



Assessing challenges of Baturiya Wetlands and Game Reserves Biodiversity as Ecotourism Resource in Hadejia, Jigawa State, Nigeria: A viewpoint

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Abstract:

Wetlands are primarily targets for exploitation by man via, uncontrolled hunting, population, pollutions, sedimentation resulting from deforestation, desertification, eutrophication resulting from agriculture, runoff, channelization for irrigational farming, progressive industrialization, compaction of soil by pastoralists and their animals which further degrade the wetlands habitats as well as climate change and drought. The drying out of the wetlands and other loss of ecosystem services are common phenomenon of the Baturiya wetlands vis-à-vis the degradation of ecotourism resource potentials, poor administration, coordination and participation amongst communities are big threats to the wetlands. These situations present a great danger to the ecosystem biodiversity and the community livelihood options. Leisure and ecotourism resources are seen as veritable tools to economic development, if dependent communities are properly engaged to harness the endowments. Apart from generating wealth, Baturiya wetland tourist site enhance community cohesion; promote peace and security within the host communities. Tourism needs a high level of planning and this has to involve the local communities in order for them to have a sense of attachment to the nature endowment of water, local/migratory birds, gum Arabic trees, lunched grasses, economic palms are left uncontrolled and devastated by poachers, farmers and deforestation for fuel woods/timbers. This paper looked at the wetlands and birds' sanctuary as tourism and recreation bolster of Hadejia to boost jobs creation, health, economic and conservation of nature for its people and beyond. It presents the synopsis of how to engage the stakeholders and community members to efficiently use and managed the wetlands and other resources sustainably. The wetlands is considered by the communities as places to fish, graze, hunt and reservoir for firewood not for ecotourism as they have less business with leisure, recreation and tourism. The study used knowledge, attitude and practice (KAP), oral interviews and on the spot observation methodologies (qualitative data), communities and staff of Ministry of Environment (Conservation unit), Dutse as source of data generation. The discussions and results showed that the communities do not see the need to utilize the wetlands as tourism hub, nor appreciate its values. This paper recommended; that communities participation, awareness of wetlands as sources of socio-economic-value chain to people, conservation and management of the wetlands for posterity is key, funding for preservation of birds/wildlife and ecosystems is also pertinent, construction of holiday chalets for domestic/ international tourists and halting of fishing and devastation of the ninety nine (99) identified ponds is suggested and students researches be tailored towards conservation of the Baturiya wetlands by Federal University, Dutse (Zoology, Botany, Forestry/wildlife, Environmental Sciences Departments), NTDC, Abuja, UNEP, UNDP, WWF towards passive wildlife and birds

watching destination realizable. The communities and neighborhood of wetlands should be well sensitized and kept abreast of the fortunes of wetlands now and for future.

Keywords: Baturiya, ecotourism, deforestation, participation, wetlands

Introduction

The world community is concerned with the fate of world wetlands, considering the valuable resources wetlands provide and the functions they perform in sustaining human life. In the last two decades, there has been a growing concern on the ecological, socio economic, and climatologically impact on wetlands. Wetland exists in many part of the world, in and around cities, uninhabited area and wild lands. They serve as local resources whose presence and values are appreciated at local levels (Cowles *et al* 2017). In south Florida, wetlands are critical resources. The fresh water wetland filter and purify the surface and ground water, preserve wildlife habitat, provides temporary storage of water during storms, and recharge the sole aquifer serving as the sole source of drinking water for the state (Cowles *et al.*,2017).

Efforts to preserve and create wetland ecosystems depend on the recognition of their ecological as well as their economic values. From an ecological perspective, wetlands are valuable as they are among world's most productive ecosystems and host a large amount of biological diversity (Ghermandi *et al.*, 2015). The economic rationale for conserving and creating wetland ecosystems is thus linked to the services and goods they provide, which have been recognized to be extremely valuable welfare constituents to many people worldwide (Ramsar 2012)

The Convention on Wetlands, a United Nations Educational, Scientific and Cultural Organization (UNESCO) based intergovernmental treaty on wetlands provides a broad characterization (NCF, 2017). Wetlands are transitional environments where dry land meets water. Basically, wetlands are areas of land covered with water of different depths from water that is several metres deep to water that is merely saturating the soil. The Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention) defines wetlands as 'areas of marsh, fen, peat land or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine waters, the depth of which at low tide does not exceed six meters' and may include 'riparian and coastal zones adjacent to the wetlands, or islands or bodies of marine water deeper than six metres at low tide lying within'. In addition, wetlands are eco tones since they are transition zones from uplands to deep-water aquatic systems. This transition position also often leads to high diversity in wetlands and has given some wetlands the distinction of being cited as amongst the most productive ecosystems on Earth.

In Nigeria, in spite of the dramatic increase in appreciation of the values of wetlands', it stills remain one of the most threatened and critical ecosystem (NCF, 2017). In view of this, the IUCN/ Hadejia-Nguru wetland conservation project, as a major aspect of its efforts towards the conservation and wise use of the Hadejia-Nguru wetlands, decided to develop standard guidelines for the sustainable use of natural resources of the wetland. Hadejia wetland constitutes important feeding ground for different migratory bird species like quails species. The area supports farmers, herdsman and fishermen who depend on the wetlands for their livelihoods (NCF, 2017). The water in the wider basin is most important for drinking and other agricultural purpose. Based on the natural annual flooding, the wetland performs a number of economic and ecological functions which are of critical local, national, and international significance (NCF, 2017). Unfortunately, there is generally poor appreciation of the environmental values in our society due to poor management and ignorance.

Baturiya wetland reserve is aimed at protecting the forest and conserving its natural resources in their domain. It also serves as a centre for recreational services, tourism, excursion, and scientific research (Kabir, 2006). The wetlands of Jigawa state are very critical for the direct livelihood of the people in the area. About 50% of the rural communities depend on the wetlands for their livelihood; this is evident by the proximity of the communities to the wetland.

Natural diversity in the ecosystem provide essential economic benefit and serves the society with food, clothing, shelter, fuel and medicine as well as ecological, recreational, cultural and aesthetic values and these play important role s sustainable development. Biodiversity is under threat in many area of the world and concern about global biodiversity loss has emerged as a prominent and widespread public issue (Anonymous, 2012).

Wetlands are among the world most productive environment and the most threatened (Abubakar *et al.*, 2015). Many wetland species have specific environmental needs and are extremely vulnerable to change. Some of our endangered species depend totally on wetlands. It has been estimated that freshwater wetlands hold more than 40% of the entire world's species and 12% of all animals. Individual wetlands can be extremely important in supporting high numbers of endemic species.

Socio economic valuation is one of the many ways to define and measure values of wetland services. Other types of values (religious, cultural, global, intrinsic etc.) are also important but the socio-economic value is the most important in most countries when decision makers have to make difficult choices about allocation of scarce government resources (Lambert, 2003). Information on the economic and social values of policy changes (with regard to the

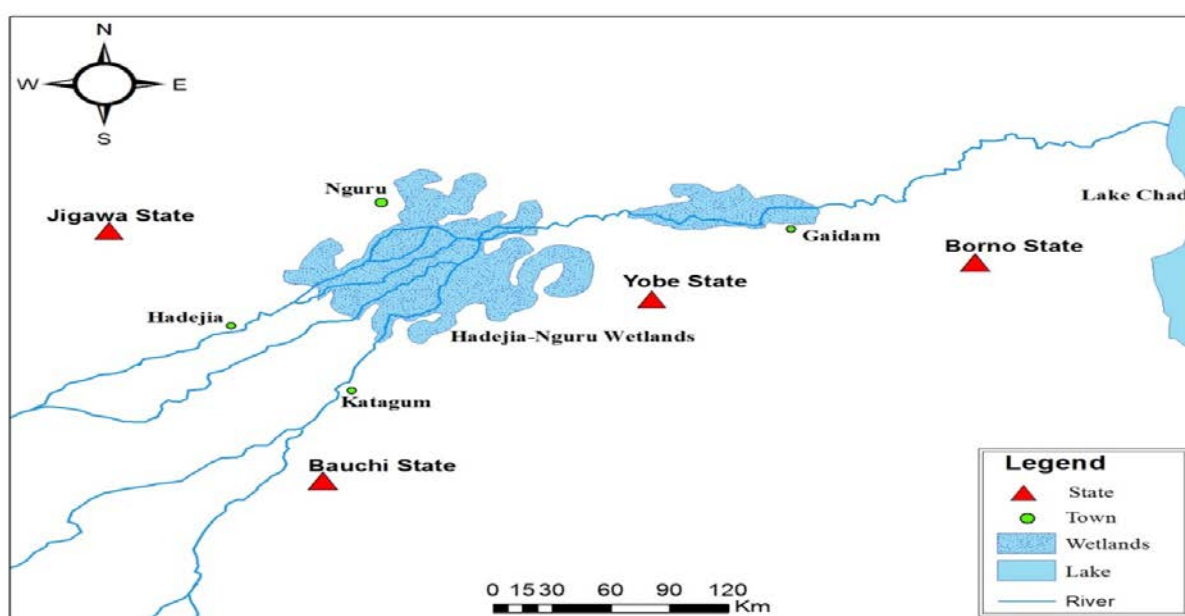
environment) can greatly assist in identifying the policy and sectorial priorities. Economic valuation incorporating environmental aspects helps in evaluating developmental projects, programmes and policies (Setlhogile, 2010).

The wetland areas are important since they provide vast ecosystem services to people and support their livelihoods. Their rich physical and biological resources are exploited for food, water, medicinal plants, fuel wood, materials for building and handicrafts (Osu, 2017). Because of the potentiality with wetlands, they have scenic attractions which encourage immigrations, student's excursions/trips to the area (Osu, 2017).

Material and Methods

Study Area and Extent: *Hadejia Wetland Game Reserve (Baturiya Wetland & Birds Sanctuary)*

The famous Baturiya Wetlands Birds Sanctuary (BWBS) located within the Hadejia wetlands at Baturiya village, Kirikasamma Local Government Area of Jigawa State. The wetland cover an area of about 320 square kilometres and is home to about 378 species of both local and migratory birds from Europe and Asia. This natural wetland habitat is one of the most important wildlife conservation sites in Nigeria, as some of the wetlands are either stop over sites or wintering quarters of these migratory species. Every year, billions of birds across the planet migrate between breeding and wintering grounds. Migration forms an integral component of the life history of many species and a behavioral adaptation to seasonal environmental fluctuation. The current and predictable nature of many seasonally dependent ecological processes allows migratory species to best utilize energy gains by altering seasonal habitat use to overlap with abundant or accessible nutritional resources.



Result and Discussions

Baturiya wetlands and birds' sanctuary (BWBS) is recognized by United Nations as a location of international significance as it attracts not just birds but various species of wildlife. The sanctuary has lots of Gum Arabic/ Bagaruwa (*Accassia arabica*), Baushe (*Terminalia superba*), wild palms and other indigenous trees which are of high economic value to the State and Nation. Sadly however, BWBS is currently facing different degrees of deforestation and devastations by fuel wood collectors/ sellers, grazers and farmers. There is lack of protection due to minimal number of rangers employed to protect the sanctuary. Interviews from the locals reviewed that only two (2) rangers are employed to patrol the entire 99 wetlands which is grossly inadequate for any meaningful safeguards and protection.

A lot needs to be done by the state government to revamp the conditions in the wetlands to bring it to a standard that will once again attract tourist both far and wide. A lot of researches also need to be carried out to understand the changing ecological systems and how best to conserve the biological diversity of the area.

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A view of one of the Baturiya wetlands and Birds Sanctuary



White-faced Whistling Ducks and Cattle Egrets on the wetland



A man fishing in one of the wetland pond.



A group snapshot of the staff and students(EMT-FUD) on the Baturiya wetlands during field trip/Excursion.



Students jotting notes in one of the sessions on the field

The socio-economic value of wetlands and wildlife resources

Some socio-economic value of wetlands and wildlife resources can be viewed through the following ways; -

- As the basis for community economic activities,
- People living within and around the wetlands have for a long time, been involved in various economic activities in their remote settlements.
- Many people depend on the wetlands and therein rich biodiversity for sustenance which includes: livestock grazing, extraction of other natural products, tourism, mining, agricultural production, water supply for domestic and other uses, such as cultural ceremonial sites during festivities.
- The socio-economic values of the wetlands are extremely high as they provide economic and socio-cultural products (local hats/mats).
- Economically, most of the wetland resources are used for fish harvesting, forest resource extraction, roof thatches, dry season grazing and irrigation water sources and for domestic water supply.
- Protected areas personnel oversee parks and reserves as ecotourism's primary "commodity" they play central roles in ecotourism development and management. Protected area personnel are usually the primary information resources concerning the flora and fauna in their areas and they are day-to-day caretakers of these natural resources and have the most responsibility for their immediate conservation.
- . Involvement of local people in tourism activities in or near protected areas: Local women cook and offer typical food to tourists at roadsides and villagers vends handicrafts to students/researchers, visitors and tourists.
- Tourism industry, tour operators have a great deal of influence on the destinations, activities and overall experience of tourists. It is therefore crucial that they understand the concept of ecotourism and the conservation requirements of Baturiya protected areas. They need to be fully aware that the ecotourism products they are trying to promote is fragile and must be carefully preserved. The tourism industry is also an important partner since it is a vital source of information about demand trends, promotion and marketing of ecotourism sites of this nature and international repute.
- NGOs on conservation and development groups can play a decisive role in helping to define and direct the growth of Baturiya ecotourism location. They can also serve as vital sources of financial and technical assistance for ecotourism projects on the ground. Moreover, they can facilitate negotiations between local communities and

tourism developers/partners, ensuring that the adequate links and mutual benefits are obtained. In addition, these groups often have members or constituencies that seek information and guidance on ecotourism issues globally. So their support for particular ecotourism projects can contribute significantly to their success or otherwise.

- Financial institutions, if parks and communities are to capture greater share of the financial benefits of ecotourism, most of them will be obliged to invest in development of infrastructure. Diverse funding sources will be essential. Banks, investment corporations, bilateral and multilateral international development agencies, and private investors could all have important roles in supporting, and providing initial financing for appropriate tourism planning and development. (This is one reason why international development agencies such as the World Bank, the African Development Bank, the AU, CBN, NNPC and Niger-Delta Development Commission have set up environmental departments within their organizational structures and carry out environmental impact assessments before funding projects.)
- Consumers, ecotourism's driving force consists of the consumers themselves. They decide where to go and what to do for recreation or vacation in protected areas of this magnitude. Therefore, their thoughts and preferences should be considered very seriously in any ecotourism planning strategy. But they must be "educated" about the costs and benefits of ecotourism to enable them to make wise travel decisions and actually participate in conservation efforts when they travel to such destinations.
- Wildlife, like any resource, may attract money to communities and vice-versa hence their preservation becomes very pertinent for sustainability of nature.

Some Economic Importance of Baturiya wetlands and game reserve

These resources are harvested and create sources of income to the people of the areas;

- ✓ Annual harvest of doum palm fronds/fruits are major resources of food, mats, hats, local fans, baskets, thatch, cane and other local building materials from the wetlands, it has high market value, generates income to individuals that are more than the cash derived from the agricultural /farming activities.
- ✓ Firewood also creates wealth for people in the areas; the wood is collected from the forest around and in the wetlands. People engage in the persistent, adamant and uncontrolled practice of the resources harvests around the wetlands, this is attributable to governmental lukewarm measures which are not in place in order to monitor and control forest resources.

- ✓ Fishing, agricultural and excursions/trips activities are among the key economic advantages ever derived from the wetlands on continual basis.
- ✓ Fruits, leaves and barks of deciduous/evergreen trees are variously used by the community people as food and medicine.
- ✓ Baobab is economically important tree of the wetlands. It's a good edible leaves product to prepare sauces and soup; this is mostly used by people living around the wetlands and dried pods/fruits are bagged and sold in rural and urban markets as additives to Fulani-milk (nono/fura) as delicacies to many people/patronages.
- ✓ Honey is produced by the people of wetlands serve as a means of economic livelihoods.

Threats to Baturiya Wetlands Biodiversity

Exploitation of natural resources, uncontrolled hunting, population, pollutions, sedimentation resulting from deforestation, desertification, eutrophication resulting from agricultural, runoff, channelization for irrigational farming, progressive cottage industrialization, compaction of soil by pastoralists and their animals which further degrade the wetlands habitats as well as climate change and drought (Abubakar and Abubakar, 2013).

Assessment by Birdlife international (2014) ranked the status of the wetlands in terms of pressure as “very high”, in addition to outdated management plan which is not comprehensive and total packaged. The study see the below as serious threats to the wetlands as thus;

- Poor administration, coordination and participation amongst bordering (Yobe, Jigawa and Bauchi) states and hosts LGAs (Hadejia, Kiri-kasama) are recognized even more threatened to the wetlands.
- Faced with the reality of global climate change, implications for wetlands pertain largely to the hydrology systems.
- Many wetlands' products and services are public goods and do not have clear property rights and also their loss is partly because of lack of understanding of their ecological and socio-economic importance, which leads to distorted policy and decision making regarding their use and management.
- Many wetlands have been lost or degraded due to increasing demands for land and water as a result of growing population and food security plights.
- These resources include rich, moist soils (for cultivation), grazing land, fisheries, reeds, sedges, grasses, timber; and water (for domestic use and livestock as well as for irrigation) are faced with depletion crises all the year round with no alternative option.

Recommendations

1. It will be beneficial if the Universities, Colleges of Agriculture, Polytechnics and Research institutes see the need to partner with Baturiya management for research and development through signing Memorandum of Understanding (MoU) for better conservation liaisons.
2. There is urgent need for the Government of Jigawa State to develop and improve Baturiya wetlands birds' sanctuary (BW & BS) by providing access roads, employing ecologists, forestry/wildlife officers, range managers and patrol/ game rangers to protect the sanctuary.
3. It will also be nice to have an office/camps and tourists lodges/ chalet structures as there is currently nothing to show that one is in the sanctuary or any guide for that matter such as bill boards/sign posts.
4. BW & BS is potential area for research, tourism and recreational activities if the state government, private partners are willing to properly fund, manage and coordinate the site.
5. Yearly trips to the place by relevant departments (Environmental sciences, Zoology, Botany and Forestry & Wildlife) will bolster research and enhance collaborations.

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