PROTECTED AREA MANAGEMENT IN NIGERIA: A REVIEW

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1.0 INTRODUCTION

In the 21\textsuperscript{st} century, environmental protection and management have been central issues across the globe. The rapid increase in the world's population and greater dependence of human populace on non-renewable environmental resources has posed a serious threat to the environment, particularly protected areas. The most valuable environmental resources are mainly concentrated in protected areas. They have long been recognized as cornerstones of ecological conservation [1-4]. The International Union for Conservation of Nature (IUCN) is primarily concerned with the management of protected areas through legal or other effective means that can enable long-term achievement of nature conservation and associated ecosystem services [5]. The establishment of Yellowstone in the United States in the nineteenth century (1872) marked the beginning of protected area formation, where the number and expanse of protected areas keep increasing rapidly throughout the globe. They are established for different purposes ranging from conservation, recreation, natural resource management, cultural and religious purposes. To achieve these and more, the protected areas need to be well-managed [6]. In an effort to ensure proper management, the World Database on Protected Areas keeps and manage data of over 162,000 protected areas distributed worldwide as in figure 1, covering 28.4 million kilometer square, equivalent to 5.6% of the earth surface [6-7]. The necessity or decision for the management of the protected areas depends on size,
richness in biodiversity and availability of rare/threatened species. Even though they are set aside and managed mainly for the purpose of conservation, they are also associated with wide natural, social and economic benefits [8, 6].

Despite the growth in number and size of protected areas across the globe, they are yet to reach 17% and 10% target of terrestrial and marine protection respectively as outlined in the CBD Aichi Biodiversity Target 11. At the same time, those in existence are subjected to a range of natural, human and management challenges. Evidence of increasing challenges in and outside protected areas have been reported by [5, 8-10]; and vulnerability and failure to achieve their primary objectives [6]. In many cases, damage resulting from these impacts are irreversible, which can lead to complete disappearance of protected areas. Threats can be natural or cultural, they may arise from inadequacies in resources or management, institutional or capacity problems [5]; external impacts, internal impacts, resource exports or human [11]. [9] include illegal hunting, harvesting of exotic plants and logging, encroachment, major conversion and degradation among adverse human activities. Based on the above mentioned facts, there is growing concern to secure protected areas through more effective management.

Several international organizations play significant role in the management of protected areas globally. Prominent leading organizations include the International Union for Conservation of Nature (IUCN), the United Nation Environment Programme (UNEP/WCMC), the World Wide Fund for Nature (WWF) and the World Bank among others. Management of protected areas differs greatly due to factors such as level of awareness, system of governance, well-being of the local people and location. In an effort to ensure effective management and sustainability of protected areas, several factors have to come into play, such as: the system of governance, resources availability and community support [13]; availability of management plan, supporting infrastructure, technical and financial resources [14,11]; institutional capacity, information on resources, involvement of indigenous/local people, enforcement and implementation [11]. Effectiveness of protected area governance plays a vital role in ensuring effective management. It determines how responsibilities are shared and exercised, and accounted for based on legal rights [15-16]. The IUCN categorizes protected area governance into four types: governance by government, shared governance, private governance and governance by indigenous people and local communities [17-18]; as shown in figure 2. However, [19] criticized governance

2.0 METHODOLOGY

The methodology used in this review is a synthesis of literature available in form of journals, books, reports, and conference papers on protected area management effectiveness and collaborative management in protected areas. They were obtained from Web of Science and Google Scholar search engines and IUCN, United Nations Environment Programme and World Conservation Monitoring Center (UNEP-WCMC) websites. The Keywords and phrases used were: “protected area”, “management effectiveness”, “collaboration management”, and “co-management”, with “AND” used as a connecting word between keywords for the purpose of retrieving relevant papers, books and reports for the review.

3.0 OVERVIEW OF PROTECTED AREA MANAGEMENT

Protected area management is concerned with a combination of actions such as legal, political, administrative, research, planning, protective, coordinating, so as to improve the operational effectiveness and performance of protected areas towards achieving their specified objectives [12].

Figure 1 Growth in number of protected areas globally (Adopted from [7])
by government in isolation from other stakeholders due to fear that, environmentally sound approaches can be ignored if they are against the interest of those in power. It is thus argued that shared governance is the most effective way of governing/managing protected areas. It is a collaborative approach to management, also referred to as co-management. This approach is the current trend adopted for protected area management in many countries, as it allows managers, local communities/indigenous people and other stakeholders such as NGO’s, CBO’s and the tourism industry to have sense of ownership and responsibility. Collaboration in management guarantees effective management of protected areas [20, 15].

![Figure 2 Options for protected area governance (Adopted from [1])](image)

### 3.1 Current Trend in Protected Area Management

Following the weaknesses of the traditional approach to protected area management, which set aside protected areas for the purpose of conservation, wilderness and scenic values; and exclude indigenous people/local communities and stakeholders in planning and management processes, collaborative approach is now used. This is a Top-Down approach, where the government assumes full responsibility of these areas, as they finance, establish regulations that govern the areas and make management decisions singlehanded. This approach was criticized by many researchers as they deny the local people their social and cultural values [16]. The collaborative approach allows the participation of several parties in management, where concession is reached by all parties involved. Collaboration is a problem solving technique through joint decision-making where stakeholders take collective responsibility for their actions and subsequent outcomes from those actions [20]. Several researches indicate the need for participation of multi-stakeholder to ensure effective management [21]. This approach emerged due to weaknesses of other approaches and their inability to integrate ecological perspective with social and cultural aspects [22]. Researches have also shown that effective management can be achieved best by incorporating local communities in every decision to be taken on the protected area [23]. The need for collaboration in planning and management of protected areas has been identified as a suitable and sustainable approach to protected area management [19-20, 22]. [24] state that public participation in planning and management of parks/reserves can intensify support for the areas by the local people/communities. This is because effective management of protected areas depends on the manner in which local people view the areas and the environment in general.

Management effectiveness evaluation is a strong mechanism that inform managers and decision makers about how well a protected area is doing, areas that need immediate attention and revealing strength and weakness of individual sites or system. Responding to the challenges facing protected area management, it becomes necessary to evaluate effectiveness of protected area management effectiveness and their capacity to deliver their management objectives. The need for more evaluation of protected areas has been postulated by a number of authors [5, 13, 25-26]. A study by [26] on global analysis of protected area management effectiveness revealed that 42% of the areas included in the study were associated with major deficiencies. Evaluation of protected area management promotes adaptive management, effective allocation of resources, accountability, transparency and support capacity building [5]; improves programme planning [27]; and improves planning strategies and better management actions/programmes [12]. For the purpose of evaluating protected area management effectiveness, over 70 methodologies have been developed and tested in different regions of the world [26] as shown in appendix I. In addition, their application depends on the region, focus of evaluation, protected area system or management [28].

### 4.0 PROTECTED AREA MANAGEMENT IN NIGERIA

Environmental protection and management in Nigeria dates back to the pre-colonial era by the traditional/local people. Protected areas in Nigeria have been managed since before the establishment of governmental and non-governmental institutions. At that time, management was the sole responsibility of the traditional and local people until the 19th century, with their local custodians. Later, the reserves were taken over by the government, where the traditional reserves custodians were substituted with modern rangers in 1900s, and came under the control of the government.

Nigeria like other countries has many protected areas. A total number of 1021 protected areas based on compilation from the [7, 29-33]. They are distributed across the seven vegetation zones of the country as in figure 3. Most of them are included in the World Database for Protected Areas (WDPA). However, despite the number of protected areas in the country, their management status remains questionable. Theoretically, the protected areas are protected; however, in practice, the situation is different, as most are only protected by name. This is what literature refers to as “paper parks” [9]; ‘paper reserves’ [33]. Even
those that are protected, they are not based on management plans or working plans meant for the protection. [5] refers to these un-followed documents prepared to guide management as “shelf documents”.

Figure 3 Map of Nigeria showing protected areas (Adapted from [30])

Nigeria has witnessed a rapid increase in the number and size of protected areas in the 20th century. The first forest reserve created in 1899 marks the beginning of designating protected areas in the country. In 1900, protected areas in Nigeria represent 0.01% of the country’s total land mass, equivalent to 97,125 hectares. Five decades later, a substantial achievement was recorded as the figure increased to 8% in 1950 representing 7,332,031 hectares, and after that, it increased slowly to 11% in 1980 [35]. The protected areas include forest reserves, biosphere reserve game reserves, game/wildlife sanctuary, strict nature reserves, and national parks as in appendix II. They are established for the purpose of conservation of valuable environmental/ecological resources, to meet tourism and recreational needs and to support research and education through proper management [35].

In Nigeria, National Parks and Game Reserves constitute the greater percentage of the protected area system. [36] estimates the total area covered by Nigeria’s protected areas to be over three million hectares, and about 2.3 million hectares fall into category Ia and II of the IUCN category. [37] categorized effort towards management and conservation of protected areas into three: the first stage was to restrict hunting rights of the traditional/local people, the second stage was to establish game reserves and other forms of protected areas so as to ensure effective management of resources; and the third stage was development of wildlife tourism with the aim of conserving endangered resources. In line with [37] categorization, management of protected areas in Nigeria gained government support from the colonial era, when the Department of Forestry was established to oversee and manage the reserves resources [38]. The Department of Forestry was established in 1897.

The establishment of the Department of Forestry was the initial step towards proper management of protected areas and other natural resources in Nigeria. Recently, the Federal Environmental Protection Agency (FEPA) was established, and it recorded significant achievements in establishment of national environmental policy, guidelines, standards and criteria. The ultimate aim of the agency are to: (i) ensure quality of life and environmental standards adequate for better health and well-being of all Nigerians, (ii) conserve and ensure the utilization of the environment and its natural resources sustainably so that both the present and future generations can reap benefits from its resources, (iii) restore, maintain and enhance ecosystems, (iv) increase public awareness particularly on the relationship between environment and socio-economic development, and encourage communities and individuals to participate in efforts.
towards environmental improvement, and (v) collaborate with international bodies/agencies and NGOs in ensuring proper protection and management of the environment. But yet, this is not the reality on the ground.

Management of protected areas in Nigeria is a Top-Dawn approach which involves only the agencies responsible and the managers. This approach is associated with several shortcomings as they are unable to incorporate indigenous/local communities, which made them lose their support in management. Involvement of local communities in protected area management is among the requirement of the Decree 46 of 1999, in an effort to improve management and conservation of national parks in Nigeria.

Effective management of protected areas in Nigeria depends heavily on the well-being of the indigenous people and local communities surrounding the areas [35]; economic and social structure of regions where protected areas are located [39]. In an effort to achieve this objective, the National Biodiversity Strategy and Action Plan was adopted in 1997 by the federal government. The primary aim is to conserve and enhance sustainable use of the nation’s biodiversity and biological resources; and to integrate biodiversity considerations in national planning policy and decision-making.

5.0 THEORETICAL FRAMEWORK

5.1 IUCN Framework for Evaluating Protected Area Management

Series of theories and framework have been developed for the purpose of evaluating protected area management effectiveness so as to determine how well a protected area is doing and how well it is protected. The most widely accepted framework is the one developed by IUCN which is based on three themes: planning and design; adequacy and appropriateness of management processes; and delivery of protected area objectives [5] as in figure 4.

The framework focuses on six elements namely; context, planning, input, process, output and outcome to determine the effectiveness of protected area management at either individual sites or protected area system and their contributions in effective management. One of the limitations of the construct is that, it does not incorporate collaboration and motivation. This is part of the requirement of the CBD Aichi Biodiversity Target 11 for 2020, where effective conservation and equitable management of protected areas have been spelled out. Indigenous/local communities can play a significant role towards effective management, as they were in-charge of the protected area management before the coming of the present institutions. In addition, other protected areas can play a significant role in ensuring effective management through information sharing and motivation of both managers and the indigenous/local people. But the institutions are of the view that the local communities are unable to manage them through proper regulation and therefore they are threats to the areas and or their contribution in management can be insignificant. Therefore, government controls are imposed, which has paved the way for the top-down approach, and this has not yielded successful outcome. The institutions are less concerned with managers’ motivation which strengthens ability to perform and achieve better outcomes for the reserves.

Collaboration receives less attention due to low level of environmental education from the side of local people. But then their traditional knowledge however is of vital importance in management and conservation of protected areas [40-41]. Some researchers argue that management of protected areas can be achieved without collaboration with local communities and stakeholders [42]. However, collaborative management strategy appears to be the most effective way of managing the protected areas since the areas are in the mist of the local people. Nowadays, collaborative management is gaining recognition due to its positive contribution in protection and conservation of protected areas [41-42]; reduces pressure on the areas especially through support of local economic development [44]; contribute to effectiveness of the areas [45]; stands better chance of achieving the protected area management objectives [46].

Neglecting local communities in management itself is a threat to the areas. It can lead to deliberate (illegal) actions that can be detrimental to the protected area resources as well as a setback to the sustainability of the areas [47]. The author also emphasized on peaceful coexistence managers and local communities otherwise, the local communities may collaborate with poachers and others of prejudicial interest. Quite number of researchers reveal that collaboration between the PA managers and the local communities plays significant role in effective management of protected areas by promoting wildlife conservation particularly in developing world [48-50]. Protected areas that
lack the support of local people, or tend to disregard them hardly if not impossible to attain expected outcome [51]; and their sustainability is at stake [48]. [52] added that, local communities should not only participate in management of protected areas, but also in decision-making process. This allows the local people to have a sense of ownership, and as well make them comply easily to policies and guidelines governing the protected areas, while disregarding them can make them become resistant to the regulations because they will feel that they are rubbered off their resources.

In addition to collaboration, staff motivation is another important factor in ensuring effective management of protected areas. Motivating protected area staff through incentives or other means contributes to effectiveness of protected areas [43].

5.2 Proposed Framework

Based on a synthesis of literature on protected area management and collaborative management, coupled with the effort to meet the CBD Aichi Biodiversity Target, a new direction for effective management of protected areas has been proposed. It incorporates elements of motivation and collaboration with indigenous people/local communities/stakeholders, NGOs, international organizations and other protected areas in both planning and management processes. The integrated framework is shown in figure 5. This is an additional dimension to the work of [5] for evaluating management effectiveness of protected areas.

![Proposed framework for evaluating protected area management](image)

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6.0 POLICIES AND PROGRAMMES RELATED TO PROTECTED AREA MANAGEMENT IN NIGERIA

The protection of protected areas by legislation dated back to 1880s under Governor Alfred Maloney. This marked the formal protection of forest and environmental resources through the Department of Forestry. The first forest reserve was then established in 1899. Environmental protection was formalized in 1901 with the establishment of Forest Ordinance, later the colonial Township Ordinance in 1917, which paved the way for the establishment of protected areas [53]. Then in 1916 the Wild Animals Preservation Laws of Western Nigeria (Cap 132) emerged as the first law, and was only applicable to the western part of the country. A decade later, the second law, the Wild Animals Preservation Laws of Eastern Nigeria was enacted in 1928, and was only applicable to the eastern part of the country. The last law which protected the northern reserves came into being after three decades in 1963, and is referred to as the Wild Animals Laws in Northern Nigeria.

After independence in 1960, a Decree emerged so that creation of reserves and national parks could have legal backing. Decree No. 46 of 1979 serves as a legal background for the creation and protection of reserves. In an effort to promote planning and management of the environment, the Nigerian Society for Environmental Management and Planning was created in 1983 with the aim of promoting planning and management of the environment; developing policies; and conducting research on the state of the environment and its management in Nigeria. In addition, the Federal Environmental Protection Agency (FEPA) in Nigeria also plays significant role in environmental management through the establishment of national environmental policy, guidelines, standards and criteria among others. Decree 36 of 1991 was later promulgated to ensure proper management of protected areas. However, the Decree was modified in 1995 due to some weaknesses. The latest decree established for NPS is: Decree 46 of 1999, introduced to improve management and conservation of National Parks in the country. The Decree also mandates all National Parks to prepare a comprehensive management plan for the parks. The plan according to [36] should consist of: (1) a map of the park and proposed facilities; (2) an inventory of resources in the park; (3) assessment of wildlife population trends in the park; (4) assessment of wildlife interference and plans for controlling it; (5) a description of proposed research activities, infrastructure development and wildlife resource management in the park; (6) plans for administration of the park; (7) plans to develop national and international tourism; (8) plans for the creation of buffer zones around the park and the participation of local communities in the management of the park; (9) plans for public participation in park activities; (10) plans to promote and assist in ensuring environmentally sound sustainable development in the areas surrounding the park, other buffer zones, for the purpose of protecting the areas.

In addition, policy on forestry, wildlife and protected areas is part of the National Policy on Environment in 1989, which was subsequently revised in 1999. The policy is aimed at:
Maintaining environmental quality in order to ensure healthy wellbeing of the citizens;
Conserving and sustaining the environment and its natural resources;
Restoring, maintaining and enhancing the ecosystems and ecological processes so as to ensure sustainability of the natural environment;
Increasing public awareness and at the same time promoting public understanding of the linkages between the environment and development;
Cooperating with other agencies and international organizations in environmental protection and management.

Similarly, other effort to strengthen the protection and management of reserves/protected areas in Nigeria include the establishment of the Support Zone Community Development Programme. It is among the significant programmes developed for the benefit of local communities around protected areas. This policy is integrated in section 49, sub-section (1) and (2) of the National Park Legislation. This policy can play a significant role in incorporating local communities in protected area planning and management so as to achieve effective protection and management, but as noted above, most park management regimes still pursue a top-down approach that tends to exclude local communities.

7.0 CONCLUSIONS AND FUTURE DIRECTIONS

Significant achievements have been recorded in the establishment of protected areas at both local and global scales, despite the pressure from population increase and increasing dependence on environmental resources which subject protected areas to a number of threats and pressure. However in Nigeria this effort continues to face major shortcomings. Even those in existence face a series of challenges from ineffective management, degradation, extinction of biodiversity and lack of independent objective evaluation.

At present, the existing IUCN framework as the most widely used framework for evaluating management effectiveness of protected areas is inadequate at fully exploiting opportunities in collaboration and motivation in management. These two elements have potentials to improve more effective management and maintain good relationships between key players (communities and managers) in management. The interplay between them can significantly contribute to the achievement of protected area objectives. This paper has indicated the reason that necessitates incorporation of the two elements into the IUCN framework so as to determine the extent to which they contribute to effectiveness of protected area management. Effectively managed protected areas are vital not only to the environment and the ecological system, but also to humans as they contribute to controlling and limiting the occurrence of natural catastrophes. Therefore, this paper calls for more assessment of protected areas using this framework to enable them accomplish their management objectives.

References

Canada and Canadian International Development Agency.


