JASEM ISSN 1119-8362

Full-text Available Online at www.ajol.info and www.bioline.org.br/ja

J. Appl. Sci. Environ. Manage. *December*, 2014
Vol. 18 (4) 603 -607

Socio Economic Assessment of Urban Forestry Respondents' income in Okitipupa, Ondo State, Nigeria

[*1]FALEYIMU, OI; [2]AKINYEMI, M

Department of Biological Sciences, Ondo State University of Science and Technology, Okitipupa, Nigeria. orimoloyespecial@yahoo.com
Department of Agricultural Economics and Extension Service, Federal University Dutsin-Ma, Katsina State, Nigeria

KEY WORDS: Income, urban forest, education, age

ABSTRACT: The paper investigates the socio economic assessment of urban forestry respondents' income in Okitipupa, Nigeria. Data were collected using structured questionnaires and these were administered to 200 urban forestry respondents. Data were collected on socioeconomic characteristics viz: age, gender, marital status, educational status, credit access and other household variables. Data were analysed using descriptive statistics and multiple regression models. Results revealed that the average age of the respondent was estimated to be 47 years. Majority of respondents (56.40%) falls within the ages of 31-40, while those whose ages were above 60years were 06.98%. Multiple Regression Model revealed that age, education, experience, gender and farm size have significant relationship ($p<0.01$) with income of respondents. Higher income would significantly lead to larger amount of donation for urban forestry programme. In order to encourage the respondents, the government should create enabling environment and publicized the importance of forest in urban settlement. Education should be made available to the urban dwellers at the grass root level. ©JASEM

http://dx.doi.org/10.4314/jasem.v18i4.7

*Introduction***:** The importance of forest to mankind cannot be overemphasized. Agbogidi and Eshegbeyi (2008) noted that forests and forest products play vital roles in human life from the cradle to the grave. Aimufia (2002) emphasized that the cot on which the baby lies at birth, the buildings and furniture he uses, at the various levels of his education, his endeavours in industry and agriculture, the accommodation and furniture he acquires as a worker/ entrepreneur, his diet and health sustaining systems, the armchair, he relaxes on his old age, and the coffin or casket in which he returns to Mother earth are forest dependent. Keay *et al*. (1989) and Abu and Adebisi (2002) stated that the traditional uses of forests are basically for subsistence, income, environmental and social/ culture. Burkill (1985) and Agbogidi and Eshegbeyi (2008) maintained that forests are often called the lungs of the earth for their role in the contribution to carbon sequestration and other global ecological services yet everywhere we look the lungs are gasping. Udo (2001) noted that forest benefits include tangible benefits-wood products and non-wood products and environmental benefits. Etukudo (2000) emphasized that forests are man's divine treasure. Aliyu (2006) stated that reasonable numbers of medicinal species are threatened by habitat loss, following heightened deforestation (Agbogidi, 2002; Agbogidi and Ofuoku, 2006). In recent years social, economic and environmental considerations have led to a reevaluation of the factors that contribute to sustainable urban environments. Increasingly, urban green space is seen as an integral part of cities providing a range of services to both the people and the wildlife living in urban areas (James et al, 2009). Although there is a great incompatibility between urbanizations/industrializations and agriculture and conservation developmental activities should be environmentally friendly to allow for a sustained productivity (Agbogidi and Okonta, 2009).

Anthropogenic activities including farming, hunting, tree felling, bush burning, mining operation, petroleum exploitation, civil engineering construction and water exploration have been shown to impact the forest negatively (Adeyemi and Jegede, 2002). Adelusi *et al*. (2002) noted that urban forest reserves and enclaves have suffered more and undue depletion and degradation with loss of biodiversity and renewable resources as a result of urbanization and encroachment on areas originally perceived as forest reserves and estate. In the same vein, Okonkwo *et al*. (2002) reported that serious anthropogenic activities of man constitute great environmental hazards. Impact of certain projects on the vegetation of ecosystems in the tropics including Nigeria is widespread. For example, establishment of modern

Corresponding author; Email-orimoloyespecial@yahoo.com

markets, television stations, amusement parks, housing estate, company sites, stadium in Nigeria and other parts of the tropics has led to the removal and destruction of various economic vegetation, the use of some are yet to be discovered. Urban forestry is not a new concept, but it is one which appears to have growing potential. This is particularly true in developing countries, where urbanization is increasing at a rapid rate and a demographic switch from a predominantly rural to a predominantly urban society is taking place. Although UN (1991) figures indicate that in 1990 only 37% of the total population of developing countries was urbanized, it is predicted that by the year 2025 the proportion will be 61%. Already rapid and uncontrolled urbanization in many developing countries is having fundamental social and environmental consequences. The role of urban trees in ameliorating this situation might, at first thought, appear to be small. Yet urban forestry may provide Third World town and city dwellers with significant environmental and material benefits (FAO, 1992). For the community to fully appreciate its urban forest, residents must feel a sense of ownership and pride in its existence. Being able to learn about trees and use public parks and forest preserves in urban areas helps them bond to their space and recognize their role in making sure it is preserved and enhanced for future generations. The simple act of planting a tree at home can provide a critical link between citizens and their more distant forest resources. Cities are realizing that the urban forest is an essential part of a "livable" and economically-sound community. As such, urban forests are coming to be known as a component of "green infrastructure". Green infrastructure provides important ecological and social functions that translate into direct cost savings to local government and indirect stimulation of the local economy. Unlike traditional gray infrastructure capital improvements, such as transportation and water systems, which begin to depreciate as soon as they are installed, green infrastructure accrues value and provides greater services as time passes. Improving aesthetics of our community has tangible economic benefits. Systems of open space and bike trails give a community a reputation for being a good place to live and visit. Increased recreational and community activity attracts new businesses and stimulates tourism. Well-maintained trees improve residential "curb appeal" and increase potential buyers' willingness to pay a 3-7% premium for property. Trees in retail settings increase shoppers' willingness to pay for goods and services by 12%. Shoppers also indicate that they are willing to drive farther and stay longer if a retail district is well-landscaped with trees (Vancouver Urban Forestry Management Plan, 2007). This study has been undertaken to study the socio economic assessment of the urban forestry respondents' income in Okitipupa area of Ondo state. Therefore, considering the overall effect of increasing focus on the respondents in relation to environmental issues, some questions are pertinent to this study. These questions are: What are the structures and the socio economic characteristics of the urban forestry respondents and the socio-economic/demographic variables that affect them? The objective of this paper is to identify the socio economic factors and analyse its effect on the income of the urban forestry respondents and to assess the contributions of their to the socio economic development of Okitipupa area, Nigeria.

Research hypotheses: H_{o1}: There is no significant difference between the socio economic characteristics and income of the respondents

Methodology: The study area and sampling procedures Okitipupa Local Government is one of the local councils in Ondo State It is bounded in the North by Odigbo Local Government, east by Irele Local Government, south by Ilaje, Ese Odo Local Government and west by Ogun State. The forest areas across the Local Government areas are distinctively marked with high density of oil palm trees and timbers. Agriculture is the main occupation of people in the villages. The instrument for data collection is structured questionnaire administered to respondents on a random selection basis.
Data were obtained from randomly selected towns and villages like Okitipupa, Ode- Aye, Ilu Tuntun, Idepe, Igodan and Igbodigo.

Method of Data Collection : Data were collected using structured questionnaires and these were administered to 200 respondents. Data were collected on socioeconomic characteristics such as age, gender, marital status, educational status, credit access and other household variables. Secondary information from published journals government reports and magazines were also used.

Analytical Tools and Models: The study employed both descriptive statistics and multiple regression models. This was used to determine the effect of socio-economic factors on the income of the respondents.

Socio Economic Determinants of Income of the Respondents: Ordinary least squares regression was used in identifying respondents' socio-economic characteristics which influence their income. The implicit form of the regression equation is: $Y = f(X_1,$

X_2, X_3, X_4, X_5, U_t), Explicitly the function can be represented as

$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5$

Where:
Y = average yearly income of the respondents (N)
β_i = Parameter
X_1= Age of the Urban Forester (years)
X_1= Education of the Urban Forester (years)
X_1=Gender of the Urban Forester (M=1, F=2)
X_1= Experience of the Urban Forester (in years)
X_1= Farm Size (in hactre)

RESULTS AND DISCUSSION

Socio Economic characteristics of the Respondents: This section presents the result of the descriptive analysis of the socio-economic characteristics of respondents in the study area. The discussion covers the age, educational status household size, working experience of the respondents.

Age of the Respondents: Age is a social variable that follows a normal distribution pattern. The ability of man to perceive right and to produce well falls due to their declining strength and age. Table 1 showed the age distribution of the respondents. The average age of the respondent was estimated to be 47 years. The results above in Table (1) showed that majority of respondents (56.40%) falls within the ages of 31-40, while those whose ages were above 60years were 06.98%. This showed that a relatively young and agile people are engaged in urban forestry. 47 respondents (85.47%) were male and 25 of them representing 4.53%were female. Considering the educational level, majority of the respondents (50.58%) had tertiary education, 16.86% had secondary education and 18.60% had primary education . Those who do not have formal education represent 13.96%. The occupational level of the respondents revealed that 59.30% were involved in skilled employment and 23.84% engaged in semi skilled while those who engaged in unskilled labour were 16.86%. Distribution of the household size of the respondents revealed that about 45.35% have a family size of 1-3 and those who have a family size of 4-6 were about 43.02 and those whose family size were 7-9 represent 09.88. Those who have a family size above 9 represent 1.74. Table 1 also revealed the income level of the respondents with majority (77.32%) earning an annual income of less than N50, 000. Those whose income falls between N51, 000 and N100, 000 were 8.14%. About 0.58% has an annual income of between 101,000 and 150,000. The respondents whose annual income falls between 151,000 and 200,000 were 4.07% and 02.91% while about 06.98% have their annual income above N250, 000.

Table 1: Socio-Economic Characteristics of the Urban Forestry Respondents

Characteristics	Frequency	Percentage
Age		
21- 30	31	18.03
31-40	97	56.40
41-50	17	09.87
51-60	15	08.72
Above 60	12	06.98
Gender		
Male	147	85.47
Female	25	14.53
Educational Level		
No Formal Education	24	13.96
Primary Education	32	18.60
Secondary Education	29	16.86
Tertiary Education	87	50.58
Occupational Level		
Skill	102	59.30
Semi Skill	41	23.84
Unskilled	29	16.86
Household Size		
1-5	128	74.42
6- 10	34	19.77
>10	10	05.81
Income Level		
Less than 50,000	133	77.32
51,000-100,000	14	08.14
101,000-150,000	01	0.58
151,000- 200,000	07	04.07
201,000- 250,000	05	02.91
Above 250,000	12	06.98

Table 2: Multiple Regression Model for Socio Economic Factors Influencing the Respondents Income

Variable	Coefficient	Standard Error	t-Values	Probability
Constant	4.6530	0.2620	17.76	0.000
Age	-0.8887	0.1683	-5.28	0.000
Education	0.5972	0.1443	4.14	0.000
Gender	0.2336	0.0919	2.54	0.014
Experience	0.3494	0.1441	2.42	0.018
Farm Size	0.3301	0.4185	0.79	0.433

R^2 = 54.16% F = 14.42

Table 2 revealed that age, education, gender, and experience play a vital role in determining the Income of the respondents. Age is negatively significant ($p<0.01$) to the income of the respondents. This implies that as they grow older their income decreases. It also showed that the productivity of the respondents decreases with age. Education and experience of the respondents are positive and significant at ($p<0.01$). The result indicates that, the more educated and experienced the respondents the more their productivity. The explanatory power of the model showed that the coefficient of multiple determination (R^2) value is 54.16%, implying that 54.16%, of the variation in the income level are jointly explained by the explanatory variables. The F-

values are highly significant at 1 percent probability level.

Conclusion And Recommendation: The findings from this study provide further support for the evidence found in previous studies that humans like trees. People like to have trees on their property and in the community, an observation that is not based on their gender, age, race, income, and family background. The most favoured amenity of trees is that trees improve the appearance of the community. Individuals with higher education have a higher tendency to have trees on their property. People with a high concern of the negative impacts of trees, such as the potential damage caused by trees, would be less likely to prefer trees in their community. In order to facilitate the development of urban and community forestry programs from a financial perspective, and to formulate a workable strategy, the industry needs to explore, assemble, and share information regarding public attitudes toward urban trees and the public's willingness to support urban forestry programs financially. Income of the respondents has a significant influence on many aspects. In order to encourage the respondents the government should create enabling environment for them and also be publicized the importance of forest in urban settlement. Also education should be made available to the urban dwellers at the grass root level. Higher income would significantly lead to larger amount of donation for urban forestry programme. Therefore, a good economic environment would helps in fundraising. It is recommended that the Managers and planners should provide public education and more accessible media information that can increase public awareness of urban tree programs in the study area.

REFERENCES

Abu M.A and Adebisi, K.I. (2002). Economic contribution of *Moringa oieifera.*(Lam.) plantation to rural livelihoods in Maradi.local government area of Niger Repupublic. *Obeche Journal*.28 (2): 142-146.

Adebisi, L. A. Abu, J. E. and Adedodun, M.O. (2002). A review of traditional forest uses. *In:* Popoola, (ed.). Proceedings of a National Workshop organized by FANCONSULT and Edo State Chapter of FAN held in Benin-city, Edo State between 5th and 6th of September, 2002. Pp 42-50.

Adeyemi, A.I. and Jegede, G. (2002). Effects of anthropogenic actives on Nigerian environment. *In*: Abu, J.E., Oni, P.L. and Popoola, L. (eds.). Proceedings of FAN held in Akure, Ondo State, Nigeria between 4th and 8th of November 2002. Pp 89-93.

Adeyemi, A.I. and Jegede, G. (2002). Effects of anthropogenic actives on Nigerian environment. *In*: Abu, J.E., Oni, P.L. and Popoola, L. (eds.). Proceedings of FAN held in Akure, Ondo State, Nigeria between 4th and 8th of November 2002. Pp 89-93.

Agbogidi, O. M. (2002). Deforestation and the Nigeria's rural environment. *In*: Ibitoye, O. A. (ed.). Rural environment and sustainable development. Petoa Educational Publishers, Ado-Ekiti. Pp 230-234.

Agbogidi, O. M. and Okonta, B.C. (2009). Conservation of biodiversity: the goal of sustainable development. *African Journal of Agricultural Research and Development.* (In press).

Agbogidi, O. M. and Eshegbeyi, O. F. (2008). Forestry development for a safe environment. *In:* Onykwelu, J.C., Adekunle, V.A.J. and Oke, D. O. (eds.). Proceedings of the 1st National Conference of the Forests and Forest Products Society of Nigeria (FFPN) held at the Federal University of Technology, Akure, Ondo State between 16th - 18th April, 2008. Pp 95-98.

Agbogidi, O.M. and Okonta, A.U. (2009). Biodiversity conservation and poverty alleviation in the Niger Delta area of Nigeria. *Agriculturea Conspectus Scientifiucs* 71(3): 103-110.

Aimufia, I.A. (2002).The impact of climate change on forest resources. *In*. Onyekwelu, J., Adekunle, V.A.J. and Oke, D.O.(eds.). Proceedings of the 2nd biennial National Conference of the Forests and Forest Products Society of Nigeria held at the Federal University of Technology, Akure, Nigeria between 26th and 29th of April,2010. Pp 132-135.

Aliyu, B. S. (2006). Some ethno-medicinal plants of the savannah region of West Africa: description and photochemicals Triumph Publishing Company Ltd, Kano.

Burkill, H. M. (1999). The useful plants of West Africa. Vol. Calesal Piniaceae Royal Botanic Gardens. Longman Publishing U.K.

Food and Agricultural Organization (1992): The Potential of Urban Forestry In Developing Countries: A Concept Paper. http://www.fao.org/docrep/005/t1680e/T1680E04.htm

Eshegbeyi, K. (2008). Forestry for national development: a critique of the Nigerian situation. *In*: Popoola, (ed.). Proceedings of a National Workshop organized by FANCONSULT and Edo State Chapter of FAN held in Benin-city, Edo State between 5th and 6th of September, 2002.Pp 55-84.

Etukudo, I. (2000). Forests: our divine treasure. Dorand Publishers, Uyo.

James, P., Tzoulas, K., Adams, M.D., Barber, A., Box, J., Breuste, J., Elmqvist, T., Frith, M., Gordon, C., Greening, K.L., Handley, J., Haworth, S., Kazmierczak, A.E., Johnston, M., Korpela, K., Moretti, M., Niemelä, J., Pauleit, S., Roe, M.H., Sadler, J.P. and Ward Thompson, C. (2009): Towards an integrated understanding of green space in the European built environment. Journal of Urban Forestry & Urban Greening. Volume 8, Issue 2, 2009, Pages 65-75

Keay, R.W.J., Onochie, C.F.A. and Stanfield, D.P. (1989). Trees of Nigeria: a revised version of Nigeria trees vols 1 and 2. National Press Ltd, Apapa Lagos. Published by the Department of Forestry Research Institute, Ibadan.

Ofuoku, A.U. (2006). Promoting environmental protection in Nigeria through environmental education: the role of woman. *Journal of Environmental Extension* 6:28-33.

Okonkwo, M.C., Umar, G. and Nwafor, O.E. (2002). Forest resources depletion and the national economy. *In*: Abu, J.E., Oni, P.L. and Popoola, L. (eds.). Proceedings of FAN held in Akure, Ondo State, Nigeria between 4th and 8th of November 2002. Pp 94-100.

Udo, E. S. (2001). The position of forestry in Awa Ibom State. *In*: Udo, E. S. (ed.). Proceedings of the 1st workshop of the Forestry Association of Nigeria Akwa Ibom State Branch in collaboration with the Department of Forestry and Wildlife, University of Uyo, State Ministry of Environment and the UNDP, Akwa Ibom State held in Uyo, Akwa Ibom State between 10th and 11th April, 2001. Pp 31-43.

Vancouver Urban Forestry Management Plan (2007): http://www.cityofvancouver.us/sites/default/files/fileattachments/public_works/page/1389/ufmp_final-web.pdf