ASSESSMENT OF THE PHYSICAL EFFECTS OF URBANIZATION IN OKPUNO, AWKA SOUTH AND AMANSEA, AWKA NORTH FROM 1992–2022

BY

[1]Ohis, Victor Sunday, [2]Nnodu, Valerie Chinedu, [3]Chukwunenye, Victor Chigozie, and [4]Onwuka, Shalom Udeagha

[1, 2, 4]Department of Environmental Management, Nnamdi Azikiwe University, Awka
[3]Department of Statistics, Nnamdi Azikiwe University, Awka

vs.ohis@unizik.edu.ng

Abstract

This paper assessed the physical effects of urbanization of Okpuno, Awka South LGA and Amansea Awka North LGA, of Anambra State from 1992–2022. Data were collected using questionnaire. It was found that there are more intense physical effects of urbanization in Okpuno than Amansea. Insufficient water availability is negative in Amansea, which can be attributed to the presence of Ezu River and adjoining stream closeness of the water table which makes room for easy access to water through borehole and hand dug well. Excessive noise pollution was also negative in Amansea, due to the fact that Amansea is not as populated as Okpuno. Mitigative measures recommended by the paper are that the government should build green parks in these study areas that are being urbanized, government to make and enforce laws backing reforestation and afforestation wherein every household is mandated to plant at least one tree in their environment and that the government should make and enforce laws prohibiting indiscriminate waste disposal.

Keywords: Urbanization, Physical, Assess, Effect

Introduction

Movement of people whether internal or international have been the major force driving the growth of population density in an area which leads to Urbanization. Urbanization is also defined as the steady increase in the number of people living in cities or urban centers as a result of continuous mass movement of people from the villages to urban areas Bodo, (2019). The author further added that increase in the population of an area which leads to urbanization can result from the combination of natural increase, (the excess of births over deaths) and migrants. Urbanization can also occur as

a result of the movement of people not only from rural areas but also from other urban areas to another urban area with preferable or better amenities, living and working conditions than the previous one. Urbanization can also be conceived as the process by which people move to urban areas Fogeard V. (2022).

Urbanization brings opportunities and challenges to the cities or environment where it occurs. In terms of opportunities, migration of people to the city could be influenced by the prospect of getting a good job in the industry, 5-Star hotel, and government establishments such as ministries of the health sector, education sector, secretariat, works sector etc. Blue chip organization and corporations away from farm practice in the rural areas. The second is immigration, for example waves of immigrants from Ireland and then Italy and other nations began coming to the United States during the 1820s as a result of their immigration friendly policy. The third could be industrialization, as people moved to live near factories and other sites of industrial production. These three trends were momentous: People crowded together as never before, and they crowded into living conditions leading to increased urban growth, Tombari, (2019).

Urbanization is a growing challenge in the world today with every society battling with its consequences. Despite the benefits that come with urbanization, the damages on developing economies are enormous. The challenges posed by this rapid urbanization are immense and very frightening with more easily observable attributes such as; human and environmental poverty, declining quality of life, and the untapped wealth of human resources that they represent, among many others, Chen, (2007).

According to modernization theory of urbanization, one of the push and pull factors catalyzes urbanization results from the introduction of new things and innovations within the society through industrialization, technological application, information penetration and cultural diffusion, Bodo, (2019) and Smith, (1996). Considering urbanization through the lens of modernization, first, it is common to see elements of modernization (new things) in every society that has moved from the primitive era (Stone Age) to a new or modern pattern of doing things. Secondly, the importance of technology in social organization and shaping of the society is very obvious; as urbanization usually results afterwards. The present state of urbanization and development in the world today cannot be separated from its initial state at the onset of modernization, Kasarda and Crenshaw, (1991).

Study Area

The study area is Okpuno in Awka South L.G.A and is located on Latitude 6°15' and 6°19'N and Longitudes 7°04'E and 7°25'E, and Amansea in Awka North L.G.A, which lies on Latitude 6°14' and 6°15'N and Longitudes 7°05'E and 7°10'E. Both Local Government Areas are interwoven at UNIZIK permanent site, with common boundaries at Ifite–Amansea axis and Agu-Awka along Enugu-Onitsha express way, Anambra State.

Materials and Methods

The research adopted an objective and subjective sampling procedure. These sampling procedure is necessary because it involved profiling, selecting and targeted individuals who are well informed and have experienced the gradual and systematic changes that have occurred in the study area as a result of urbanization. Data for the study was obtained through a well-structured questionnaire distributed to the targeted population.

Sources of data

The study relied on two types of data sources namely: the primary and secondary sources of data. The primary sources of data included data generated from responsive interaction with the sample population size through the structured questionnaire. The secondary data were information sourced from published textbooks, journals, conference papers publications, unpublished works and past populations of the study areas obtained from National Population Commission (NPC).

Results

To identify the physical effects of urbanization in Okpuno and Amansea from 1992–2022

Table 1: Responses on Physical Effects of Urbanization

S/N	Item	Amansea		Okpuno	
		Mean	Remark	Mean	Remark
1	Insufficient water availability	2.97	Disagree	3.40	Agree
2	Waste disposal problems	3.88	Agree	4.16	Agree
3	High energy consumption	3.31	Agree	3.46	Agree
4	Traffic congestion resulting to waste of time	3.01	Agree	3.77	Agree
5	Alteration of the environment	3.22	Agree	3.67	Agree
6	Increased heat in the environment	3.31	Agree	3.75	Agree
7	Decreased biodiversity	3.14	Agree	3.37	Agree
8	Excessive noise pollution	2.96	Disagree	3.78	Agree
9	Increase in pollution with dust	3.91	Agree	4.02	Agree
10	Loss of aesthetic beauty of the environment	3.79	Agree	3.52	Agree
11	Soil erosion	3.29	Agree	3.59	Agree
12	Destruction of watersheds and wetlands	3.29	Agree	3.59	Agree

13	Soil pollution from waste and toxins	3.33	Agree	3.87	Agree
14	Removal of vegetative cover	3.38	Agree	3.77	Agree

Source: Researcher's Field Survey

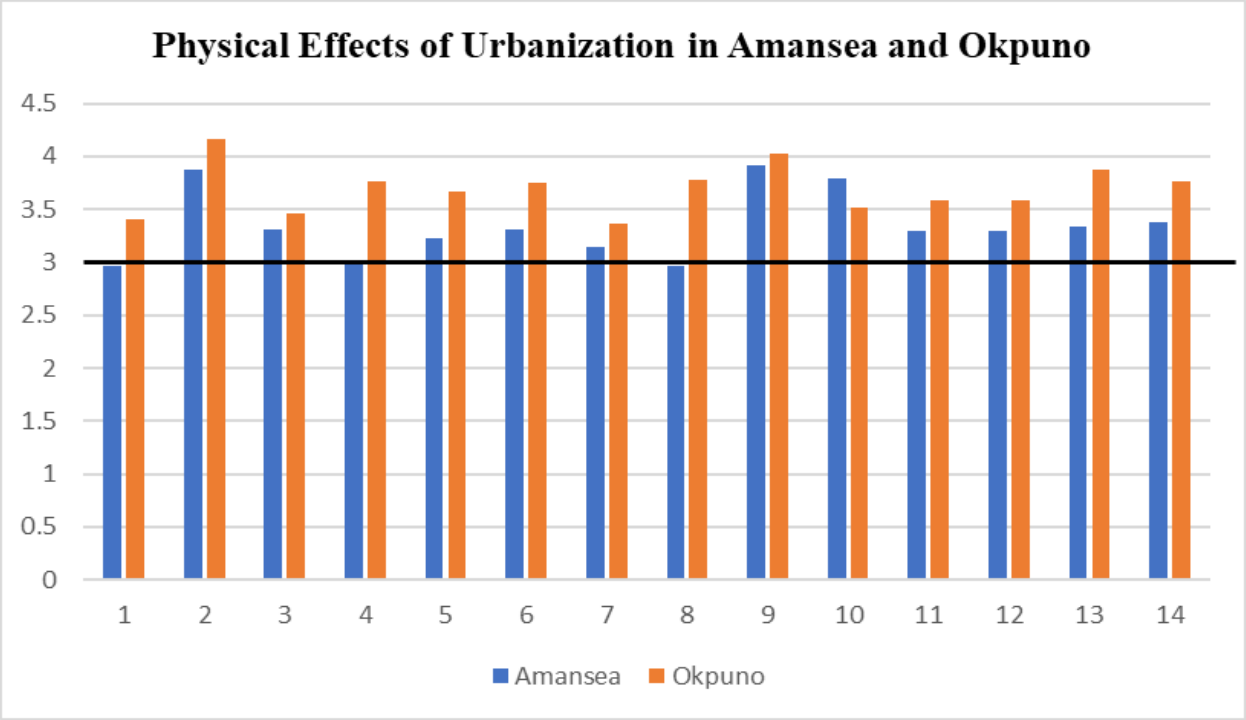


Fig. 1: Chart showing Responses on Physical Effects of Urbanization

Looking at table 1 and figure 1, it can be shown that there are more physical effects of urbanization in Okpuno than Amansea, showing that all the effects are positive in Okpuno. In Amansea, the response on insufficient water availability is negative, which can be attributed to the presence of Ezu River and adjoining stream closeness of the water table which makes room for easy access to water through borehole and hand dug well. Excessive noise pollution is also negative due to the fact that Amansea is not as populated as Okpuno.

Looking at the chart shown in figure 1, it confirms the fact that the physical effects of urbanization are more intense in Okpuno than in Amansea. The implication of this is that the more the concentration of people in an area, the more the environmental impacts.

Some pictorial evidences are shown below to highlight further, the physical effects of urbanization in the study areas.



Fig 2a: Picture of Okpuno, when there were still much vegetative covers.
Source: Google Earth Image (earlier stage of urbanization)



Fig 2b: Picture of Okpuno, vegetative cover being replaced by built up areas.
Source: Google Earth Image (later stage of urbanization)



Fig 3a: Picture of Amansea, when there were still much vegetative covers.
Source: Google Earth Image (earlier stage of urbanization)

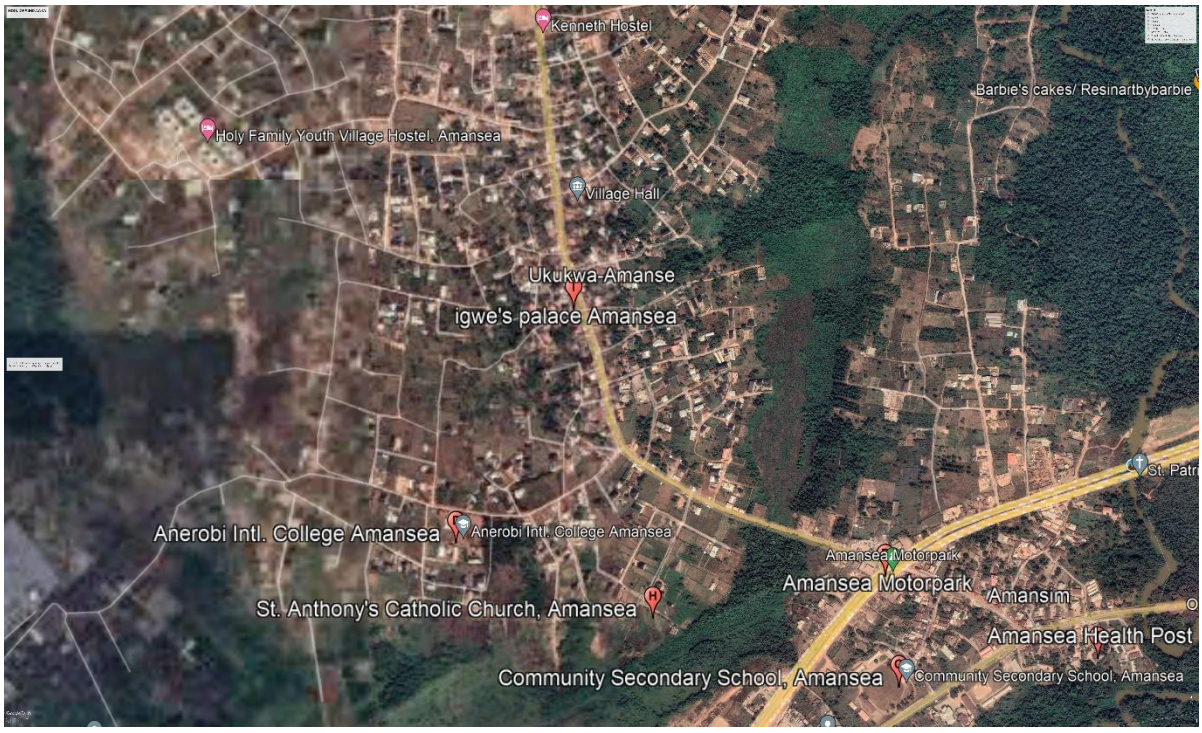


Fig 3b: Picture of Amansea, vegetative cover being replaced by built up areas.
Source: Google Earth Image of (later stage of urbanization)

Conclusion

There are 14 physical effects of urbanization in Okpuno, while there are 12 in Amansea. The effects in Okpuno seem to be more intense than those of Amansea. Pictorial evidences of the study area revealed that the vegetative cover of the study areas is gradually and rapidly being replaced by built up areas with no enforced plan yet for tree planting, see Fig 2a and 2b for Okpuno and fig 3a and 3b for Amansea. The above findings illustrate significant environmental implications if not regulated.

Recommendation

Knowing that vegetative cover serves as heat absorbent, its removal contributes to the increase in average surface temperature which has become unbearable to man and also exposes the topsoil to erosion. It is unequivocally pertinent for government to make tree planting compulsory in every house whole and the streets. Those who are into lumbering for business should be enforced by law to replant as many trees they fell in the study areas.

Government is also advised to build green parks in these study areas that are being urbanized.

Government should make laws that prohibits sand filling of catchment area that serves as receptor from rain water and surface runoffs which drains into River Ezu at Okukwa slope, Ebenebe Road, Amansea.

To curb the menace of waste disposal in the study areas, government should make and enforce laws prohibiting indiscriminate waste disposal. Wastes disposal should be categorized in three forms. Biodegradable wastes, plastic wastes and paper wastes. These three forms of wastes are recyclable. The biodegradable wastes should be packaged and sealed separately for onward delivery to fertilizer or compost manure Company where it can be recycled. The paper wastes should be packaged separately for onward delivery to the paper mill where it can be recycled. The plastic wastes should also be packaged separately for onward delivery to the plastic industry where it can be recycled. The other type of wastes that forms garbage can be subjected to incineration.

Government should provide compartment trucks that should pick up these wastes at strategic locations on designated days. Organized or unorganized waste pickers can come to homes and pick up the wastes at a stipend.

Government is also advised to make and enforce laws backing reforestation and afforestation wherein every household is mandated to plant at least one tree in their environment.

References

Bodo T. (2019), Rapid Urbanization: Theories, Causes, Consequences and Coping Strategies

Forgeard V. (2022), what are the social impacts of Urbanization

National Population Commission NPC, (1991).

Akintunde, E. A. (2017). Theories and concepts for human behavior in environmental preservation. Journal of Environmental Science and Public Health, 1(2), 120–133.

Crenshaw and Kasarda, (1991), Third World Urbanization, Dimensions, Theories and Determinants

Chen M. F. (2007), Consumer Attitudes and Purchase Intentions in organic….

Smith P. B. (1996), Cross-Cultural Social and Organizational Psychology

Ali, A.M .S (2009), September 2004 flood events in South West Bangladesh: a study of its nature, causes, human perception and adjustment to new hazards. Naural Hazards 40: 89-111.

Barton, H. et al, (1995): Sustainable Settlements-. A Guide for Planners, Designers and Developers. The Local Government Management Board, London.

Bowling J.(2000). A worker's view on sustainable forestry Managing forest in the Ecosystem Sustainable forest rnana~ment :in von Gadow, Pukkala and Margarida .Kluwer Academic Publishers, Dordreck, Netherlands. pp 121.

Husain, M (2002), Human Geography, Rawat Publications, New Delhi