

ENVIRONMENTAL RESOURCES MANAGEMENT IN BORNO STATE, NIGERIA: RELIGIOUS PERSPECTIVE

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ABSTRACT

This study which adopted literature review research design was conducted to examine the religious and cultural perspectives in environmental resources management in Borno State, Nigeria. Data were generated from the secondary sources as well as photographs. It examined the concepts of resources management with a focus on local strategies as adopted by communities in the study area. It specifically dwelled on Man's perception and needs of local resources. It also highlighted the religious ethics on resources management and brought to the fore the process of Man's exploitation and responses to management of various environmental resources. The article advocated for the integration of both local and advance environmental management strategies in order to achieve a sustainable environment.

INTRODUCTION

The Encarta Dictionary Tool (2005) defines environment as the natural world within which people, animals and plants live. It is also referred to as all the external factors influencing the life of organisms such as light or food supply. In the social sciences, Environment is referred to as social and physical conditions that surround people and affect the way they live. The natural environment therefore includes the nature of the living space (sea or land, soil or water), the chemical constituents and physical properties of the living space, and the assortment of other organisms present (Oxford Dictionary of Geography, 1997). It is regarded by many as being at risk due to the harmful influences of the societal components.

The phenomenal environment includes changes and modifications of the natural environment made by man. The Environment is also defined as the sum total of the conditions within which an organism lives (Barrows, 1993). It is a result of interaction between nonliving and living parameters. Thus, the Environment may be said to be all the external conditions that affect an organism. The environment is therefore simply the relationship between man and nature and this relationship changes from time to time and from one place to another. Man modifies his environment in response to the changing conditions of his needs.

The environment on the other hand responds to human manipulation. This creates a dynamic equilibrium, which constantly adjusts in both space and time. Man usually disturbs this equilibrium, which exist between his manipulation, and the adjustment that the environment can undergo. There is a close relationship between culture and the physical environment (Ayuba *et al*, 2003). Culture has to do with the totality of peoples' way of life. It consists of the values, beliefs, aspirations and modes of behaviour, which are learned and handed down within a group. Culture is therefore a dynamic phenomenon. It undergoes changes through the adoption of inventions and innovations made internally within the group by the learning and adoption of traits from other cultures. According to Karshi (2001) the rural people have the knowledge of their environment, which tends to vary within and between ethnic groups with similarities occurring in very few instances. The environment on the other hand, presents people with a range of

opportunities and challenges through the configuration of the land, climate, vegetation, wildlife, water and mineral resources. From time immemorial man has relied so much on the environmental resources around him. This makes man as the major player and controller of all the processes as well as the one to contend with the impacts of misuse and proper use of natural resources of land, water, vegetation, minerals, wildlife (Ajayi,1996).

Man as agent of environmental degradation in a bid to carry out his daily activities led to so many environmental problems like land and water pollution, land degradation, global warming, desertification, deforestation and flooding among others. The consequences of the environmental problems are enormous which has led to the depletion of so many of its resources. Culture is the primary factor that affects the way in which man responds to the environment and since there are wide varieties of cultures, there are therefore different cultural responses even to the same environment. Every culture creates its cultural landscape, which is a physical expression of its way of life, in the form or type of land use, crops grown, animals kept, housing forms and materials (Ayuba *et al*, 2003). This paper therefore examines the Religious and Cultural Perspectives in Environmental Resources Management with a view to analysing man's perception of managing his available resources locally.

ENVIRONMENTAL RESOURCES MANAGEMENT

Natural resources refer to any material on earth which is useful to man and that can be tapped profitably (Daura, 2001). It can also be seen as all those things beneficial to man that have been put in place by nature. Thus any material becomes a resource as long as it is identified, its relevance recognized, technology for its exploitation developed and accrue some benefits to man.

The sustainability of natural resources management depends not only on appropriate technology and prices, but also upon the institutions involved in resource management at the local level (Rasmussen & Dick 1994). Resources degradation problems are exhibited in a number of sectors including forestry, fishing, grazing, irrigation, soil erosion, drought or water resources, deforestation or desertification as well as mineral resources have received increasing attention in recent years. Concept of sustainable natural

resources management as only technical and ecological matter on the one hand or economic issues on the other hand, have been shown to be too simplistic.

If either approach were sufficient, natural resources degradation problems would be relatively easy to solve. The persistence of these problems and the failure of simple technological or economic "fixes" demonstrate the need to look at more complex aspects of resources management. There is thus growing recognition of the centrality of social actions, their institutions and organizations when explaining natural resources management issues. Voluntary organizations at the local level which provide a source of collective resources management over receiving particular attention at an alternative to state management on one hand and private management on the other hand.

Environmental management is seen as a deliberate effort at striking a balance between the need for overall development and the need to save the environment from total collapse and or destruction (Moukhtar, 2005). The concept of environmental management is much more than controlling undesirable nuisance in the physical set up, but includes the need to obtain desirable optimum living conditions. The main consideration is the protection of the physical system by avoiding a stress on an ecosystem beyond its limits or carrying capacity.

ENVIRONMENTAL RESOURCES MANAGEMENT: THE ISLAMIC PERSPECTIVE

Peoples' responses and attitudes towards resource use are conditioned by time, place and culture. Religion to a great extent has also fashioned strategies for resources conservation and management. In Islam, resources are regarded as the gift of all mankind. Allah, (SWT) clearly stated it that "And it is he who produces gardens with Trellised and Untrellised, and Date - Palms, and crops of different shape and taste (their fruits and their seeds) and Olives and pomegranates similar (in kind) and different (in taste) Eat of their fruit when they ripen, but pay the due thereof (its zakat, according to ALLAH'S orders, which is one-tenth (1/10th) or one-twentieth (1/20th) on the day of its harvest, and waste not by extravagance. Verily, He likes not Al-Musrifun (those who waste by extravagance (Q6:141).

He is the one who produce gardens with fruits of all kinds who are similar in kind but different in variety is a clear testimony that God created all the resources needed by man in different varieties for his diverse uses. Therefore mankind is bestowed with bountiful resources for his pleasures but cautioned not to waste for Allah (SWT) does not loveth the waster. But of all the resources bestowed on to you, waste not. Enjoy them in moderation and be grateful of Allah (SWT) (Sadiq, 1999).

Again, Allah (SWT) stressed that "O you who believe make not unlawful the good things which God hath made lawful for you, but commit no excess for God loveth not those given in excess (Q5:90). Islam has therefore enjoined all Muslims to imbibe the culture of orderly and proper management of resources no matter what the quantity as was emphasized by some verses from the Holy Quran. Islam does understand the earth to be subservient to mankind but not be administered and exploited irresponsibly.

Islam recognizes the major constituents of the environment (edaphic, pyric and biotic) and provides laws that will ensure their benevolence to mankind (Sadiq, 1999). For instance on soil, its types are not only mentioned (Quran 7:58) but also methods of preserving and maintaining its fertility to ensure high yield are also discussed (Quran 22:5). Similarly, practices such as overgrazing and deforestation are condemned. Instead Prophet Mohammed (Peace Be upon Him [PBUH]) enjoined tree planting and condemned acts capable of destroying flora and fauna of the environment. In fact, orchards were maintained by the early Muslims. Even at war, Muslim armies are forbidden from felling of trees, destroying farmlands and any other source of sustenance of the enemies. On water, Islam considered it as the basis of all creation (Quran 21:30) and its provision as a great charity. Indeed, Prophet Mohammed (PBUH) ordered that no one should be denied water and that it should not be wasted. Because of the value of water for different purposes, Islam condemns any act capable of defiling it (Yahya, 1997).

As a means of attaining this, Prophet Mohammed (PBUH) ordered that both stagnant waters and running rivers should not be defiled and where they have been defiled they should not be used for either spiritual or mundane purposes. Similarly, human and animal waste should be properly

preserved to avoid any health hazards. There is a strong sense of the goodness and purity of the earth. Clean dust must be used for ablution before prayer if clean water is not available (Omaka, 2007).

ENVIRONMENTAL RESOURCES MANAGEMENT: THE CHRISTIAN PERSPECTIVE

Similarly, the Christians from their own perspectives view or understand resources as belonging to God who alternatively entrusted them to man for the good of all his deeds. The Christian perspective on the use of resources was rooted in the doctrine of religion right from the beginning when God created man (Jodale, 1999). He enjoined him to guide and make use of resources that abounds him judiciously. The commandment or law was that, welfare of man on earth rested not only on just access to resources but on the harnessing, cultivation and preservation of these resources to increase its continual existence.

According to the commandment, resources are the basis of community prosperity and proper care must be employed to restore its integrity, for resources are natural gifts for generations. To care for God's word is to care for persons. To care for both is to cater for the earth and other related resources (Genesis 2:8-9, Pslam 8:3-9, Luke 20:9-17, Mathew 13:1-16 and Verses 24-43). Ecological concern is an element strand in Biblical stewardship, but responsible stewardship of the earth and other related resources are worldwide problems. Jodale (1999) pointed out that ignorance; apathy and selfishness hinder people everywhere in the World in prospering for a better quality of life, because it has high economic price tags attached to proper utilization of resources. For this reason self discipline is rare in all aspect of human endeavour because God having created man, gave him dominion over all resources and other animals that move along the ground and subdue the resources and animals to his personal use, except human life (Daniel 4:21-22).

In Deuteronomy 11:17, God warn all Christians on the use of resources "Then the Lord's anger will turn against you and he will shut the heavens so that it will not rain and the ground will yield no produce and you will soon perish for the good land the Lord is giving you". Equally, it has been stated in the Bible that any misuse of resources provoked God.

"For God created man as part of the resources and gave him power to rule over it and subdue them to the best of his knowledge". The book of Genesis 1:1-29 "if man including his life misuses the resources, God's anger will descend upon him and destroy him. Therefore God has made life and made it to depend on these resources for its up keep. It will therefore be the responsibility of man to keep concern upon the use of these resources not to exhaust them.

MAN'S EXPLOITATION AND MANAGEMENT OF ENVIRONMENTAL RESOURCES

The essential needs of man in most developing countries (food, clothing, shelter, and jobs) are not being met and beyond their basic needs these people have legitimate aspirations for an improved quality of life (Uyanga, 2005). A world in which poverty inequalities are endemic will always promote ecological and other crisis. Perceived needs are socially and culturally determined and sustainable values that encourage consumption standard that are within the bounds of the ecological possibility and to which man can reasonably aspire. In recent times, researches in the environmental resources have more than doubled due to population increase. Man therefore, relies more on the environment for his basic needs since the environment is nature's gift, so it is his fundamental right to exploit whatever resources available and at whatever magnitude. Man's activity such as exploitation of natural resources leads to diverse environmental problems. Preserving the delicate balance of nature in biological resources appears to be most difficult and important aspect of serving our natural resources because people have often upset this balance (Jodale, 1999). For instance, poor farming methods have ruined most of the fertile soils and left it barren. Millions of tons of fertile soil that could produce food crops are washed away by rains, chemicals used by farmers, firms or industries end up in rivers which in turn kill fishes and several other water animals. Other contemporary problems are deforestation, floods desertification, drought, and soil erosion, depletion of fisheries, water resources loss and mineral resources depletion.

Agriculture: This is not only a vital source of food among rural farmers but it is also the prevailing way of life (Ayuba et al, 2003). The common

traditional tillage practices are minimum tillage which involves hand hoeing, harrowing and ridging across the predominantly wind erosion direction. The use of simple tools such as the short and long handed hoes affects only the top soil and appears to do limited damages to the soil during normal rainfall. Most agricultural outputs are kept at the village level using simple storage system such as Rumbu and underground pits against weevil.

Soil Management:- Peasant farmers have various ways of managing the soil to improve productivity. The use of animal dung, agro forestry, intercropping, crop residues, planting in rows, terracing, composting, mulching, bird droppings and Binne (a traditional practice that involves burying of seeds in the soil in anticipation of the rains) as well as the practice of shifting cultivation or bush fallowing

Pest and Diseases Management: The most common pests and diseases that destroy crops are Queila birds, Rats, Locust, Rodents, Stem borers, Arm worms and Aphids. Quela birds are curtailed by going as early as 5 am and staying up to 5 pm in the farm either by shouting or throwing sticks (Ayuba, Aji & Msheliza, 2003). Other strategies includes erecting human statues, ringing of bells, beating of drums and tying of tapes from video cassettes which when blown by the winds makes a very scary sound. Intercropping of beans or groundnut with millet or maize may help where a farm is ravaged by pests, not all the crops will be affected.

Vegetal Resources and Domestic Energy Management: There are different vegetal resources ownerships. These are private, group community and government ownerships. Private are mostly found around homesteads and sometimes on boundaries of farmlands. Trees are planted as a way of strengthening a farmer's claim to a particular field or as boundaries demarcating farm plots. Typical among such trees are Neem, Baobab, Acacia, Mango, Cashew, Guava and Eucalyptus as well as Acacia Senegal. These trees are hardly cut because they serve as economic trees and some are believed to be abode of Evil spirits. Thus, only dry branches are utilized in addition to cow dung and corn stalks in cooking and heating. More over, not every tree is used for cooking because they are very few which are preferred due to slow burning, charcoal residue, strength, low smoking, easy ignition and availability.

Traditional Rangeland Management: Traditional husbandry is an ancient subsistence adaptation that has enabled people to live in this region. Because of this long history of exploitation, plants and animals in these rangelands have been subjected to selective pressures for a long period of time. The pastoralists have involved management strategies that optimize plant - animal relationships under a variety of constraints. These strategies include conservation of forage through haymaking. Corn and millet stalks, rice husks, groundnuts and beans leaves are harvested and stored as Harawa (animal feed) for livestock. For example farmers may grow corn on a farmland and cattle owners may have the right to graze cattle in the fallow fields after harvest. This mutually beneficial arrangement helps in improving soil fertility and provides forage for cattle.

Water Resources: Water is a daily necessity and a key factor in the well being of people and livestock. Water for people and livestock traditionally has been procured from ephemeral ponds, surface rivers, shallow wells dug in the riverbeds during the dry season (usually less than 20 meters deep) (Ayuba *et al*, 2003). Today, the rural people mostly use ponds in the rainy season and wells in the dry season to supply water for human and livestock consumption. The most wide spread traditional water harvesting techniques observed for crop production and livestock are contour earth bound with walls around through which excess runoff is drained to trap or hold water to ensure that the soil is well saturated for the production of Masakwa during the dry season.

Fish Management: The general methods used in catching fish include the use of hooks, fish traps and hand held nets. Local measures towards fish resources management includes, reserved ponds for fishing, specification of periods for fishing, returning of fingerlings into the water and the use of a more efficient design of fish nets to reduce the volume of fingerlings being caught alongside the mature ones. The use of chemicals such as Gamalin 20 for fish catching should therefore be avoided completely.

Cultural Taboos: There are generally many cultural taboos existing within every environment. These include the setting aside of land for religious and other purposes, such land serve as community forest estates protected by local laws and customs and serving the spiritual or social needs of the

people. These include mosques, churches and shrines. Ayuba et al, (2003) pointed out that these are places set aside for religious worshipping by the different religious groups usually not extensive and are uncultivated lands located at the centers or outskirts of rural settlements. Trees are planted to provide shade and felling them for firewood is prohibited. Equally graveyards and cemeteries are believed to be inhabited by spirits of the departed souls. Thus, nobody goes there for hunting, firewood collection, or uses the land for cultivation. In some cultures, hunting expeditions is restricted to some woodland and except when it is announced and so it is an offence for anybody to hunt to any of these sites before it is announced. This allows vegetation and animal species to regenerate before subsequent disruption by man. In some villages, species of acacia could not be felled, unless certain rituals were performed by an elderly person involving having some grains underneath such trees. The trees were believed to have evil spirits that inflict whoever cuts them with illness and some other plagues. In the past no villager brought new stalks of millet or corn to the village unless the village head gives out red sorghum in charity. Violation means abomination on the entire village. This allows the stack to mature before harvest since they provide raw materials for roofing of houses and fodder for livestock during the long dry season. In some rural settlements where Islam is dominated, the eating of some animals such as dogs, horses, donkeys and pigs is a taboo.

For instance in the Southern part of Nigeria, there are evil forest where there is no hunting or tree felling. Plate 1 and 2 also throw more light on some of the damage to farmlands and other economic trees as a result of the excavation. Excavation is one of the typical activities by Man on the Bama Ridge whereby sand and gravel are removed from the ridge for various construction purposes. The ridge which is situated in Borno State and seen as a national monument, is today being tempered with by excavators in ways that signal a lot of dangers to the environment.

From figure 1, it can be observed that the bottom right portion is part of a beans farm which is almost destroyed by excavation in one of the sites; while at the center of the same plate, some trees are about to fall down due to the same action. Figure 2 also shows that the topmost part is a cashew plantation, while the bottom left hand side is another beans farm

all about to be destroyed by excavation. These two plates go to show that excavation is being carried out even when there is farming activity on the land. Imagine what happens to such areas in the next rainy season. It may be partial or total loss of such lands due to erosion.

CONCLUSION

A vital part of living in harmony with God's creation is to understand our place within this wider sense of community. The earth itself is a community that is characterized by a sense of interdependence. The environment, its resources, and all of humanity are connected in a delicate web of life that is interdependent on one another. The environmental degradation that is so overwhelmingly apparent in our societies today is not just about better resources management or issues of recycling. Rather, it has its roots in the failure to understand all of creation as interconnectedness and it is this interdependence, which should be the foundation any coherent would view. Disregarding the knowledge and cultural practices by different ethnic groups may lead to failure in any resources management practices. Therefore, the integration of local environmental management strategies will not only aid effective resources management but will enable the local people to share, enhance and analyze their knowledge of life and conditions to plan and act.



Fig. 1: Destruction of farmlands and other tree species due to excavation activities in Borno State.

Source: Kagu, A. (2008) Excavation on the Bama Ridge: A Socio-economic and Environmental Analysis, Unpublished Ph.D Thesis, Department of Geography, Usmanu Danfodiyo University, Sokoto

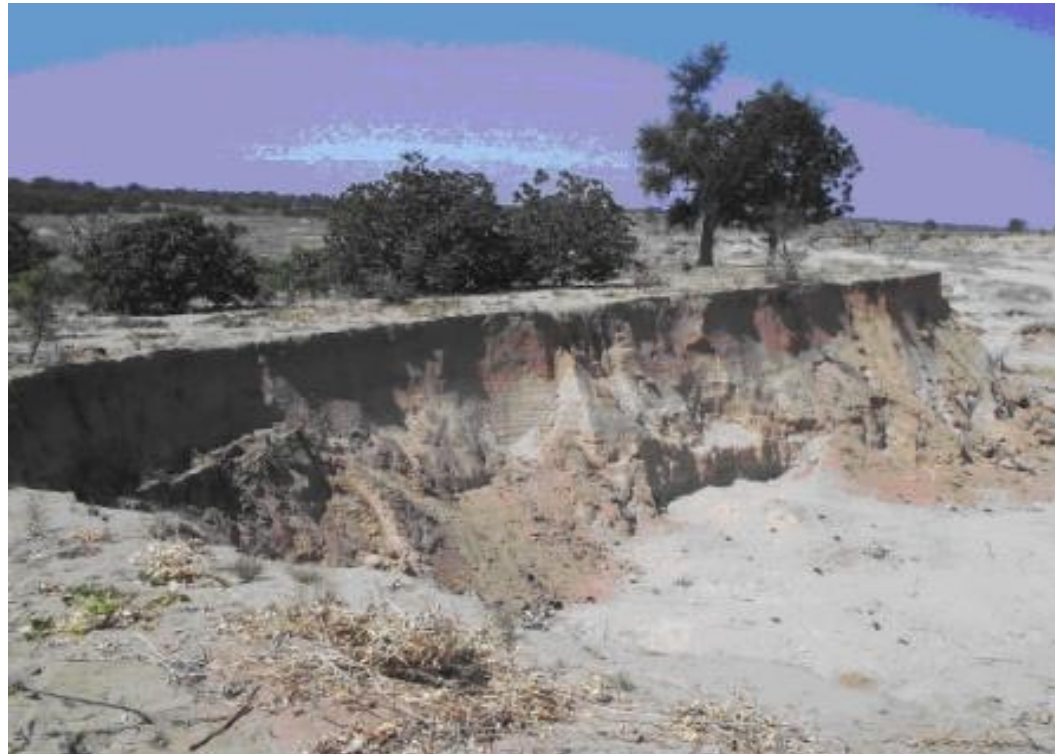


Fig. 2: Threat of Excavation to cashew plantation on the Bama Ridge in Borno State

Source: Kagu, A. (2008) Excavation on the Bama Ridge: A Socio-economic and Environmental Analysis, Unpublished Ph.D Thesis, Department of Geography, Usmanu Danfodiyo University, Sokoto

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