



## **LOCAL PEOPLE'S BURDEN OF MOVEMENT AND NON-MOTORIZED TRANSPORT IN DEVELOPING COUNTRY FOCUSSING ON MILE 12 MARKET IN LAGOS, NIGERIA**

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### **Abstract**

The study evaluates the role of non – motorized transport in the movement of local people's goods with a focus on Mile 12 Market in Kosofe Local Government Area of Lagos State, Nigeria. The research questions which the study addresses include: What are the socio – economic characteristics of the operators and users of non – motorized transport? How are non – motorized transport operated? What are the problems confronting the use of non – motorized transport? How effective are non – motorized transport in the movement of goods? A total of eighty (80) questionnaires were administered. The data collected was analyzed using descriptive statistical method. Findings show that majority of the operators are male and they use wheel barrow. Most of the operators indicated that financial and health problems affect their operation and that governments do not provide incentive to them. Majority of the users are married women and they use it because it is readily available. However, they are poorly organized. In case of loss of freight, it has always been difficult to track down the operators to retrieve forgotten goods or lost items. Policy implications of the findings towards alleviating local people's travel burdens are discussed in the paper.

**Keywords:** Transport; Local people; Urban market; Lagos; Nigeria

### **Introduction**

Observation from the literature shows that transportation network in any nation forms the channels for the flow of goods, services, and people which in addition, contribute to the basic structural framework around which activities are spatially arranged (Giaoutzi, 2008; Jurgen, 2011; Johnson and Ponnuswamy, 2012; Coyle et al, 2015; Jean-Paul et al, 2016). Before the advent of motorized transport, non-motorized transport had been in existence over the ages for the movement of people, goods and services, but now has to a large extent been substituted by the car in daily mobility, and by trucks, for freight movement, etc. (Fjellstrom, 2002). In urban areas, non-motorised transport is not only relevant for the movement of people, but also for the transport of goods. In many African towns handcarts are used to transport goods to and from markets. This can be done either by the seller or by a small scale entrepreneur as a service provision for the customer. In Asia, rickshaws designed for passenger transport

are often used to transport goods in towns, special form of rickshaw is used in Bangladesh, the bicycle van, which has basically the same design as a rickshaw; only the back (load area) is designed to carry goods. Using this vehicle, a human is able to transport up to one metric tonne on a flat terrain without the aid of an engine. Most bulky goods are transported by rickshaw vans; not only goods to and from markets, but also raw materials and products of small-scale industries. The abundance of rickshaw vans in Bangladesh towns shows the economic importance of this mode for the local economy (Replogle, 1992). As observed in the literature, in many developing countries, non-motorized transport is the primary means of transportation for people and therefore, it is essential to consider it in the design and modernization of transport systems. In Nigeria and in other developing countries, human portage is the most familiar form of non-motorized transportation. Others include bicycle, handcarts/wheelbarrow; push drawn carts; and other human powered

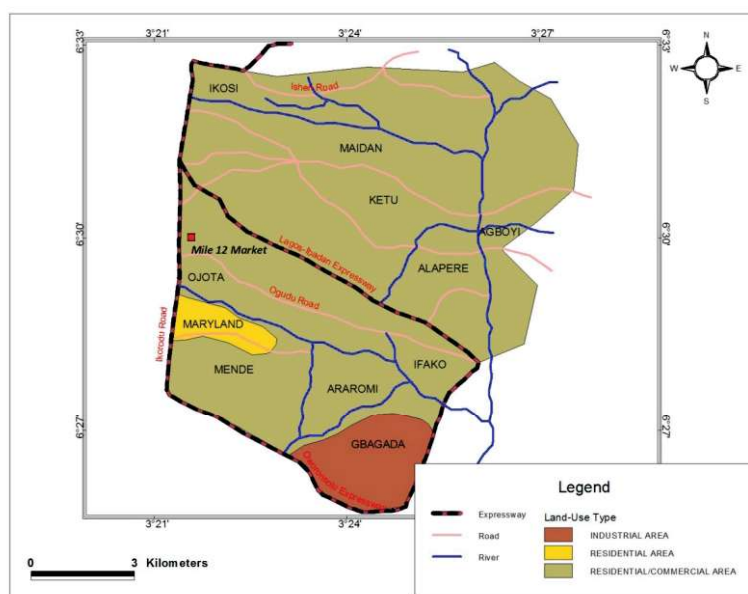
vehicles. In fact, the definition of non-motorized transport includes any form of transportation that provides personal or goods mobility by methods other than the combustion motor or engine (Replogle, 1993). Somuyiwa and Somuyiwa (2010) in their study of non-motorized transport system in a medium sized city in Nigeria observed that the use of non-motorized transport especially in the movement of goods in Nigerian markets is an aspect of transportation that is being neglected or ignored and that not much academic study has been done on this aspect. Nigeria is one of the countries in the developing world with rapid urbanization and fast growing cities. This trend of urbanization, urban expansion and transportation are intricately interwoven (Ogunsanya, 1993), as a result, there is greater demand for transport services than what the available or existing facilities can accommodate. As observed in Nigerian markets, there is insufficient transport services that can satisfy the needs of the traders and marketers within the market especially over short distances. There is also vivid accessibility problems in the markets, roads are narrow and not properly maintained. Roads are usually not well planned as to accommodate heavy trucks. Therefore getting into some areas require the use of some form of non-motorized transport.

This study is an addition to the literature and it examines the role of non – motorized transport in the movement of goods with focus on Mile 12 Market, Kosofe Local Government Area of Lagos State. Among the research questions which the study address include (i) what are the socio – economic characteristics of both the users and operators of non

– motorized transport? (ii) What are the operations of non – motorized transport in the movement of goods in the study area? (iii) What are the problems confronting the use of non – motorized transport in the movement of goods? (iv) How effective is non – motorized transport in the movement of goods in the study area? (v) What is the role of government in the adaptation of non – motorized transport in the movement of goods?

Mile 12 market is located along Ikorodu end of Lagos State in Kosofe Local Government Area of Lagos State. The market that has been in existence for the past 40 years and has become one where different food stuffs ranging from fruits, tomatoes, pepper, onions, yam, yam flour, vegetable, and palm oil and other numerous edible food items likewise non-edible items are sold. Being the terminus of food stuff brought in from the northern parts of the country, it serves as the commercial hub that brings together different ethnics group in Nigeria. These include: Yoruba, Hausa, Igbo, Kanuri, Ibibio, Fulani, Efik, Edo, Igala, Idoma, and Ebira just to mention a few.

All these traders warmly interact with themselves on a daily basis; millions of naira is generated there. This is so because items from the market are sold to myriads of local buyers as well as some exported beyond the shores of the country. It is one of its kind in Nigeria . Before entering the market, different hawkers are seen. While inside the Market Sea of heads are seen moving from one section of the market to another. These are mainly sellers and buyers. Figure 1 show the map of Kosofe Local Government showing the Mile 12 market location.



**Fig 1:** Map of Kosofe Local Government Area showing the study Area(Mile 12 Market).

## Method of the Study

The data for this study was obtained through primary and secondary sources. The primary data was collected through questionnaires, direct observation and personal interview. Two sets of questionnaires were employed in the course of this study. The first questionnaire was designed for the non- motorized transport operators while the second one was designed specifically for the non- motorized transport users. The questionnaire was designed to elicit information on the demographic characteristics of the non- motorized transport operators and users as well as other aspects of the research questions. Direct observation was achieved through careful inspection and note taking. Also, an interview was conducted with one of the executive members of the non-motorized transport association official. The secondary data was gathered from sources such as textbooks, journals, internet materials etc.

The sampling techniques adopted for this study is purposive sampling technique, whereby forty (40) operators and forty (40) users were sampled within the study area. This implies that a total of eighty (80) questionnaires were administered to the non-motorized transport operators and users, however, only thirty-eight (38) questionnaires were returned by the users making a total of seventy-eight (78) questionnaires retrieved. The purpose of choosing this sampling technique is that it allows for easy administration of the research instrument. The data collected was analysed using descriptive statistical methods which include the frequency analysis and percentages.

## Findings and Discussion

### Socio-economic characteristics of the non-motorized transport operators

Table 1 shows the socio-economic characteristics of the non-motorized transport operators interviewed. It shows that 75.0% of non-motorized transport operators interviewed are male, 25.0% are female. 2.5% indicated that their age is less than 15 years, 45.0% are between the ages of 16-30 years, 40.0% are between the ages of 31-45 years, and 10.0% are between the ages of 46-60 years while 2.5% are above the age of 60 years. Most of the respondents (45.0%) that operate wheelbarrow, push cart and head portage are between the age's brackets of 16-30 years. This shows that more young people operate non-motorized transport in the study area. Table 1 further shows that 25.0% of the respondents are

single, 45.0% are married, 15.0% are divorce and 15.0% are widowed. As shown in the table, 27.5% of the respondents indicate no formal education, 30.0% indicated primary education, 37.5% indicated secondary education and 5.0% indicated postsecondary. Table 1 shows that 10.0% of the respondent indicated below N5,000 as their monthly income, 37.5% indicated N5,000-N10,000 as their monthly income, 20.0% indicated N10,000-N15,000 as their monthly income and 32.5% indicated above N15,000. Table 1 also reveals that 32.5% of the respondents are Yoruba, 7.5% are Igbo, 57.5% are Hausa's and 2.5% indicated others. Also, table 1 shows that 32.5% of the respondents are Christian, 65% are Muslim and 2.5% are traditional worshipper. As shown in table 1 majority of the respondents are Nigerian with a percent of 97.5%. Furthermore, table 1 reveals that 22.5% of the respondents indicated 1-3 years as years spent in non-motorized transport operation, 35.0% indicated 3-5 years as years spent in non-motorized transport operation and 42.5% indicated above 5 years as years spent in non-motorized transport operation.

### Operations of non-motorized transport

Table 2 shows nature of non-motorized transport operation in the study area. The table shows that 37.5% of the respondents are head portage operators, 50.0% are wheel barrow operators, 10.0% are push drawn cart operators while 2.5% are other types. From this data it can be deduced that most of the operators of non-motorized transport in the study area are wheel barrow operators. The table reveals that 12.5% of the respondents can cover a distance of 50 to 100 meters, 10.0% can cover distance between 100 to 200 meters, 32.5% can cover distance between 200 to 300 meters, while 45.0% can cover distance above 300 meters. Also, the table reveals that 75.0% of the respondent responded yes that they operate for someone, while 25.0% responded no that they operate for themselves. The table reveals that 75.0% of the respondents that operate for someone delivered below N1500, 12.5% delivered between N1500 to N2000, 7.5% delivered between N2000 to N2500 while 5.0% claimed to deliver above N2500. The table shows that 30.0% of the respondents indicated that they earn below N1,500 per week, 5.0% indicated that they earn between N1,500-N2,000 per week, 5.0% indicated that they earn between N2,000-N2,500 per week and 60.0% indicated that they earn above N2,500 per week.

**Table 1:** Socio-economic characteristics of the non-motorized transport operators

S/N	Socio-economic characteristics		% (n = 40)
1	Sex	Male	75.0
		Female	25.0
2	Age	Less than 15 years	2.5
		Between 16-30 years	45.0
		Between 31-45 years	40.0
		Between 46-60 years	10.0
		Above 60 years	2.5
3	Marital Status	Single	25.0
		Married	45.0
		Divorce	15.0
		Widowed	15.0
4	Educational Status	No formal education	27.5
		Primary school	30.0
		Secondary school	37.5
		Post-secondary	5.0
5	Income Level	Below 5,000	10.0
		5,000-10,000	37.5
		10,000-15,000	20.0
		Above 15,000	32.5
6	Ethnicity	Yoruba	32.5
		Igbo	7.5
		Hausa	57.5
		Others	2.5
7	Religion	Christianity	32.5
		Muslim	65.0
		Traditional worshipper	2.5.0
8	Nationality	Nigerian	97.5
		Non-Nigerian	2.5
9	Years spent on the operation of non-motorized transport	1-3 years	22.5
		3-5 years	35.0
		Above 5 years	42.5

Source: Field survey, 2015

**Table 2:** Operations of Non-motorized transport

S/N	Operations of Non-motorized transport		% (n = 40)
1	Years spent on the operation of non - motorized transport	1-3 years	22.5
		3-5 years	35.0
		Above 5 years	42.5
1	Type of Non- motorized transport used	Head portorage	37.5
		Wheel barrow	50.0
		Push drawn cart	10.0
		Others	2.5
2	Distance covered in the movement of goods	50-100M	12.5
		100-200M	10.0
		200-300M	32.5
		Above 300M	45.0
3	Do you operate for someone?	Yes	75.0
		No	25.0
4	How much do you deliver to the owner?	Below N1500	75.0
		N1500-N2000	12.5
		N2000-N2500	7.5
		Above N2500	5.0
5	How much do you earn per week?	Below N1,500	30.0
		N1,500-N2,000	5.0
		N2,000-N2,500	5.0
		Above N2,500	60.0
6	Do you have non-motorized transport Association?	Yes	92.5
		No	7.5
7	How much do you pay to the Association?	Below N500	77.5
		N500-N700	10.0
		N700-N900	7.5
		Above N900	5.0
8	Does the Association help in resolving some of the challenges you face?	Yes	90.0
		No	10.0

Source: Field Survey, 2015

As shown in the table, majority of the respondents indicated that they have non-motorized transport association and that they pay below N500 as due to the association. The table further shows that majority of the respondents indicated that the association helps in resolving challenges when they arise.

### Problems confronting the use of non-motorized transport

Table 3 shows the response to questions relating to the problems confronting the use of non-motorized transport in terms of financial, organizational, language, technological, health and social problems. The table shows that most of the respondents indicated that financial problem (45.0%) and

language problem (47.5%) affecting non-motorized transport operators are high, while 15% of the respondents indicated that health problems affecting them is high. Majority of the operators interviewed

indicated that there is low organizational problem (55.0%), technological problem (50.0%), and social problem (62.5%) affecting them.

**Table 3:** Problems confronting the use of non-motorized transport

S/N	Problems confronting the use of non-motorized transport		% (n = 40)
1	Financial problem	High	45.0
		Fair	35.0
		Low	20.0
2	Organizational problems	High	15.0
		Fair	30.0
		Low	55.0
3	Language problem	High	47.5
		Fair	25.0
		Low	27.5
4	Technological problem	High	15.0
		Fair	35.0
		Low	50.0
5	Health problem	High	15.0
		Fair	50.0
		Low	35.0
6	Social problem	High	7.5
		Fair	30.0
		Low	62.5

Source: Field Survey, 2015

### Socio-economic characteristics of the users of non-motorized transport

Table 4 shows the socio-economic characteristics of the users of non-motorized transport interviewed. The table shows that 28.9% of the respondents who are users are male, while 71.1% are female. The table shows that 2.6% of the users interviewed indicated that their age is less than 15 years, 15.8% indicated that they are between the age of 16-30 years, 36.8% indicated that they are between the age of 31-45 years, 36.8% indicated that they are between the age of 46-60 years, while 7.9% indicated that they are above the age of 60 years. This shows that majority of the respondents who uses non-motorized transport are between the ages of 31 years and 60 years with a percent of 73.6%. The table shows that 21.0% of the users interviewed are single, 65.8% are married, 5.3%

are divorced, and 7.9% are widowed. The table further shows that 13.1% of the users indicate that they had no formal education, 34.2% indicated that they have primary education, 26.3% indicated that they have secondary education, and 26.3% indicated that they have post-secondary education. This shows that majority of the users of non-motorized transport are literate. Also, the table shows that 5.3% of the users indicate that they are company employee, 7.9% indicate that they are civil servants, 10.5% indicate that they are teacher, 5.3% indicate that they are students, 60.5% indicate that they are self-employed, while 10.5% indicate that they are unemployed. Furthermore, the table shows that 39.5% of the users indicated that they earn below N18,000 as their monthly income, 44.7% indicated N18,000-N50,000 as their monthly income, 7.9% indicated N51,000-

N83,000 as their monthly income, 5.3% indicated N83,000-N115,000 as their monthly income, while 2.6% have monthly income above N115,000. The table shows that 57.9% of the users are Christians, 39.5% are Muslim, and 2.6% are traditional worshippers. As shown in the table, majority of the

users are Nigerians with a percentage of 78.9%. The table shows that 26.3% of the users indicated that they owned their own means of transport, and 73.7% indicated that they did not own their own means of transport.

**Table 4:** Socio-economic characteristics of the users of non-motorized transport

S/N	Socio-economic characteristics of the users		% (n = 38)
1	Sex	Male	28.9
		Female	71.1
2	Age	Less than 15 years	2.6
		Between 16-30 years	15.8
		Between 31-45 years	36.8
		Between 46-60 years	36.8
		Above 60 years	7.9
3	Marital Status	Single	21.0
		Married	65.8
		Divorce	5.3
		Widowed	7.9
4	Educational level	No formal education	13.1
		Primary school	34.2
		Secondary school	26.3
		Post-secondary	26.3
5	Occupation	Company employee	5.3
		Civil servant	7.9
		Teaching	10.5
		Student	5.3
		Self-employee	60.5
		Unemployed	10.5
6	Income level	Below 18,000	39.5
		18,000-50,000	44.7
		51,000-83,000	7.9
		83,000-115,000	5.3
		Above 115,000	2.6
7	Religion	Christianity	57.9
		Islam	39.5
		Traditional worshipper	2.6
8	Nationality	Nigerian	78.9
		Non Nigerian	21.1
9	Ownership of transport	Yes	26.3
		No	73.7

Source: Field Survey, 2015

### Effectiveness of non-motorized transport

Table 5 shows the response of the users of the non-motorized transport interviewed to the questions on effectiveness of non-motorized transport. Table 5 shows that the users interviewed indicated that they all patronize non-motorized transport. The table shows that 28.9 of the users interviewed indicated that very flexible and fast as reason for using non-motorized transport, 31.6% indicated readily available as reason for using non-motorized transport, 7.9% indicated no damage to freight as reason for using non-motorized transport, 28.9% indicated that it is cheaper as reason for using non-motorized transport, and 2.6% indicated no alternative as reason of using non-motorized transport. This shows that most of the respondents use non-motorized transport because it is readily available. Also, the table shows that 50.0% of the users indicated that they spend less than N500 on

carrying goods, 39.5% indicated that they spend N500-N1000 on carrying goods, and 10.5% indicated that they spend above N1000 on carrying goods. This shows that most of the respondent spends less than N500 on carrying goods. The table shows that 73.6% of the users indicated that the charges is high, 13.2% indicated that the charges is low, and 13.2% indicated that the charges is fair. Majority of the users interviewed say that the charges are high. Furthermore, the table shows that 36.8% of the users always use non-motorized transport, 18.4% occasionally use non-motorized transport, and 44.7% seldom use non-motorized transport. This shows that majority of the users use non-motorized transport when the needs arise. The table shows that 5.3% of the users spent less than 10 minutes in the movement of goods, 18.4% spent 10-15 minutes in the movement of goods, 36.8% spent 15-20 minutes in the movement of goods, and 39.5% spent more than 20 minutes in the movement of goods.

**Table 5:** Effectiveness of non-motorized transport

S/N	Response		% (n = 38)
1	Do you patronize non - motorized transport?	Yes	100.0
		No	0.0
2	Reasons for using non - motorized transport	Very flexible and fast	28.9
		Readily available	31.6
		No damage to freight	7.9
		Cheaper	28.9
		No alternative	2.6
3	Amount spent on carrying the goods	Less than N500	50.0
		N500-N1000	39.5
		Above N1000	10.5
4	Rating of the charges	High	73.6
		Fair	13.2
		Low	13.2
5	Frequent usage of non - motorized transport	Always	36.8
		Occasionally	18.4
		Seldom	44.7
6	Time spent in the movement of goods	Less than 10 minutes	5.3
		10-15 minutes	18.4
		15-20 minutes	36.8
		Above 20 minutes	39.5
7	Rating on the effectiveness of non - motorized transport	Very effective	68.4
		Fairly effective	28.9
		Not effective	2.6

Source: Field Survey, 2015



The table further shows that 68.4% of the users rate the effectiveness of non-motorized transport as very effective, 28.9% rate the effectiveness of non-motorized transport as fairly effective, and 2.6% rate the effectiveness of non-motorized transport as not effective. This shows that majority of the users rate the effectiveness of non-motorized transport as very effective.

### Role of regulatory Agencies in promoting non-motorized transport

Table 6 shows the response of the operators of the non-motorized transport on the role of regulatory agencies in promoting non-motorized transport. Table 6 shows that 15.0% of the operators interviewed indicated that the role of regulatory agencies in the use of non-motorized transport are very effective, 15.0% indicated effective, 12.5%

indicated fairly effective, and 57.5% indicated not effective. This shows that most of the operators interviewed indicated that the role of regulating agencies in the use of non-motorized are not effective. Also, the table shows that 10.0% of the operators are satisfied with the treatment they receive from regulatory agencies, 2.5% are very satisfied with the treatment they receive from regulatory agencies, 17.5% are fairly satisfied with the treatment they receive from regulatory agencies, and 57.5% are not satisfied with the treatment they receive from the regulatory agencies. This shows that most of the operators are not satisfied with the treatment they receive from the regulatory agencies. The table shows that 67.5% of the operators indicated that the regulatory agencies are effective in checkmating irregular behaviour, and 32.5% indicated that the regulatory agencies are not effective in checkmating irregular behaviour.

**Table 6:** Role of regulatory Agencies in promoting non-motorized transport

S/N	Items	Response	% (n = 40)
1	Rating of the role of regulatory agencies on the use of non-motorized transport	Very effective	15.0
		Effective	15.0
		Fairly effective	12.5
		Not effective	57.5
2	Are You Satisfied With The Treatment You Receive From Regulating Agencies In Your Daily Operation?	Satisfied	10.0
		Very satisfied	2.5
		Fairly satisfied	17.5
		Not satisfied	70.0
3	Regulatory Agencies Are Effective In Checkmating Irregular Behaviour by Operators	Yes	67.5
		No	32.5
4	Regulatory Agencies Are Not Punctual In the Discharge of Their Duties	Yes	52.5
		No	47.5
5	Government Provide Incentives to Non - Motorized Transport Operators	Yes	2.5
		No	97.5
6	Government Provides Subsidized Wheel Barrow and Push Drawn Cart to Operators So As To Encourage Non - Motorized Transport	Yes	2.5
		No	97.5

Source: Field Survey, 2015.

The table further shows that 52.5% of the operators indicated that the regulatory agencies are punctual in the discharge of their duties, and 47.5% indicated that the regulatory agencies are not punctual in the discharge of their duties. This shows that most of the operators interviewed indicated that the regulatory agencies are punctual in the discharge of their duties. Furthermore, the table shows that 2.5% of the operators indicated that government provide incentive to non-motorized transport operators, and 97.5% indicated that government do not provide incentive to non-motorized transport operators. This shows that majority of the operators indicated that government do not provide incentive to non-motorized transport operators. Also, the table shows that 2.5% of the operators interviewed indicated that government provide subsidized wheel barrow and push drawn cart to operators, and 97.5% indicated that government do not provide subsidized wheel barrow and push drawn cart to operators. This shows that majority of the respondent indicated that government do not provide subsidized wheel barrow and push drawn cart to operators.

#### **Summary of the in-depth interview conducted with the non-motorized transport Association Officer**

The in-depth interview was conducted on the 17th of November 2015 at exactly 12:47 pm which lasted for more than 35 minutes with one of the non-motorized transport association officer who has spent more than 6 years in operating the wheel barrow and was also the Assistant Secretary to the association. He said the association of non-motorized transport in the study area is made up of different ethnic groups of the country consisting of both the Hausas, Yorubas, Igbos and other minor ethnic groups in the country such as the Nupes, Ebiras, Ibibios, and Fulanis. Thus, this makes the membership strength of the association to be strong and effective and structured in such a way to prevent ethnic favoritism among the members. However, the Hausas are predominant in operating the non-motorized transport in the study area and this is due to the fact that majority of them reside inside the market.

The association usually meets every Thursday and Saturday of the week to discuss the way forward of their members except on the last Saturday of the month which is as a result of the environmental sanitation. As a mode of transport, non-motorized is available to almost everyone in the study area. He said majority of non-motorized class of transport modes in the study area is healthy, non-polluting, versatile reliable and readily available to users, and it encourages local movement and hence supports local community facilities.

The member of the association reveals that the association collects a fee of N50 as daily due which is a prerequisite before they operate for the day. He also revealed that their members also pay a fee of N50 as ticket for the Local Government Area. They lamented that the government, especially the Local Government Area has neglected them and there is no favorable policy concerning the use of non-motorized transport.

#### **Conclusion and Recommendation**

The study evaluates the role of non-motorized transport in the movement of goods with focus on Mile 12 Market in Kosofe Local Government Area of Lagos State. Even though, non-motorized transport has generated a lot of employment among the less privileged and has potentials to generate more jobs thereby reducing poverty level in the society, the issue of non-motorized transport is an added responsibility to the government, and it is therefore recommended that strategic operational and implementation policy plans are developed by the State Government and Local Government Area to support the operation of non-motorized transport. Such policy plans will include: development of infrastructure that recognize non-motorized transport, enhancement of traffic legislation that recognizes non-motorized transport as an alternative transport mode, and, promotion of non-motorized transport as reliable, healthy, affordable, accessible and safe transport mode, etc.

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