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EXAMINING THE IMPACT OF ROADSIDE MARKETS ON ENVIRONMENTAL SUSTAINABILITY IN YENAGOA METROPOLIS.

Amatari - Breford Sinclair Amatari (PhD)[1*], IMAITOR Ebinemi Edith[2]

[1, 2] Department of Geography, Isaac Jasper Boro College of Education, Sagbama, Bayelsa State, Nigeria

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***Corresponding author:** Amatari - Breford Sinclair Amatari (PhD)
Department of Geography, Isaac Jasper Boro College of Education, Sagbama, Bayelsa State, Nigeria

Abstract

This study was carried out in Yenagoa metropolis in Bayelsa State. The purpose of the study was to examine the impact of roadside markets on the environment, highlighting challenges and potentials solutions for sustainable development. Survey method was adopted, where a questionnaire was administered on 240 respondents selected through the random sampling technique. The questionnaire aims to illicit vital information regarding types and nature of waste generated, disposal technique and availability of disposal facilities; relationship between roadside markets and environmental degradation as well as sustainable practices in roadside market areas. Data collected were analyzed using descriptive analysis and results presented in tables, figures and percentages. Results showed that roadside markets significantly impacted environmental sustainability, contributing to waste management issues, pollution, degradation of natural resources as well as road congestion which hinder pedestrian and vehicular traffic. It is recommended that government should encourage environmental education and awareness programmes, provide sanitation facilities, waste management systems and enforce policies and regulations that enhances environmental sustainability.

Keywords: *Roadside markets, environmental sustainability, sustainable practices, market activities and Yenagoa metropolis.*

INTRODUCTION

The continued influx of people from other states to Yenagoa following the creation of Bayelsa State with Yenagoa as capital, and population growth has made the market stalls in the ultra-modern Swali market insufficient for the residents, thereby making some of the traders to resort to roadside markets and trading. This has posed serious challenges to the urban environment ranging from traffic congestion, waste management issues culminating to poor hygiene and unsanitary condition, pollution and degradation of natural resources, to mention a few. According to Akhure and Ampire (1999), roadside markets involve exhibition of goods and products along the roadside; it could also involve carrying these goods to commuters in a moving vehicle; hence, the road is

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collectively used by traders, pedestrians and motorists, and posing serious challenges to the urban environment. Similarly, Adeyinka et al (2006), noted that roadside market activities are associated with hazard and uncoordinated development, encroachment of structures on streets and walkways with attendant reduction of road capacity, causing congestion, pollution and environmental blightedness.

In Yenagoa, Bayelsa State, the environmental impacts of roadside markets are not far-fetched and different from other states. Consequently, the state government has made concerted efforts to displace or relocate roadside markets and trading but despite these efforts the traders still find their way back to the roadside and streets and even tend to diversify It is against this backdrop that this study was carried out to assess the impact of roadside markets in Yenagoa Metropolis. In so doing, three specific objectives were proposed;

1. Identify the types of wastes and effects on environmental sustainability in roadside market areas
2. Ascertain the relationship between roadside markets activities and environmental degradation.
3. Develop adoptable sustainable practices to improve environmental sustainability in roadside market areas.

LITERATURE AND CONCEPTUAL REVIEW

This section discussed literature and concepts that are related to the study.

Meaning of Roadside Markets

The act of roadside markets or street trading is an ancient with a long and varied history which will continue to have a place in modern society (Ouwamanam et al, 2007). Maylofer et al (2003) noted that street trading was thought of a peculiar feature of large urban enclaves, with current realities showing that small and medium cities and towns are fast becoming theatres of intense street trading activities. It is pertinent to note that. roadside markets and street trading are sometimes used synonymously (Bogoro, Ali and Bukar, 2012). The authors saw street trading as display of goods along the road that can occur within established market locations or outside major road intersections; and road side markets as illegal structures or open spaces within a building line or right of way (Ouwamanan, Oluseri & Babatunde, 2007).

According to Tunji (2000), roadside market connotes the selling or offering for sale of any article or product in the street or roadside. Similarly, Akhure and Ampire (1999), described roadside markets as involving exhibition of goods and products along the roadside. The phenomenon has become a significant part of the city space in most urban areas and it reveals the dynamic nature of such environment in both economic and spatial terms (John-Nsa, 2022). The author also noted that street vending are major sources of livelihood for the poor urban families in Nigeria; it is a major type of the informal economy found in almost all Nigerian cities, with about 20% employment in the urban economy (Onodugu et al, 2016). Palmer (2007) noted that the informal sector is becoming the main target of most school leavers; as they are jobless and cannot raise adequate capital, they resort to places where operational cost in terms of rent and utility bills are minimal, hence the roadside activities; the informal sector is seen as a survival haven by the urban poor (Bhowmik 2004).

Roadside markets and trading are one livelihood means for the urban poor, as it involves petty financial input and low skill, so people resort to the roadside; and streets when they are not able to find another livelihood means (ILO, 2002). Roadside markets and street trading is part of the complexities of urban fabrics; the joy, livelihood and liveness of street trading brings psychological relief to street traders, who are considered to have been alienated from the city's formal prospect and benefits (Koffi, Usip, 2022).

Causes and Effects of Roadside Markets

According to John-Nsa (2022), street trading activities are a product of combined negative elements embedded in political, socioeconomic and culture facets of the society in complex dimensions. The author further stated that the causes of the growth of street trading activities are grouped into endogenous and exogenous factors; the endogenous factors are those attributes of the traders that informed their choices of occupation, such as illiteracy, lack of skill, personal choice of location due to expected patronage etc, while the exogenous factors area features of the environment external to the trader which has also shaped his choice of occupation, such as insufficient market, high cost of shops, to mention a few. He underscored that unemployment is a function of low level of education or illiteracy as a major cause of street trading. Moneke (1988) noted that street trading is caused by insufficient market and high cost of stores/shops. However, Atoyebi (1984) and Moneke (1988) attributed street vending to customer availability, especially among passenger and road users etc. Nonetheless, Micah attributed street trading to the fact that Nigerians are always in a hurry. So any opportunity to do fast shopping is grabbed with both hands (The punch Editorial, Tuesday 1, July 2008).

Several factors have been identified for the growth of roadside markets; high unemployment, rising inflation, low wages, dire marketing conditions, and rapid population growth leading to endemic poverty, all these have it difficult for individuals to maintain their families (Charles, 2004). Nduka and Dum (2014); Basorun (2011); Ekpeyong and Nkerewuem (2011) summarized the causes of roadside markets trading as unemployment, poverty, migration and population, illiteracy and lack of good government policy. However, Adeniyi (2011) said the cause of street trading is a reflection of the state of affairs of the country; street trading thrives because of the grinding financial hardship in the country to the effect that most people interested in doing business cannot afford the cost of renting shops, what are exorbitant.

However, the problems caused by roadside markets cannot be overstated as they keep lurking years in year out despite the actions of government to stop them. According to Adeniyi (2011), these problems ranges from deterioration of the environment thereby reducing the environmental quality, distortion of existing master plan in the area where such exists, traffic congestion on surrounding roads, distortion of the land uses, environmental pollution etc. Omole (2009) noted that roadside markets deny government to generate revenue as road intersection where market area located is free for all thereby neglecting the well-established market spaces; and congestion around the market areas thereby posing threat to life in such area. Street trading causes diverse problems like traffic congestion as vehicles cannot smoothly pass fast (Bogoro, 2010) which causes accidents (Adebayo, 2020). Similarly, Roever (2006) noted that the rise of street vending produced intolerable states such as pedestrian congestion, amassing of trash, noise pollution and other harms in the neighborhood.

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Also, the city image is distorted and given a bad aesthetic value and problems of accidents.

There are different views to its impacts; some regard the act as detestable practices, while other believe it has some positive attributes (Adeagbo, 1997). Basorun (2003) identified some problems associated with street trading; it causes traffic congestion because traders congregate at points along the roads where pedestrian and vehicles traffic is heavy; the practice also poses problems of hygiene and sanitation, because traders dealing in food items usually exposes them to flies and display them under unsanitary conditions, so transmit diseases like cholera (Adeagbo, 1997), and generate a lot of wastes which are improperly managed. Despite all these negative impacts of street trading, McGree (1979), observed that these group of the urban dwellers play a major role in the commodity and service distribution systems of cites. He said, they sell goods at cheaper rates; goods can be easily accessed and purchased. Also, it reduced the rate of unemployment as a lot of people are engaged. The pressing urgency of assessing the problems associated with roadside markets exacerbates the need to introduced sustainable practices strategies to trader in order to achieve environmental sustainability.

The Concept of Environmental Sustainability

The concept of environmental sustainability (ES) stands as a fundamental tenant within the broader concept of sustainability (Kaswanet, et al 2019). It is a broad term which include the condition of resilience, balance and connection to allow society (humans) to meet its requirements without surpassing the capacity of its supporting ecosystems to continue the generation of service without harming the biological diversity is emphasized (VOS, 2007). ES has ascended as a paramount concern in recent epochs, propelled by the discernment of the profound ramifications human activities wield on planetary health and the progeny's well-being (Mohammed, 2024). The UN General Assembly, 2015 defined ES as the ability to, maintain or support a process without depleting natural resources harming the environment, or compromising the ability of future generation to meet, their own needs. Similarly, the United Nation (UN) Environment programme noted that ES involves making life choices that ensure an equal, if not better way of the quality of life and environment without pulling unnecessary strain on the earth's supporting ecosystems holding the principles of environmental sustainability.

Kaswan et al (2019), highlighted the importance of environmental sustainability to include.

Promoting human health: By reducing pollution and preserving natural resources, environmental sustainability helps protect human health from the adverse effects of environmental degradation. *Maintaining ecosystem services:* healthy ecosystem provides essential services like clean air and water, pollination and climate regulation, which are vital for human and environmental well-being. *Ensuring resources availability for future generation:* ES is essential for ensuring that future generations have access to the resources they need to thrive. *Mitigating climate changes;* reducing greenhouse gas emissions and promoting sustainable practices area crucial for mitigating the impacts of climate change on environmental sustainability.

According to Kaswanet et al (2019), integrating environmental sustainability into roadside markets activities is not only vital for protecting the urban environment but also offers numerous social and economic benefits, such as improved public health, enhanced urban livability, reduced environmental impact and social equity, to mention a few. The authors concluded that by addressing the negative impacts of roadside markets and promoting responsible and sustainable practices, cities can create vibrant and sustainable roadside market ecosystems that benefits both vendors, the wider community and the environment at large.

MATERIALS AND METHOD

The Study Area: The study was carried out in Yenagoa metropolis of Bayelsa State. Yenagoa is located within in 4^0 55' 16.1832" N and 6^0 16' 29.1828" E. The overall economy of Yenagoa is diverse, with a mix of traditional occupation; fishing, farming, trading and modern industries including oil and gas related activities. Yenagoa is situated in the Niger Delta region, specifically in the transition zone of coastal sedimentary lowland hydrogeological province. Yenagoa is an administrative town; the capital of Bayelsa state as well as the Headquarters of Yenagoa L.G.A. The area is characterized by swamps, mangrove and tropical rain forests, with the Nun River, Ekole and Epie creeks flowing through it. The study area is part of the Niger Delta region which is known for its rich biodiversity and environmental challenges, such as oil spills and pollution, deforestation, indiscriminate waste disposal among others. This context provides a unique opportunity to study environmental education in an area with significant environmental concerns.

Research Methodology: The research used mainly primary data, which involved the utilization of a structures questionnaire to illicit relevant data and direct physical observation. The study area covered twenty (20) hitherto traditional communities that make up Yenagoa metropolis in Yenagoa local government area of Bayelsa State, as earlier stated. Given the total population of the study area, the sample size of 240 was determined using the Taro Yamene formula for determination of sample size (Kpolovie, 2011). The simple random sampling technique was adopted for the study. A set of 240 structured questionnaires were administered to respondents; male and female household heads, but 230 were retrieved and subjected to analysis of data. The data obtained from the administration of questionnaires were analyzed descriptively using tables, figures, percentages and graphical illustrations.

PRESENTATION OF RESULT AND DISCUSSIONS

This section highlights the findings of the study, and presented data in tables, figure and graphs, with interpretation and discussion of findings. As earlier stated, 230 questionnaires were retrieved and subjected to data analyses, and presented thus;

Table 1: Types of Occupation

No	Occupation type	No of Respondents	Percentages
1	Civil Servant	20	8.7
2	Trader	198	86.1
3	Farmer	9	3.9
4	Fishing	3	1.3
5	Public Servant	-	-
		230	**100**

Source: Researchers Fieldwork, 2025

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Results showed that majority of the respondents, specifically 198 respondents representing 86% were traders; about (20) 9% were Civil Servants who were also involved in street trading; about (9) 4% and (3) 2% of respondents were farmers and fishing respectively.

Table 2: Duration of Involvement in Roadside Market Activities

No	Duration	No of Respondents	Percentages
1	1 – 5	71	30.8
2	6 – 10	94	40.9
3	11 – 15	35	15.2
4	16 – 20	23	10.0
5	Above 20 years	7	3.0
		230	**100**

Source: Researchers Fieldwork, 2025

Results showed that about (71) 31% of respondents had been involved in roadside market activities for a period of 1-5 years, (94) 41% had been involved for a period of 6-10 years and about (35) 15% of respondents had been involved for a period of 11-15years. The table showed that (23) 10% of respondents had been involved in roadside market activities for 16-20 years and only (7) 3% expressed their involvement in roadside market activities for over 20years.

Table 3: Types of Waste Generated in Roadside Market Activities

No	Type of waste	No of Respondents	Percentages
1	Organic wastes; (food waste, vegetable peels, fruits scraps etc).	166	72.1
2	Plastic waste (packing material, plastic bags, water bottles etc.)	23	10.0
3	Paper and cardboard wastes (paper packaging, cardboard boxes, other paper products etc)	27	11.7
4	Inorganic wastes (broken goods, discarded materials and other non-organic debris etc).	14	6.1
		230	**100**

Source: Researchers Fieldwork, 2025

Results showed that about (166) 72% of respondents generated organic wastes which comprised food wastes, vegetable peels, fruit scraps etc.; about (23) 10% of respondents generated plastic wastes which comprised packaging materials, plastic bags, water/mineral bottles etc. The table also showed that about (27) 12% of respondents generated paper and cardboard wastes and about (14) 6% of respondents generated inorganic wastes that are non-biodegradable

Table 4: Availability of Waste Management Facility in Market Areas

No	option	No of Respondents	Percentages
1	Yes	11	4.8
2	No	201	87.4
3	Absences	18	7.8
		230	**100**

Source: Researchers Fieldwork, 2025

Results showed that 201 respondents representing about 87% of sample size stated that there were no waste management facilities in the markets, about (11) 5% said there were waste management facilities. However, about (18) 8% of respondents decline to give any information.

Table 5: Methods of Waste Disposal

No	Methods	No of Respondents	Percentages
1	Open dumping	146	63.5
2	Burning	31	13.4
3	Composting	15	6.5
4	Recycling	23	10.0
5	Collection/disposal by municipal services	15	6.5
		230	**100**

Source: Researchers Fieldwork, 2025

Results in table 5 showed that (146) 64% of respondents indulge in open dumping, (31) 13% of disposed waste by burning, (15) 7% of respondents indulge in composting of waste. The table also showed that (23) 10% of respondents recycle their waste, while (15) 7% of respondents utilized collection and disposal of waste by municipal services. Impact of roadside market activities in parts of the study area is illustrated below:

Figure 1: Roadside Markets activities in Swali and Akenfa areas.

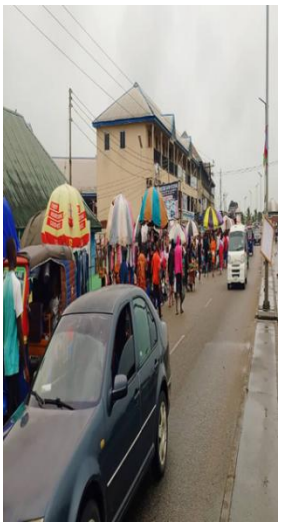

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Table 6: Effects of Roadside Market Activities on the Environment

No	Option	No of Respondents	Percentages
1	Yes	132	57.3
2	No	76	33.1
3	Absences	22	9.6
		230	**100**

Source: Researchers Fieldwork, 2025

On whether or not roadside market activities affects the environment, results showed that (132) 57% of respondents affirmed that roadside markets actually affect the environment; (76) 33% indicated that roadside market activities do not affect the environment. However, (22) 10% of respondents declined to provide any answer to the item.

Table 7: Awareness that Sustainable Practices (Such as Waste segregation, Composting organic waste, Reducing plastic use and Proper waste disposal) Reduces Environmental Effects

No	Option	No of Respondents	Percentages
1	Yes	31	13.5
2	No	179	77.8
3	Absences	20	8.7
		230	**100**

Source: Researchers Fieldwork, 2025

Results showed that (179) 78% of respondents said they were not aware of such sustainable waste management practices. However, (31)14% of respondents affirmed awareness of sustainable practices. Also, results revealed that (20) 9% of respondents declined any answer.

Table 8: Willingness to Adopt Sustainable Practices (such as Waste segregation, Composting organic waste, Reducing plastic usage and Proper waste disposal).

No	Option	No of Respondents	Percentages
1	Yes	219	95.3
2	No	4	1.7
3	Absences	7	3.0
		230	**100**

Source: Researchers Fieldwork, 2025

Results on willingness to adopt sustainable waste management practices showed that 219 respondents accounting for 95% indicated willingness to adopt sustainable practices. Secondly, whereas about (4) 2% of respondents said they were not willingness to adopt such sustainable waste management practices (7) 3% of respondents declined any response to the item.

Discussion of Results

On the nature of waste generated by street traders in roadside markets in Yenagoa metropolis, findings of the study showed that greater proposition of such wastes were organic wastes, such as food wastes, vegetable peels, fruit scraps etc.; and this accounted for about 72% of total number of respondents. This findings agreed with Roever (2006) who stated that street trading is seen as a nuisance because it makes the city look untidy, resulting to dropping dirt and litters traffic congestion, assaulting passer-byes etc. Similarly, according to the Punch, Tuesday, April, 17, 2007, a report of a survey conducted by a Lagos base NGO on the condition of refuges in the state showed that of all the waste generated, street trading contributed 70%, and these wastes were mainly organic in nature, and dumped beside the streets, drainages and gutters; thereby causing severe environmental problem, Oladimeji (2021) noted that its practically impossible to wipe out street trading completely. Hence, the need to examined the nature of street trading with it attendant challenges, so as to proffer strategies for regulating the activity for an orderly city, while harnessing the inherent gains of roadside markets.

On the relationship between roadside market activities and environmental degradation, the study revealed that majority of respondents which accounted for 57% affirmed that roadside markets activities held far reaching effects on the environment, causing environmental degradation. In the words of Onodug et al (2016) street trading has posed serious challenge to the urban environment, causing congestion, filthy environment and wrecks the city's outlook; thus compromising its economic attractiveness (Donovan, 2008).

On willingness to adopt sustainable waste management practices in order to reduce environmental problem associated with roadside market activities, an overwhelming 95% of respondents indicated their willingness to imbibe strategies such as waste segregation, composting organic wastes, reducing plastics usages and proper waste disposal carrying out street trading operation. Titilayo (2021) asserted that if the adequate environmental education and other activities regulated and supported to imbibe sustainable practices, roadside market or street trading activities could be highly productive and rewarding to individuals and society

CONCLUSION AND RECOMMENDATION

This study has established that roadside markets in Yenagoa metropolis significantly impact environmental sustainability, contributing to waste management issues, pollution, degradation of natural resources as well as congestion and difficulty in vehicular traffic, especially during market days. Therefore, implementing an effective waste management practices, environmental education, and infrastructure development can mitigate these challenges and promote sustainable development.

Consequently, we recommend that government should encourage environmental education and awareness programmes to educate street traders, residents and stakeholder on the importance of environmental conservation and sustainable waste management practices. Also, government provide adequate infrastructure, including sanitation facilities, waste management systems that emphasizes waste segregation, recycling and proper disposal practice, aim to minimize environmental pollution, and implement policies that promote environmental sustainability.

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