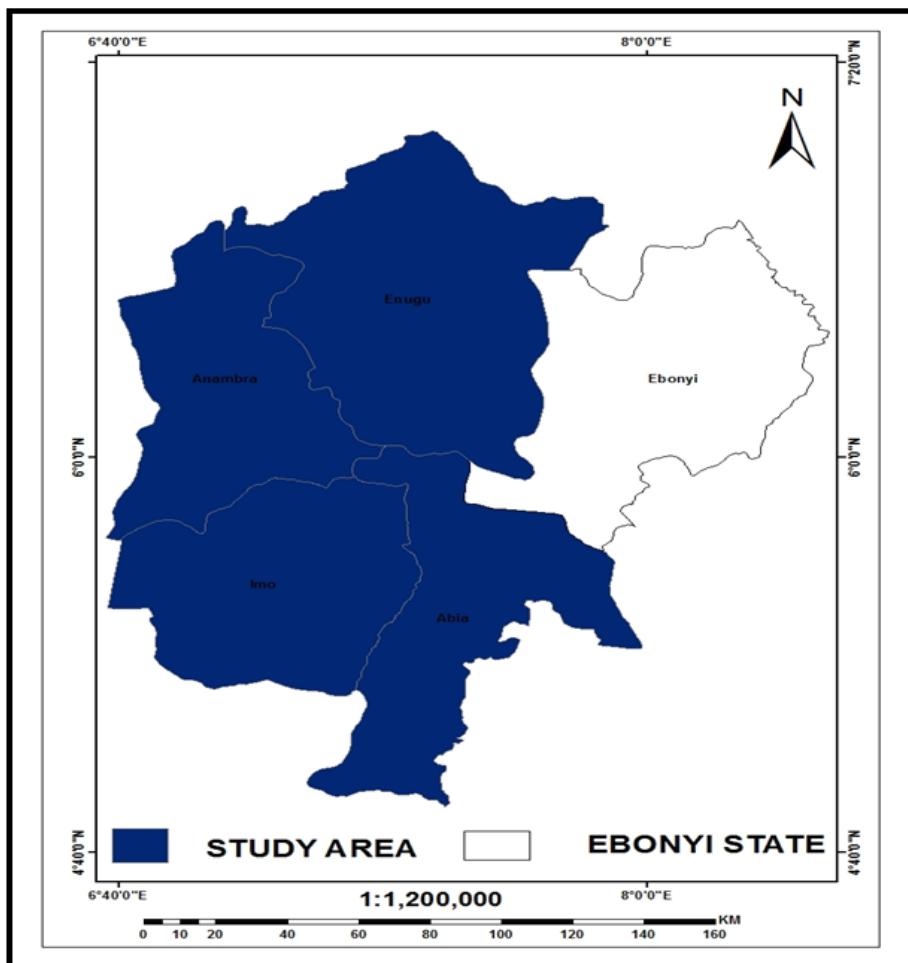
## INTRODUCTION

Sequel to the alarming rate of public recreational open space conversion in South-eastern Nigeria, as expressed in Tang and Wong (2020) and Oyegun (2020), it does appear that there are, as well, lapses in the management structure and policy implementation strategies on public open space matters, especially on issues regarding public recreational open space management in the study area. This problem is particularly prominent in the aspect of change of use (conversion) and availability (access) of active public recreational open space services.

A reasonable percentage of public open spaces were lost by conversion to other land uses in Aba urban, although the percentage is quite prominent (average wise, up to 65%) (Cohen and Manion, 2018). This shows

the extent of encroachment on landed properties designated for public recreational open space operations in the study area.

Alder et al. (2019) revealed that about 78% of the loss emanated from public open spaces alone, with 11% from privately owned and managed open spaces, and 3% from communal open spaces. Although Cohen and Manion (2018) and Alder et al. (2019), failed to offer convincing and lasting solutions to these losses. The above classification by percentage of loss in open space management calls for proper investigation into the reasons for the huge loss of public open spaces, particularly, public recreational open spaces in Aba urban, and to proffer feasible measures to forestall future loss.



**Figure 1:** Map of South-Eastern States of Nigeria showing the Study area. Source: Atlas Map of Old Imo State (1991).

The aim of this study is to examined public open space conversion, with a concentration on the costs (consequences) and implications of converting public recreational open spaces in the sampled urban areas of South-eastern Nigeria (Figure 1).

To achieve the aim of the study, two key objectives were examined; determining the educational status of the respondents to determine their level of income and ascertaining the costs of public open space conversion using low property values, increased social vices, loss of urban aesthetics, environmental insecurity and loss of employment opportunities as proxies.

## MATERIALS AND METHODS

The study is both qualitative and quantitative. Qualitatively, it made use of secondary sources to data elicitation and quantitatively, it involved field survey via questionnaire distribution and real-life measurements to facilitate the quantum of public recreational open space areas affected by conversion. Furthermore, it engaged inferential statistics to facilitate the analytical process to secure an inferential result.

The study employed Survey Research Design (SRD) as the analytical technique for this research. SRD is structured to verify the extent of availability of the

environmental good (public open space, which in this circumstance, is a dependent variable), and the role of public governance (public open space management), which in this regard is an independent variable) on preservation and protection of urban public recreational open space in the urban communities in Aba metropolis. This method was preferred since according to Scott and Usher (1996), it involves the collection of data on a large population and leads to simple frequency counts and relational analysis. A total of 1,300 populations were sampled from the study area.

The choice of survey research design has gained acceptability over the years. Boreham et al. (2017) asserted that such studies are suited for the examination of topical (current) conditions; and practices relating to an aspect of the environment (society). This study is topical and it involves a prong of techniques like questionnaires, interviews and direct observation to data collection. This is supported by Scott and Usher (2018) and Owei et al. (2010), who posited that the collection of data in survey studies, involves structured interviews and questionnaires. It is also better suited for assessing and reporting existing conditions, attitudes or influence, especially as it affects an aspect (public open space management) or the entire environment and the society in general (Settle and Drake, 2020).

The study as well engaged descriptive statistical

**Table 1:** Educational Status of Respondents by Sampled Communities.

LGA's Sampled Communities	LEVEL OF EDUCATION				Total
	(0)	(1-3)	(3-6)	(7)+	
<b>Aba North</b>					
Old G.R.A	6 [1.97%]	36 [11.84%]	176 [57.90%]	86 [28.29%]	304
Osusu Aba	9 [2.94%]	44 [14.38%]	180 [58.82%]	73 [23.86%]	306
<b>Aba South</b>					
Eziukwu	3 [1.15%]	37 [14.12%]	126 [48.09%]	96 [36.64%]	262
Abaukwu (CBD)	- [0.00%]	51 [14.65%]	186 [53.45%]	111 [31.90%]	348
<b>Total mean of distribution (%)</b>	<b>18 [1.48%]</b>	<b>168 [13.77%]</b>	<b>668 [54.75%]</b>	<b>366 [30.00%]</b>	<b>1220(100%)</b>

Note: 0 = non formal education, 1-3 = primary education, 3-6 = secondary education, 7+ = tertiary or post-secondary education.

**Table 2:** Costs of Public Open Space Conversion in the Sampled Areas of South-eastern Nigeria.

Sampled States/Urban Areas	C o s t s					Total Response
	LPV	ISV	LUA	EIS	LEO	
<b>Abia</b>						
Aba	144 (24.83%)	64 (11.03%)	296 (51.03%)	19 (3.28%)	57 (9.83%)	<b>580</b>
<b>Anambra</b>						
Onitsha	56 (15.91%)	29 (8.24%)	221 (62.78%)	3 (0.85%)	43 (12.22%)	<b>352</b>
<b>Enugu</b>						
Enugu	23 (10.31%)	18 (8.07%)	147 (65.92%)	7 (3.14%)	28 (12.56%)	<b>223</b>
<b>Imo</b>						
Owerri	17 (11.72%)	8 (5.52%)	93 (64.14%)	12 (8.28%)	15 (10.34%)	<b>145</b>
<b>Total mean of distribution (%)</b>	<b>240 (18.46%)</b>	<b>119 (9.15%)</b>	<b>757 (58.23%)</b>	<b>41 (3.16%)</b>	<b>143 (11.00%)</b>	<b>1300 (100%)</b>

**Key:** LPV- Low Property Values; ISV-Increased Social Vices; LUA-Loss of Urban Aesthetics; EIS-Environmental Insecurity and LEO-Loss of Employment Opportunities.

methods to present data generated. Therefore, tables were used to illustrate the results of the study.

## RESULTS AND DISCUSSION

Table 1 shows that the majority of the sampled population is lettered, with secondary education ranking first (54.76%), closely followed by post-secondary or tertiary education (30.00%) and primary education (13.77%). However, a low rate of non-formal education in the area is represented by 1.48% of the respondent. This could be as a result of evening education and night school programs being enrolled for by most traders and peasant farmers within the sub-region; besides the proliferation of tertiary and non-tertiary institutions in the area.

From Table 1, the high rate of interest and involvement in public open space and recreational matters is expected as the greater number of the sampled population are getting educated on daily basis. However, on the contrary, it may be astonishing to note that the level of interest in recreational and open space activities in the areas under investigation is close to zero, little wonder why open space and recreation activities do not thrive in the area; despite the high level of literacy. This could be a high probability index on the conversion and subsequent negligence of public recreational open space activities in the area. This fact is as well

corroborated by Solans et al. (2018), which attributed this trend to poor public education/sensitization and weak management structure of public recreational spaces in Aba urban.

Table 2 shows the consequence of converting public recreational open spaces in South-eastern Nigeria. From Table shows 58% of the respondents agree that it affects adversely the aesthetic value of the urban environment and may lead to environmental chaos over time. Consequently, about 19% of the respondents opined that the property value has been adversely affected.

From the study result, it is glaring that the high rate of conversion of public recreational open spaces in South-eastern Nigeria has seriously affected negatively the property value of both land and structures. This is supported by the findings of Taiwo and Wong, (2020). Equally, 11% of the respondents believe that the conversion of public recreational spaces in the South-eastern states of Nigeria has seriously affected the level of employment as individuals who would have been gainfully employed at public recreational space centres now roam about the street and consequently serve as a treat to urban security.

Also, about 9% of respondents submitted that the absence of public recreational open space leads to the growth of social vices such as pocket-picking and drug addiction as individuals tend to source for alternative recreation thus resulting in various uncontrolled lifestyles like alcoholism, prostitution and kidnapping in its

advanced state. 9% of the respondents believe that conversion of public recreational spaces to other uses encourages obesity, boredom and insomnia in adults (Boreham et al., 2017). This submission is supported by World Health Organization's report which states that exposure to relaxation activities has been globally accepted as a mental pill that fine-tunes human psychics for sound and healthy living (WHO, 2019, 2020). This group of the respondents (9%) exert that public recreational open space conversion has resulted in environmental insecurity, thus making people more aggressive and antagonistic in issues of life, as a result of frustration and urban aggression which is often accompanied by insufficient relaxation of nerves and brains for a well-directed thought and self-composition. The result of the study also showed that the costs of converting public recreational open spaces in South-eastern Nigeria is more prominent on the aesthetic value of the urban environment and might lead to environmental chaos with time. Consequently, the high rate of conversion of public recreational open spaces in South-eastern Nigeria has seriously affected negatively the environmental value of both land and structures.

## CONCLUSION

The liveability of cities is enhanced by the availability of basic social amenities such as planned recreational open spaces. Public open spaces within a planned urban environment indicate a sound, functional and sustainable urban area. This research aimed to examine the costs and implications of public recreational open space conversion in South-eastern Nigeria. Therefore, the study concluded that there is an increase in environmental costs (67.69%) as a result of the conversion of public recreational open space in South-eastern Nigeria.

The study, succinctly, contributed that public recreational open space conversion has resulted to environmental insecurity, thus making people more aggressive and antagonistic in issues of life, as a result of frustration and urban aggression which often accompanies insufficient nerves and brain relaxation for a well-directed thought and self-composition. Therefore, up to 25% of every developable area should be reserved for recreation and open space activities.

The costs of public open space conversion from the study area include low property values, increased social vices, loss of urban aesthetics, environmental insecurity, and loss of employment opportunities. There is therefore the need to make the public spaces functional to attract increased value, aesthetics, employment, decreased social vices and a decline in environmental insecurity.

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