

## **Community Participation and Government Vision towards the Conservation and Management of the Ecosystem in Cross River State, Nigeria**

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**Abstract:** *The main purpose of this study was to investigate community participation and government vision towards the conservation and management of ecosystem in Cross River State of Nigeria.*

*To achieve this purpose, two hypotheses were formulated to direct the investigation and Ex-post facto research design was adopted for the investigation. This research design was considered appropriate because the researchers have no direct control over the independent and dependent variables.*

*A sample of three hundred (300) respondents was randomly selected for the study. The questionnaire was the major instrument used for data collection. The reliability estimate of the instrument was established through the test-retest reliability method. Pearson Product Moment Correlation analysis was employed to test the hypotheses under study.*

*The result of the analysis revealed that community involvement/participation in the Management of the environment, awareness creation through environment quality, reforestation, sustainable harvest of flora and fauna, enactment of environmental legislations and establishment of forest and game reserves are significantly related to the conservation and management of ecosystem.*

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### **1. INTRODUCTION**

The Cross River State of Nigeria is blessed with natural forest ecosystem where living and non-living organisms interact with one another. These living and non-living organisms are of great significance to both man and the ecosystem in general. Man from time immemorial has the conception that the ecosystem is renewable. The existence of indigenous African Religious beliefs and totemism that have endured the years within the ethnic groups of Cross River State led to the conservation of shrines, evil forests, and sacred water. The practice has direct relationship with conservation of the ecosystem in the area (Ntia 1995). Shrines are used in traditional African religious worship, the adjoining was left to grow and shield the shrines. Over the years people were not allowed to carry out any activity around the shrine. Thus shrines grew into mordial forests where rare species of plants and animals lived. However, through ignorance and misconception, man has regrettably stuck to the opinion that products of the forest are inexhaustible. The misconception led to unsustainable exploitation of the forest products thus giving way to wanton destruction of the ecosystem with little or no thought for regeneration. The fast depleting of the ecosystem species have been a matter of serious concern to the state in particular and the nation in general.

Man is the architect of the fast disappearance of the ecosystem. He indulges in activities such as grazing rangelands for livestock, felling of trees, building material, construction of highways, commercial hunting, and service reserve land for estate building and destroys the forest by wildfire (Anthony 2003).

The non-governmental organization (NGOs) contributes to the conservation of the ecosystem. The World Wild Fund for Nature (WWF) established in 1961 plays a major role in the conservation of threatened or endangered species of plants, animals and areas of biodiversity including watersheds and wetlands. In Nigeria environmental awareness campaign are considered by many as late with epileptic fits. They are often abandoned to non-governmental organization.

The history of ecosystem preservation in Nigeria is traced back to the 1940s when the flora and fauna preservation society in London sent its secretary to assess conservation situation in Nigeria in the late 1940s. The secretary saw the need for active participation by Nigerians in the conservation programme and further suggested that all revenues accrued from hunting licenses and trophies should be used in the development of communities (Afolayam 1980).

The Nation today has over forty conservation areas including six national parks. The Federal and State departments of forestry were established to control wildlife-(flora and fauna) in the country. To realize the dream of preserving the ecosystem in Nigeria the national wildlife conservation committee was created. Legislations and policies have been formulated to make the dream of preservation of the ecosystem come true. These include; the Forestry Amendment Edict 1969 and 1973; The Wild Animal Law and Wild Animal Edict 1975 and 1978 respectively The Kainji Lake National Park Decree 1985; The National Resources Conservation Council Decree 1989; The Endangered Species Decree No 11 of 1985; others include, Refuge establishment, Game Harvest, Predator Control and Stocking and Habitat Manipulation (Ayodele 2004). All these are various attempts made by the international communities and National governments to preserve the ecosystem. Large populations of wild plant and other organisms have been conserved as a result of effective resource management. However, a great number of species in the ecosystem are declining largely as a result of habitat loss caused by over harvesting and poaching.

Originally, natural ecosystems are balanced systems in which the communities of living organisms are in equilibrium with the physical environment. Man's interference with natural environment disturbs in-flow of energy and the cycling of matter. Some animals and plant species remain threatened while some are on the brink of extinction.

One of the major ways in which man interferes with the balance of nature is through the clearance or disturbance of the natural environment. Because of man's ignorance and misconception, he holds the opinion that plants and animals species are inexhaustible. This misconception has led to unsustainable utilization of plants and animals species in the forest ecosystem.

This study examined how we could assist the government of Cross River State in the realization of its vision of preserving the ecosystem and how measures put in place can be sustained.

## **2. LITERATURE REVIEW**

### **2.1. Community Involvement/Participation in the Management of the Environment and the ecosystem.**

According to Ibor and Abi (2005) community participation in the management of the forest resources in Cross River State is quite recent even though it is a viable strategy. They pointed out that the advantages of participatory management include; increase rewards to stakeholders, reduction of conflicts between communities and forest officials, confidence building/rapport among stakeholders that gives a sense of belonging to forest communities.

The management of ecosystems the world over is changing from the traditional approach to one that ensures greater benefit flow to all its stakeholders, especially the forest communities. This paradigm shift which places more emphasis on the people is informed by the fact that the well being of the local people is inextricably tied to their natural resources base, whether used as food, medicine, fuel/energy need or for maintaining ecosystem balance. Sustainable management of the ecosystem according to FAO (1995) requires a more comprehensive approach, which includes strengthening the organization and technical capabilities of rural communities as well as engendering at least passive support for sustainable resources use from the larger community group.

The use of the participatory approach or the idea of involving the stake holders in the management of the ecosystem have been on for over two decades now. This approach allow stakeholders and the immediate community, whose livelihood are tied to forest resources to take active part in planning and decision-making concerning the resources. It is built primarily on the principles of partnership. Adequate commitment to participatory management by the partner could lead to co-management-a situation where responsibilities and powers of managing the forest are shared equitably between the state and communities involved. It simply mean the devolution of powers to the communities and other forest users (Enger, 2000). Chokor (1993) states that,

community participation can be interpreted in numerous ways. He however viewed participation as an individual or group who have direct interests in the use and management of the forest resources. This could include hunter, farmers, loggers, women, government planners, developers, extension workers, industries, indigenous and non-governmental organizations.

Chokor (1993) further enumerated the following contributions of community participation. It enhances forest sustainability as it ensures that the stakeholders balance the burden (costs) and benefits from forest conservation. He further warns that participation has some burden invariably associated with the benefits.

Nchor (1996) stressed that involvement of the local people in park protection and surveillance is currently limited to recruitment of park guards, village liaison staff, and some senior management staff.

Akpama (2002) maintained that, people's participation in communal forestry management does not mean just convincing people to carry out the tasks identified for them in the course of management. It means that people either individually or collectively are involved in identifying the problems and their causes and assessing the native scope and magnitude of interventions required to ameliorate crisis.

He however, identified two levels of participation of communal involvement in resources management. The first level of approach is known as the 'blueprint or large-oriented' in which projects are defined in forms or mechanism, for the delivery of pre-refined packages of good services to specific large groups. Communal participation or involvement in this context is understood in terms of willingness of local people to undertake the required activities that can bring about proper management of the environmental resources.

The second approach is the "process-oriented approach" where specific categories of activities are defined by the local people themselves. Participation in this context is understood to mean that the people themselves assumed ownership and accountability for activities which they have identified and developed and ready to manage (Akpama 2002).

Ibor and Abi (2005) maintained that, participatory forest management avails the communities the unique opportunity of discussing or negotiating with logging companies or individuals from a position of strength through better understanding of the true value of their forest resources. The community could begin to have a sense of belonging and see the forest ecosystem as their property, which they must do everything to protect. This development is likely to contribute significantly to the improvement of their socio-economic well-being.

Anyanwu (2002) stressed the need for community education programmes, stating that, the principle of community participation is deeply inherent in the very nature of community education. He further explained that the idea of participation as it applies to community education strongly implies that success is assured where the effort of local community is channeled to the solution of a problem deemed as common to the people. He views the principle of community participation as the active involvement of the local people in the planning, execution, utilization and assessment of community education programmes. It emphasizes the initiative of the people as a means of stimulating the active participation of all citizens in programmes designed to induce development in their community.

Anijah-Obi (2001) states that, community education is an approach where by communities are encouraged and involved in decision-making, design, implementation and evaluation of matters that affect them. It is grass root in nature and draws on the capabilities and creativity of rural dwellers. That as custodians of the environment, the rural people have profound and detailed indigenous knowledge and practices. It is a means of evolving and eliciting community goodwill, understanding and cooperation.

## **2.2. Community Participation in the Enactment of Environmental Legislation**

Environmental legislation according to Upla and Utang (2004) is generally law or a set of laws enacted for the purpose of protecting the environment. It is a corpus of law related to environmental issues. Brazil (1985) sees environmental legislation as an aggregate of all the rules and principles aimed at protecting the environment and controlling activities within national and

local jurisdiction that may affect another state or local environment or area beyond the national jurisdiction. It is thus a set of rules, regulations and codes formulated purposely for the protection of the environment.

This objective can only be achieved through popular participation. It is in the light of the above that global treaties/conventions and major United Nations Charters on Environment Kicked-off in 1972 to empower people to effectively involve themselves in creating the structures and in designing policies and programmes to protect the environment from total depletion.

Adeyoju (1995) traced the origin of laws enactment to preserve the forest ecosystem in Nigeria to 1901, when the forestry ordinance was enacted. According to him this legislation was instrumental in laying a solid foundation of Nigeria forest policy. The ordinance empowered the colonial government on the advise of the Director of Forestry to create forest reserves in the country. The purpose of these reserves areas where to safeguard the tropical forest from total destruction. This was amended in 1934 and 1972 respectively following awareness created about the environment.

Balogun (2000) enumerated some environmental legislations, which have been enacted to assist in floral and faunal preservation. These include the forestry ordinance 1937; the Eastern Region Forest Law 1953. The forestry ordinance with amendments-Northern Region 1960; the Forestry Amendment Edict 1969 and 1973; The Wild National Park Decree 1959, 1963, 1972 and 1975; The Kanji Lake National Park decree 1979; The Endangered Species Decree 1985 and the Natural resources Conservation Council Decree 1989.

Anijah-Obi (2001) observed that since the passage of endangered species Act in USA in 1955, species have been considered as threatened or endangered. This legislation is considered as one of the strongest environmental law in USA. The Act makes it illegal to sell and buy forest resources classified as endangered or threatened. Bassey (2006) states that, the government should enact laws forbidding timber exploitation. He noted further that tropical timber cutting regulation and practices can be reformed. New logging contracts should be entered where increased tariff be paid by timber dealers and laws be made on reforestation and restoration of the forest. According to Dan (2000) the conscious awareness of the government to protect the forest ecosystem led to the enactment of the forest laws and regulation of 1956.

The major concern of the forest law is the establishment of the forest reserves as forest areas to be managed by government. The 1956 laws do not provide the rules for community participation, community forestry and sustainable management in general. However, the law led to the establishment of seventeen forests reserves. These include; Agoi Forest Reserve; Ukpom River Forest Reserve,; Oban Group Forest Reserve; Ekinta River Government Forest Reserve; Ekom Fuel Plantation Reserve; Bushi Forest Reserve; Bushi Extension Forest Reserve; Gabu Forest Reserve; Ikwigon Forest Reserve; Umon Forest Reserve; Uwet-Odot Forest Reserve; Enyong Forest Reserve; and Afi River Forest Reserve (Alden Wily 2000). Daniel (1990) expressed the need to protect floral and fauna species assert that, Legislation may begin and end the entire process of protecting some species. In order words, it becomes an offence to pick certain varieties of plants or kill particular species of animal in a given game reserve or national park. These are also called "nature reserves", wildlife refuges.

These restricted areas may be set by the government either at the national, state or local levels and voluntary bodies often called non-governmental organizations (NGOs) or even by individuals". He however notes that a great deal of scientific knowledge is necessary in order to formulate strategies for achieving the long term plan of the nature reserve. He further stressed that, this knowledge should not be restricted to only knowing the species composition of the park but also the dynamic interactions between the species and their non-living environment.

Enger and Smith (2000) notes that, environmental laws are not a recent phenomenon. Such laws became more common as industrialization creates many sources of air and water pollution through out the world. He added that in some states many Federal environmental programs are administered by the states under the authority of Federal government. He enumerated some of the legislations promulgated to protect floral and fauna species as follows; National Wildlife refuge System Act of 1966, and 1969; Marine Mammal Protection Act of 1972; Endangered Species Act 1973, 1982, 1988 and 1995; Fishery Conservation and Management Act of 1976, 1982 and 1996,

Whale Conservation and Protection Act of 1974 and 1976; Forest and Rangeland Renewable resources Act of 1974 and 1978; National Forests Management Act, etc. Anijah-Obi (2001) listed the following as enabling strategies of environmental law enforcement; - evolving public participation in environmental legislation; pursuing public awareness and environmental education; Compliance promotion. Most environmental laws are always not enforceable due to lack or absence of institutional backing, weak political will reinforced by other short-term economic considerations, political patronage etc. Thus, these enabling strategies could be used to ensure that environmental laws are ensured to achieve desired objectives. Anmashaun (2001), sees law enforcement as an effective tool for the management of floral and fauna species.

Anthony (2003) postulate that although the law of the land has prohibited the killing of endangered animals as well as indiscriminate felling of trees in communities, it has also given communities some exclusive rights to hunt and fish; collect the produce of the palm oil palm; to tap and collect the produce wild oil, palm wine; to collect the fruits of specified species, to collect cains and bush robes; snail and tortoise; fetch water from steams in such areas and to receive royalties on trees felled in the reserve. Through the instrument of the law, the National Park Decree which was promulgated in 1991 established five National Parks. The Decree established the governing board, and management committees to pilot the affairs of the park. The Act is elaborate with regard to prohibitions, restrictions, offences and penalties.

The possibility of making this Act a reality is attributed to public participation in environmental legislation and public awareness and environmental education. The Nigerian Environmental Study/Action Team "NEST" (1991) Contends that, Environmental education should also assist the Law makers and law enforcement agents in enforcing legislation on forest conservation. It is observed that through the Forest Services, Many states have enacted laws protecting natural vegetation from damage, particularly laws against bush burning.

Dan (2002) notes that, environmental education should be able to assist the Federal, states and local government in policy formulation and enforcement of laws about the environment, and that laws and policies on environment should not be contradictory. For instance, the cost price of fuel and kerosene should not be above the reach of the common man, because an attempt to increase the pump price for petroleum produces will intensify the rate of deforestation.

This is so because the only alternative left for the common man is to use the fuel wood energy. Through popular participation, bush burning, tree planting, logging, hunting of animals for commercial purposes, provision of social welfare package; provision of adequate funding for forest management; reduction of family size' poverty eradication etc will be addressed.

### **3. RESEARCH METHODOLOGY**

The research design adopted for this study is the ex-post facto design. The population of this research study consists of all the forest communities in Cross River State. The sampling techniques adopted for this study is the simple random sampling techniques. The sample size was made up of two hundred and forty (240) respondents randomly selected from ten communities.

The main instrument used for data collection was the questionnaire designed by the researchers. The questionnaire was administered in each of the sampled communities in Cross River State.

### **4. RESULTS AND DISCUSSION**

In this section each hypotheses are restated in the null form. The variables are identified and the result of the test hypotheses are presented and interpreted. The .05 level of significance was used for the statistical testing of each of the hypothesis.

#### **4.1. Hypothesis One**

There is no significant relationship between community involvement/participation in the management of the environment and the preservation of the ecosystem.

The independent variable involved in this hypothesis is community involvement/participation in the management of the environment; while the dependent variable is the preservation of the

ecosystem. Pearson Product Moment correlation analysis was adopted to test this hypothesis. The result of the analysis is presented in Table 1.

**Table1.** *Pearson Product Moment Correlation analysis of the relationship between communities involvement/participation in the management of the environment and the preservation of the ecosystem (N = 240)*

Variables	$\frac{\sum X}{\sum Y}$	$\frac{\sum X^2}{\sum Y^2}$	$\frac{\sum X}{R}$
Management of the Environment	4498	8461	1701250.49
Preservation of the ecosystem	6247	8461	

\* Significant at .05, critical  $r = .138$ ,  $df = 238$

The result of the analysis as presented in Table 1 shows that, the calculated t-vale of 0.49 is greater than the critical r-value of .138 at .05 level of significance with 238 degrees of freedom. This shows that the result of the analysis is significant since the calculated value is higher than the critical value. With this result the null hypothesis was rejected. This result therefore implies that, community involvement/participation in the management of the environment has a significant relationship with the preservation of the ecosystem.

#### 4.2. Hypothesis Two

There is no significant relationship between community participation in the enactment of environmental legislation and the preservation of the ecosystem.

The independent variable involved in this hypothesis is community participation in the enactment of environmental legislation; while the dependent variable is the preservation of the ecosystem. Pearson Product Moment correlation analysis was adopted to test this hypothesis. The result of the analysis is presented in Tables 2.

**Table2.** *Pearson Product Moment Correlation analysis of the relationship between community participation in the enactment of environmental legislation and the preservation of the ecosystem (N =240).*

Variables	$\frac{\sum X}{\sum Y}$	$\frac{\sum X^2}{\sum Y^2}$	$\frac{\sum X}{R}$
Environmental Legislation	4565	8767	189542 0.65*
Preservation of the ecosystem	6247	846	

\* Significant at .05, critical  $r = .138$ ,  $df = 238$

The result of the analysis as presented in Table 2 shows that, the calculated t-value of 0.65 is greater than the critical r-value of .138 at .05 level of significance with 238 degree of freedom. This shows that the result of the analysis is significant since the calculated value is higher than the critical value. With this result the null hypothesis was rejected. This result therefore implies that, community participation in the enactment of environmental legislation has a significant relationship with the preservation of the ecosystem.

#### 4.3. Discussion of Findings

The result of the first hypothesis reveals that community involvement/participation in the management of the environment has a significant relationship with the preservation of the ecosystem. The finding of this hypothesis is in line with FAO (1995) which requires a more comprehensive approach, which includes strengthening the organization and technical capabilities of rural communities as well as engendering at least passive support for sustainable resources use from the larger community group. The use of participatory approach or the idea of involving the stakeholders in the management of the ecosystem, has been on for over two decades now. This approach involves or allow stakeholders and the immediate community, which is domiciled to forest resources to take active part in planning and decision-making concerning the forest resources. It is built primarily on the principles of partnership. Adequate commitment to participatory management by the partner could lead to co-management-a situation where responsibilities and powers of managing the forest are shared equitably between the state and community involved. It simply mean the devolution of powers to the communities and other forest users (Atte 1993).

The result of the second hypothesis revealed that communities participation in the enactment of environmental legislation has a significant relationship with the preservation of the ecosystem. The finding of this hypothesis is in line with Anijah-Obi (2002) who sees environmental legislation as an aggregate of all the rules and principles aimed at protecting the environment and controlling activities within national and local jurisdiction that may affect another state or local environment or areas beyond national jurisdiction. It is thus a set of rules, regulations, codes etc formulated purposely for the protection of the environment. The enforcement of appropriate laws and policies is necessary in tackling the problem of floral and fauna disappearance. This objective can only be achieved through popular participation. It is in light of the above that global treaties/conventions and major United Nations Charters on Environment kicked-off in 1972 to empower people to effectively involve themselves in creating the structures and in designing policies and programs to protect the environment from total depletion. Adeyoju (1995) traced the origin of enactment of laws to preserve the forest ecosystem in Nigeria to 1901, when the forestry ordinance was enacted. According to him this legislation was instrumental in laying a solid foundation of Nigeria forest policy.

## **5. CONCLUSION AND RECOMMENDATIONS**

Two main hypotheses were tested in the course of this study and based on the result of the study, it was concluded that, community involvement/participation in the management of the environment and community participation in the enactment of the environment legislation is significantly related to the conservation and management of the ecosystem.

Based on the findings of the study, the following recommendations were made. That community in Cross River State should ensure that they actively participate in government policies of preserving the ecosystem. Government should make sure that all the communities in Cross River State are adequately involved in the realization of the government dream of preserving the ecosystem. Government should also enact laws forbidding timber exploitation. The traditional conservation of sacred forest by communities should be encouraged.

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