

## AGE AND COMMUNITY PARTICIPATION IN FOREST CONSERVATION IN CALABAR EDUCATION ZONE OF CROSS RIVER STATE, NIGERIA

**ENAMHE, D.**

Department of Social Works,  
Faculty of Social Sciences,  
University of Calabar  
dornclaimz@yahoo.com

&

**OKANG, O.A.**

Department of Environmental Education,  
Faculty of Education,  
University of Calabar, Nigeria  
[oshieaji@yahoo.com](mailto:oshieaji@yahoo.com)

### Abstract

This paper examined the influence of age on community participation in forest conservation in Calabar Education Zone of Cross River State, Nigeria. One statement of hypotheses was formulated to guide the study. Literature review was carried out based on the variable under study. Survey research design was considered most suitable for the study. Purposive and simple random sampling techniques were adopted in selecting the 474 respondents sampled for the study. A validated 10 item four point modified Likert scale questionnaire was the instrument used for data collection. The reliability estimate of the instrument was 0.76 established using Cronbach Alpha method. To test the hypotheses formulated for the study, one way Analysis of Variance (ANOVA) statistical tool was used for data analysis. The hypothesis was tested at 0.05 level of significance. The result obtained from analysis of data revealed that there is no significant influence of age on community participation in forest conservation in the study area. Based on the findings of the study, it was recommended that all age brackets in the communities be encouraged and incorporated for effective community participation in forest conservation for sustainability and inclusion in community based organization on forest conservation.

**Key words: Age, Community participation, Forest conservation**

### Introduction and background

Demographic variables are noted to be some of the key factors responsible for the lack of community participation in forest conservation. Age is said to be merely a measure of the number of revolutions that the earth has made around the sun since a person's birth, indicating that age provides a convention index of the passage of time. The age of people as a demographic variable segment forest conservation project according to the age of the community members. It is based on the premise that typical community participation changes as the residents ages This variable classifies community members' age into four stages: children (8-11 years), teenagers/youths (12-18 years), middle-aged (25-45 years) and older population.

People of all ages can be forest dependent, however young people may be more dependent on forest products than elderly people. The reason for this is that the young people may have multiple uses of the forests and more so forest products collection is labour intensive. On the other hand, the elderly people may not take a risk of going into the forest to undertake forest activities particularly that the elderly people may not have the strength to carry out forest related activities. Age may be an important factor in

explaining conservation commitment. Elderly people may perceive the commitment to conservation of resources as a constraint to their livelihood because of cultural practices and traditions e.g. collection of medicinal plants and herding livestock. In that case, age may have negative influences on conservation attitude.

Forest conservation project provides multiple environmental, economic, social and cultural benefits, which can provide opportunities for poverty alleviation and economic development. It also plays an important role in meeting the cultural and spiritual needs of the surrounding communities. Forest conservation is beneficial to the natural environment as the forest acts as carbon sink, reservoir of biodiversity and critical habitat for wildlife, keep the land productive by conserving soil and water. It also serves as water catchment that recharges rivers and dams, which supply water for domestic use and hydroelectric power. Forests are designated as protected areas, which host game parks and forest reserves and contribute to the national economy by supplying renewable sources of energy in the form of wood fuel and charcoal. Protected area establishment, however affects the sustenance of the rural populace that relies on the forest for agriculture, energy, medicinal and other human needs. Due to the lack of resources, poor management practices and ineffective legal systems as identified in the state of protected areas management in developing countries has worsened.

Forests and woodlands contribute significantly to a country's economy. They provide multiple environmental, economic, social and cultural benefits which can provide opportunities for poverty alleviation and economic development. Forests play very significant role as carbon sinks, reservoirs of biodiversity and critical habitats for wildlife and other endangered species of plants and animals. Forest equally maintain productive land by conserving soil and water, and serve as water catchment that activate rivers and dams that provide water for industrial and domestic use as well as hydro-electric power generation.

Guthiga (2006) stated that, the world's forests and woodlands are increasingly under pressure from the growing human population and many are shrinking as a result of human-induced deforestation. Forests are designated as protected areas that serve as game parks and forest reserves which contribute to the national economy as a renewable source of energy in the form of wood fuel and charcoal. Across Africa, innovations that incorporate various forms of Community Based Conservation (CBC) or community participation in forest conservation programmes are geared towards integrating conservation of forest resources with poverty mitigation among the rural dwellers through a good structured participatory approach. Community participation is pivoted on the inclusion of rural inhabitants either in the physical management of the reserved areas or constitutionally in the conservation policymaking process (Gbadegesin & Ayelika, 2000).

The enduring progress of this approach is yet to be realized because of repeated failures by the stakeholders in meeting up with the expectations from the communities and the reluctance of government to delegate some proprietary and management roles to forest communities. This has posed a huge challenge to protected areas management in Africa. The majority of community-based organizations are formed to conserve the forests and improve the livelihood of their members. The emergence of community participation in forest conservation project was a response to growing concerns of the environmental degradation in the study area. The project sought to bring patches of forests lands under control of local communities with the goals to meeting local forest product needs and combating degradation.

The participatory approach to management of forest resources as a means of providing a sustainable system of management to avoid further deforestation or

degradation of forests in forests and communal lands. In Nigeria, the enactment of the 2006 Forests Act under the Approved National Forest Policy has really helped to reinvigorate the sector by giving local communities a stake in the management of the forests reserves. The goal of the forest policy was to enhance the contribution of the forest sector in the provision of economic, social and environmental goods and services. This led to the introduction of participatory forest management that recognized the need of involving communities in forest management as co-workers alongside the government and other stakeholders (Osumba, 2011).

The 2006 Approved National Forest Policy provides for community participation in forest management. The best opportunity to engage the surrounding communities in forest management is the formation of Community Based Conservation (CBC). This provides an avenue for local communities to actively participate in the protection, conservation and management of particular forest areas. More active involvement of local communities is currently hampered by lack of information on potential benefits as well as lack of awareness on the mechanism for benefit sharing. Local community participation is the key strategy to current forestry conservation and management. If wildlife and all the protected areas are to survive, it is imperative that conservation activities and communities are in harmony so that it does not constrain community livelihoods. For conservation of natural resources of the forests to be realized effectively, there is the need for integrative management that considers local communities; stake in conservation. Community participation in conservation of forestry, therefore, needs to be promoted for its continued preservation.

Community awareness of policies guiding natural resources use and recognition of its contribution is essential to their effective participation in integrated natural resource planning and management. However, many local communities do not get involved in the planning and management of the forest. Most communities implicate many factors in this lack of participation such as lack of community involvement in conservation programmes, low incentives and inadequate benefits sharing etc.

Age is the central concern of development studies. Kimmel (2008) sees age as merely a measure of the number of revolutions that the earth has made around the sun since a person's birth. Indicating that, age provides a convention index of the passage of time. Rodger (2009) observed that, age is the central variable in the demographic model. He stressed that age is the most important variable in the study of mortality, fertility, mutuality and certain other areas of demographic analysis. According to Feeney (2010), exact age is as time elapsed since birth.

There is a dearth of empirical literature in the area of age as it concerns community participation in forest conservation project. In this case, the researcher will attempt to bring both age and forest conservation project together. Atchley, in his study carried out in 2000 on age and perception of forest resource conservation, he randomly selected a sample of 240 respondents using stratified random sampling technique. A 12-item questionnaire was administered to the sample and data obtained were analyzed using one-way analysis of variance (ANOVA). From the result of the study, the researcher observed that, chronological age has a period at which rules and policies should be applied, which indicate that there is meaningful development. The foregoing shows that aging increases the level of experience of the people, thus it creates opportunities to gain greater wisdom. As such, old people possess wisdom and experiences that enable them to function as advisers to members of their families and the community at large. Also, aged people have adequate information about many unrecorded events that happened over the years in families, workplaces, schools, communities and nation. Again, most of the old

people are observers or keepers of traditions. They therefore, give advice on issues relating to traditional values and norms. Oluwabamide (2007) states that, aged period is a time of extraordinary freedom, indeed old people are free from work by retirement and from child bearing, therefore, they have rest of mind in this period. This made them less at risk to forest resources and hence they play advisory role and participate in forestry conservation project. Atchley (2005) pointed out that, aging is neither predictably positive nor predictably negative.

Kimmel (2008) conducted a study on the effect of age on attitudes toward forest conservation. The study was on 30 communities involving, 1,039 males and 500 females, the data were analyzed using chi-square ( $X^2$ ) and t-test, and it was revealed that human development consisted of the simultaneous process of changes and continuity from birth through childhood, adolescence, young and child adulthood, the latter years and old age. Physical attributes are often combined with social ones to categorize people into broad life stages. Such life stages according to Ibrahim and Babayemi (2010). Include adolescence, young adulthood, middle age, later maturity and old age.

In relation to this study, Atchley (2005) gave four stages of age classification thus: the adolescence, middle age, later maturity, and old age that can be linked to community participation in forest conservation project as examined were; For adolescence age: Obot (1994) stated that, this period of life starts from 12 years to 18 years and at this time puberty and adulthood are interrelated. At this stage, an individual experiences a lot of psychological changes, rapid physical growth and rapid increase in height. The adolescent begins to interact with adults, respond like adults and expects adult treatment. At this stage, an individual is faced with emotional storm stress and confront serious constraints, ranging from personal, educational, social and problems of participating in forest conservation.

The stage of middle age, this stage usually begins around the age of 40. Levinson (2009) put it that, middle age is a time of marked crises. It is the stage in which most people become aware that they have less than they use to, hence, they often begin to look for less physical demanding activities. Atchley (2005) observed, that, middle age is a stage marked primarily by social transitions at home, on the job and in the family, most people see middle age to be an exciting time in life. Transitions in this period involve opportunities to lead a more satisfying and sometime less hectic life. To some people, middle age brings irreparable losses, which may be regrettable. However, it is the stage where people become part of the aging population, it is noteworthy, that, the middle age stage is said to be the period that an individual can imbibe the culture and policies of forest conservation.

The stage of later maturity, according to Rodgers (2009) and Atchley (2005), chronologically begins in the early 60's. This stage brings about the decline in physical functioning, achievements and failures one might have made in the course of life. At this stage, chronic illness becomes more common, activity limitations become more prevalent. Mortality begins to take its toll among family members and friends. The later maturity stage is characterized by changes which are social in nature and retirement takes place during this stage, which usually lead to income reduction or even total loss of income, and Lowenthal (2005) observes that, during this stage, most women become widows, making the individuals at this stage to be high risk people to forest conservation project. In spite of the seemingly losses associated with this stage, most people still retain on fair measure of physical strength and are free from responsibilities and tend to obey the rules on forest conservation project that can lead to sustainable use of forest resources.

The stage of old age chronologically occurs in the late 70's. People at this stage think about themselves and their past and try to find meaning in the lives they have led. In the old age period, the individual feels that death is near, forest related activities are considerably restricted. Social networks become decimated by the death of friends and relatives. This stage may not be very pleasant at least externally. Old people tend to support and participate in forest conservation project. The review on age shows that all stages of life support forest conservation. The literature on age and community participation in forest conservation project has been criticized on the grounds that, it assumes that age of the individuals has much to do with forest conservation project. From the literature, it is observed that, young people's age categories exploit forest resources more than old people, since the young one form the active population, and old people tend to support forest conservation. Other environmental educationists rather argue that, both young and old people exploit and deplete forest resources and vice versa to meet their various needs.

### **Methodology**

The research design adopted for this study is the survey design which is a sub-category of descriptive research design. The research area is Calabar Education Zone of Cross River State, Nigeria. The zone stretches between longitude 8° 30" E and latitude 5°45" N of which coordinates is: 5° 45" N 8°30" E. In the west it shares boundaries with Ebonyi, and Abia states, to the East by Cameroun Republic and to the south by Akwa Ibom and the Atlantic Ocean. Southern Cross River State has a projected population of 1,387,053 and a land area of about 15165.54km<sup>2</sup>(NPC, 2016). The vegetation of the area is largely that of a large broad leafed evergreen tree species of 50-100 species per square kilometer (Cross River National Park, 2015). The climatic condition of Southern Cross River State are characterized by two observed seasons which include; the rainy season which measures 1300mm – 3000mm between (March-August) and 30°C mean annual temperature, and vegetation ranges from mangrove, swamps and through rainforest and dry season between (September-May) and harmattan (November-January)

The study area is typified by mountainous landscape fluctuating from 100 to over 1000m. The landscape South of Oban fluctuates from mild undulation to rolling plains with scanty isolated hills. The Oban division is located in Cross River State and is rich in both human and material resources, the major occupation of the people of the area is agriculture, and they also engage in trading and quarry. The park area enjoys visits from tourists and researchers owing to the rich natural tourism and cultural heritage.

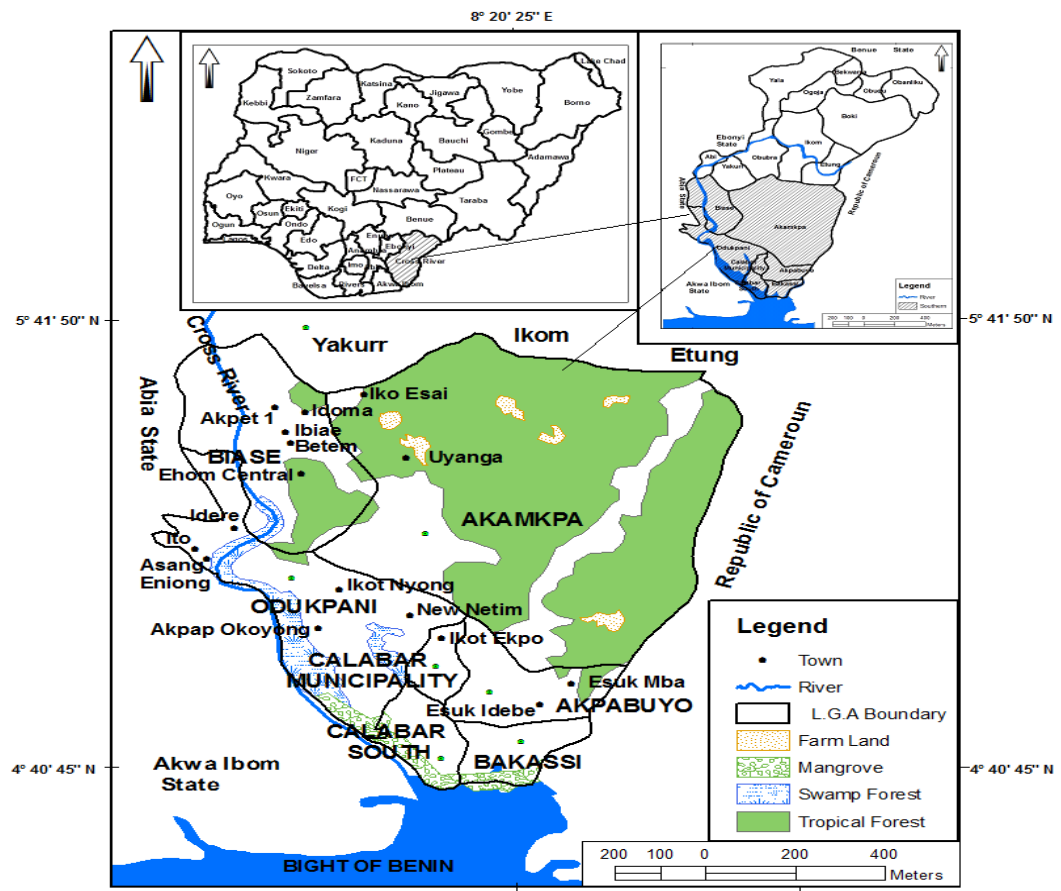


Figure 1: Map of Local Government Areas in Southern Cross River State

Source: Cartography / GIS Unit, Dept. of Geography & Environmental Sc., Unical

The stratified, purposive and accidental sampling techniques were adopted for this study. The sample for this study consists 474 respondents, i.e. 266 male and 208 female respondents out of 1,397,928 residents from thirteen communities in Calabar Education Zone of Cross River State, Nigeria. The instrument used for this study is a structured questionnaire titled age and Community Participation in Forest Conservation Questionnaire (ACPFQC). The items of the instrument were generated from literature reviews. The questionnaire items were analysed using the adopted four-point Likert – type scale of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD). The data were analyzed using One-way analysis of variance (ANOVA).

### Result and discussion

The results of data analyses are presented in Tables 1. The hypothesis stated that there is no significant influence of age of the residents in their participation in forest conservation. The independent variable is age which was categorized into three: 25 years and below, 26 – 40 years, and 40 years and above while the dependent variable is community participation in forest conservation in Calabar Education Zone. The mean scores in community participation in forest conservation of the subjects in the different age categories were compared using One-way ANOVA tested at .05 level of significance as presented in Table 3.

The result in Table 1 revealed that the mean score obtained by the 408 subjects who are below the age of 25 years was 34.16 with a standard deviation of 6.82 is greater than the mean score of 33.97 with a standard deviation of 7.23 obtained by the 36 subjects who are between the ages of 26 – 40 years and this is less than the mean score of 34.64 with a standard deviation of 6.80 obtained by the 301 subjects who are above 41 years of age. The result further revealed that the calculated F-ratio obtained was .056 with a p-value of .983 at .05 level of significance with 3 and 473 degrees of freedom. With the obtained result, the F-ratio is not statistically significant and the hypothesis which stated that there is no significant influence of age of the residents in their participation in forest conservation in Calabar Education Zone was upheld.

**Table 3: One-way ANOVA of age of the residents in their participation in forest conservation in Calabar Education Zone (474)**

Age	N	Mean	SD
25 years and below	408	34.16	6.82
26 – 41 years	36	33.97	7.23
Above 41 years	30	34.64	6.80
Total	474	34.26	6.95

Source of variance	Sum of squares	Df	Mean square	F-ratio	p-level
Between groups	7.835	3	2.612	.056*	.983
Within groups	21999.431	470	46.807		
Total	22007.266	473			

\*Mean difference is significant at .05 level;  $p > .05$

The finding of this study contradicts the finding of Atchley (2010) which stated that that aging increases the level of experience of the people, thus it creates opportunities to gain greater wisdom. As such, old people possess wisdom and experiences which enable them to function as advisers to members of their families and the community at large. Also, aged people have adequate information about many unrecorded events that happened over the years in families, workplaces, schools, communities and nation. Again, most of the old people are observers or keepers of traditions. They therefore, give advice on issues relating to traditional values and norms.

The finding of the study also contradicts the finding of Oluwabamide (2007) which states that aged period is a time of extraordinary freedom, indeed old people are free from work by retirement and from child bearing, therefore, they have rest of mind in this period. This made them less at risk to forest resources and hence they play advisory role and participate in forestry conservation project. Lowenthal (2005) stated that age of the individuals has much to do with forest conservation project. From literature, it is observed that, young people’s age categories exploit forest resources more than old people, since the young one form the active population, and old people tend to support forest conservation. Other environmental educationists rather argue that, both young and old people exploit and deplete forest resources and vice versa to meet their various needs.

### Conclusion

The essence of the study was to examine age and community participation in forest conservation in Calabar Education Zone of Cross River State, Nigeria. The findings from the study showed that there is no significant influence of age on community participation in forest conservation in the study area. Forests resources contribute significantly to a country's economy. They provide multiple environmental, economic, social and cultural benefits which can provide opportunities for poverty alleviation and economic development.

Forests play very significant roles as carbon sinks, reservoirs of biodiversity and critical habitats for wildlife and other endangered species of plants and animals. Forests equally maintain productive land by conserving soil and water, and serve as water catchment that activate rivers and dams that provide water for industrial and domestic use as well as hydro-electric power generation. All over the world forest resources are being exploited than before. The need to really figure out the major factors that contribute to forest degradation prompted this study. Knowing too well that the importance of forest resources to man and the environment cannot be over emphasized.

### Recommendations

It is strongly recommended that all age brackets in the communities be encouraged and incorporated for effective community participation in forest conservation for sustainability and inclusion in community based organization on forest conservation.

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