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Biodiversity Conservation and the Sacred Forests of Emohua, Rivers State, Niger Delta Region Nigeria – A Review

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Abstract

There are five (5) sacred forests in Emohua Local Government Area in Rivers, Nigeria. The area is situated in the Niger Delta region of the country. The forests include Abaka, Ovulikpo, Ohia, Ogbagoroggaro and Ogbagorigeri. These sacred sites are regarded as the temples of god by the local people due to their beliefs, but technically the forests are centres of biodiversity. In recent times, anthropogenic interference activities expose the forest to threat and challenges which make the development and adoption of conservation strategies inevitable. This paper focused on the various strategies necessary for conservation of the sacred sites at Emohua.

Introduction

Emohua is one of the twenty three local government areas of Rivers State Nigeria. The variability in climatic, edaphic and other geographical features endow the area with one of the richest in Biological diversity comprising of lowland rain forest, freshwater and mangrove swamp forests respectively. Biological diversity today is being lost allover the world at an alarming rate. This rapid loss is due to expansion in agriculture; shifting cultivation; animal husbandry; urbanization; road construction; timber and fuel wood harvesting; environmental pollution; invasive species and climate change among others. The potential impacts of this include: threat to human means of livelihood, extinction of valuable plant and animal species and climate change acceleration.

Conservation of biodiversity at sacred sites is in line with several International Conventions such as the 1992 -Earth Summit in Rio de Janeiro and the 1998 United Nations Educational Scientific and Cultural Organization Symposium on sacred sites Cultural and Biological diversity in Paris, France. These international conventions acknowledged the protection of Biological diversity through traditional and cultural values at sacred sites.

The objectives of this paper are to contribute to the conservation strategies and sustainable management of biodiversity at sacred sites as well as outline major challenges and action plan on the administration and management of the benefits derivable from the sacred forests of Emohua.

The Five Sacred Forests of Emohua

The five sacred forests of Emohua are situated on the coastal plains of Rivers State, Nigeria. The sacred forests are botanically diverse and have high conservation values. By working with some University graduates from the communities that make up Emohua, five sacred forests were identified. These are: Abaka and Ovulikpo in Rumuche community; Ohia in Rumuakundele community; Ogbagorogoro in Rumuche community and Ogbagorigeri (fine country) in Oduoha community.

Rainfall is bimodal with the wettest months as July and September. The area is a heavy rainfall region with between 2000mm - 2500mm per annum. Mean annual temperature range between 23°-32°C and a mean relative humidity of over 80% per annum. The mean soil pH value in the mangrove forest of the area is 3.60 while the freshwater swamp forest and the lowland rain forest have mean soil pH values of 4.50 and 5.20 respectively.

Traditional Protection of the Sacred Forests

Several literatures are available on management responses to threats facing protected areas in different parts of the world (Rawat, *et al.,* 2011; Dudley, 2009;

Horning 2008; Iriondo, *et al.*, 2008; Chape, *et al.*, 2008; Heywood, *et al.*,2006; Mhando, 2003; IUCN, 2002; Mcneely, 2001; Luoga, *et al.*, 2001; Bruner, *et al.,2001;* Gascon *et al.*, 2000; Schweik, 2000; Nyamweru, 1996; Wass,1995). The sacred forests at Emohua are among the only known sites of certain plant species in the freshwater and mangrove swamp forests in Nigeria. These sacred forests have been important for the protection of biodiversity in the 5 communities. In Nigeria, taboos, superstitious beliefs and myth have been used by indigenous people in forest protection.

The main objective of traditional protection of sacred forests is to maintain their sanctity by restricting accessibility. Harvesting of timber and fuel wood collected are prohibited. This is made possible through: social norms and rules; manifestation of spiritual powers of deities; taboos; sacred species; and threat of death by spiritual means to trespassers.

As stated earlier, timber removal, fuel wood collection and other trespasses that can cause disturbances to the forests are highly forbidden. Grazing and wandering are strictly prohibited. Sexual relationships in the forests are regarded as taboos. It is believed that even if done in the secret, the symptoms of the offence must come to lime light sooner or later.

There are certain sacred species associated with the sacred forests. For instance, one the sacred forest in Emohua is associated in crocodile which must not be killed or eaten. Visitors and non-indigenes are usually educated on the dangers of encroaching into the sacred forests. Special sacrifices are performed on behalf of forest offenders or trespassers by spiritual leaders to ward any punishment from the gods. Offenders are made to pay fines to appease the spirits. The punishment for encroachment varies dependent on the magnitude of offence. Ignorance is no excuse.

Traditional Values and Threats to the Sacred Forest

Traditional values of the Sacred Forests

Sacred forests are regarded by the people of Emohua as the first temples of their gods in the various communities. They see these sacred sites as places of communication to their gods and departed loved ones. These forests are said to provide spiritual and physical protection for the people since the days of their ancestors.

Threat to the Sacred Forests

Sacred forests are important sites for biodiversity conservation in different parts of the world. In Nigeria, over the past three or four decades there has been a tremendous .decline in biodiversity and the sacred sites are not speared. These sacred sites have been threatened with deterioration due to decline in knowledge about and

respect for cultural values, increased demand for forest products, population growth, road construction, local agricultural activities, the advent of Christianity and the various exploration and exploitation activities of multi-natural oil companies in the Niger Delta.

Potential Uses

One of the most important values of forests is in supplying food and various goods and services for human beings. The 3000 species of plants regarded as food for man, only 200 have been domesticated. These domestications come from the wild ancestors of the species in the forests.

We made a field survey of the plant species and the vast array of goods and services that can be contributed by the sacred forests (field survey 2010). The survey revealed several species that can be used for timber, fuel wood, charcoals, phytomedicine, fruits, seeds, vegetables, spices, thickeners, chewing stick, dyes, sweeteners, fodder, fats oils, gum, adhesives, containers, fibre beverages, drinks, masticatory, stimulant, tannin, mushrooms, snails, honey, broom, sponge, wrapping heaves, poles, wattles shade trees, beautification and recreation, water shed protection, erosion control, purification of air and climate change amelioration Furthermore, the sacred forests at Emohua can serve as services of genetic materials for biodiversity conservation and domestication of potential plant species for food.

Some of the plant species found at the mangrove vegetation of the sacred forests include; *Rhizophara racemosa, R. harrisoni, R. mangle, A vicennia Africana, Syzygium guineense var. uttorale. The freshwater swamp vegetation has several timber and non-timber species which include: Alstonia congensis, cleisTopholis patens, Spondias mumbin,* S. *cythesea, Elaseis guineensis, Newbouldia laevis, Bombas buopopozense, Ceiba pentandra, Alchomea cordifolia, Dialium guineense, Baphian itida, Pentaclethera macrophylla, Harungana madascariensis, Symphonia globulifera, Sacoglottis gabon ens is, Irvingia wombolu,* I. *gabonensis, Uapaca species, Trichopoda, Musanga cecropioides, Lophira alata* and *Mitragyna ledermannii.* Several herbs, grasses and limes with numerous uses are also abundant in the sacred ecosystems.

Major Challenges in Sacred Forest Conservation

(a) How to bind the traditional communities to respect, preserve and maintain cultural values. Overcoming this challenge will help in encouraging and supporting the indigenous people to conserve biodiversity.

(b) Suspicion from local communities who may worry about loss of sanctity at the sacred sites if conservation measures are adopted by stakeholders.

Converting these sacred forests to any biodiversity management category will require intensive negotiation with the local people.

(c) The financial and institutional means to achieve biodiversity conservation at Emohua sacred forest must be overcome.

(d) Overcoming the various perspectives different individuals see sacred forest is a major challenge. To some it is an impediment to community development and must be exploited or destroyed. Some believe it is a sacred site to pray for peace and tranquillity in the community. To others, a mere mention of sacred forest conjures fear, hate, awe and mystery in their minds. Only a few of the indigenes knows the benefits derivable from forests protection.

Determination of Management Categories for Sacred Forest

According to the International Union for Conservation of Nature (IUCN), a protected area (PA) is: a clearly defined geographical space, recognized, dedicated and manage through legal or other effective means to achieve the long-term conservation of nature with associated ecosystem services and cultural values (Dudley, 2009). It may be very important to determine where or not the sacred forests at Emohua meet the IUCN definition of a P A and then decide on the most appropriate category to adopt. The various categories of IUCN include: strict nature reserve and wilderness area (Category I); National Park (Category II); Natural monument (Category III); Habitat area (Category IV); Protected landscape (Category V) and Protected area with sustainable use of natural resources (Category VI).

Categories V and VI are likely to be the most appropriate for conserving biodiversity at Emohua sacred forests. This is because both categories conserves ecosystems with significant ecological and biological characters along with associated cultural and traditional values involved in natural resource management.

Conservation Strategies for the Sacred Forests

The challenges and threats earlier on mentioned in this paper must be overcome and addressed properly in order to have a successful conservation of the sacred forests (Gascon *et al.*, 2000). Below are some activities that can be undertaken to protect the sacred forests at Emohua.

Institutional Development and Capacity Building

There is need to properly organize the forestry department that can ensure that well articulated government forest policies are actualized. Presently, the Rivers State government lacks a well developed forest development organizational structure that can effectively police the 5 sacred forests necessary for implementing forest policies in the state.

A Robust Financial Mechanism should be in Place

Increase in funding would directly increase the ability of protected areas to protect tropical biodiversity (Bruner *et al.*, 2001). A sustainable financial system for conserving biodiversity need adequate funding which will help cure the perennial problem of protected areas. A robust financial source must be put in place for biodiversity conservation. The Government of River State alone may not be able to shoulder the financial requirement needed for conserving the sacred forests. There is need to explore different funding options especially the multinational oil companies that contribute significantly to forest destruction in the Niger Delta.

Legal Recognition

The Government should formally designate the sacred forests as P A through enabling law. This will provide the legal element for status of the areas.

Involvement of the Local Communities

It will be difficult to achieve sacred forests conservation without community involvement even if the financial and institutional means are possible. Much more need to be done to build support from local communities for protected areas (Mcneely 2001). Partnership between the local communities in Emohua and concerned stakeholders are important in biodiversity conservation. Indigenous knowledge from local communities could play major roles in natural resource management. As we were taken round the sacred sites, the local community leaders provided volunteer guards. This collaboration is necessary in order to protect the sites from destruction and interferences.

Education

Biodiversity conservation in the sacred forests of Emohua cannot be effective without educating the local people on the numerous benefits of forest protection. There is need to create a general awareness in the local communities on various conservation programmes. This will arouse interest in the local people.

Action Plan

Proposed action plan for the five sacred forests of Emohua should have the following practical activities:

(a) Survey of the sacred forests and also determination of their present status.

(b) Documentation of the biodiversity in the communities.

(c) Preparation of management plan for the sacred forests.

(d) Constitution of Joint Forest Management (JFM) communities in the communities involving community leaders, sacred temple leaders, local

government council officials, Forestry Department Officials and all other concern stakeholders.

(e) Legal empowerment of these communities to manage the sacred forests.

Conclusion

The Government of Rivers State must recognize, respect and protect the traditional and cultural values of indigenous people for any biodiversity conservation programme to be successful. In addition, every conservation policy must be backed up by legal framework to promote the participation of local communities in the administration and management of sacred forest. Since the local communities are struggling with resources to survive, the government should adopt forest conservation policies geared at improving their livelihood.

References

Bruner, E. G., Gullison, R., Rice, R. & Faneca, G. da (2001). Effectiveness of parks in protecting tropical biodiversity. *Science* 291: 125-12.

Chape, S., Spalding, M. & Jenkins, M. (eds.) (2008). *The World's Protected Areas.* UNEP World Conservation Centre, University of California Press, Berkeley.

Dudley, N. (ed) (2009). *Guidelines for Applying Protected Area Management Categories*, International Union for Conservation of Nature (IUCN), Gland, Switzerland.

Gardner, C. J., Ferguson, B., Rebara, F. & Ratsifandrihama, A. N. (2008). Integrating Traditional values and Management regimes into Madagascar's expanded protected area system: The case of Ankodida. In: Mallarach, J. M. (ed.) *Protected Landscape and Cultural and Spiritual Values. Volume 2* in the series values of Protected Landscapes and Seascapes, IUCN, GTZ and Obra Social de Caixa Catalunya. Kasparek Verlag, Heidelberg.

Gascon, C., Williamson, G. & Fonseca G. da (2000). Receding forest edges and vanishing reserves. *Science* 288: 1356-1358.

Heywood, V. H. & Dulloo, M.E. (2006). In situ Conservation of Wild Plant Species - a Critical Global Review of Good Practices, (*PGRI Technical Bulletin, no 11*, FAO and IPGRI, International Plant Genetic Resources Institute (IPGRI), Rome, Italy.

Horning, N. R. (2008). *Madagascar's Biodiversity Conservation Challenge: From Local - to National-Level Dynamics*. Workshop on Forest Governance and Decentralization in Africa. 8-11 April 2008, Durban, South Africa.

Iriodo, J.M., Maxted, N. & Dulloo, M.E. (eds.) (2008). *Conserving Plant Diversity in*

Protected Areas. Wallingford, UK: CAB International.

IUCN (2002). *IUCN Technical Guidelines on the Management of Ex-situ Populations for Conservation*. Approved at the 14th Meeting of the Programme Committee of IUCN Council; Gland, Switzerland, 10 Dec. 2002, International Union for Conservation of Nature (IUCN).

Luoga, E.J., Witkowsky, E.T.F. & Balkwill, K. (200t). Harvested and standing wood stocks in protected and communal miombo woodlands of eastern Tanzania. *Forest Ecology and Management J.* Vol. 164, Issues 1-3, Elservier Science B.V.

Mcneely J.A. (2001). Investments Needed for Biodiversity Conservation: Asian Overview. *Special Reports*: pp. 18 - 26.

Mhando,. J. (2003). Ramogi Hill- The Dispersal point of the Luo. The secrets of Traditional sacred sites. In *Indigenous Knowledge Newsletter, V 01. II issue 1*.

Nyamweru, C. (1996). Sacred Groves Threatened by Development. The Kaya Forests of Kenya. *Cultural Survival Quarterly*, 19 - 21.

Rawat, M., Vasistha, H. B., Manhas, R.K. & Negi, M. (2011). Sacred Forest of Kunjapuri Siddhapeeth, Uttarakhand, India. *Tropical Ecology* 52(2): 219-221.

Schweik M. Charles (2000). Optimal foraging, Institutions, and Forest Change: A Case from Nepal. In Clark C. Gibson, Margaret A. Mckean and Elinor Ostrom (eds.) *People and Forests: Communities, Institutions and Governance*, 87-98, Cambridge, MA: MIT Press.

Wass, P. (1995). *Kenya's Indigenous Forests, Status, Management and Conservation.* XII and pp. 205. Gland, Switzerland: IUCN.