A CRITIQUE OF PRESERVATION METHODS IN WEST AFRICAN MUSEUMS: THE CASE OF NIGERIA AND GHANA.

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Abstract
This study critically examines the methods employed in the preservation of cultural artifacts in Nigeria and Ghana, focusing on the challenges and effectiveness of these practices. Both countries, rich in cultural heritage, face significant issues in preserving their artifacts due to environmental, financial, and technical constraints. In Nigeria, the preservation of artifacts is hampered by inadequate funding, poor infrastructure, and a lack of skilled personnel. Many artifacts suffer from deterioration due to improper storage conditions, such as fluctuating temperature and humidity levels. Efforts by government and non-governmental organizations to improve preservation practices have seen limited success due to inconsistent policies and insufficient collaboration among stakeholders. Ghana faces similar challenges, with additional issues stemming from the country's colonial past, which has led to a fragmented approach to cultural heritage preservation. The repatriation of artifacts from foreign museums has been slow, and local preservation efforts are often underfunded and poorly managed. Additionally, the lack of public awareness and education on the importance of cultural heritage preservation exacerbates the problem. This critique also highlights successful initiatives in both countries that could serve as models for broader application. In Nigeria, the establishment of specialized institutions like the National Commission for Museums and Monuments (NCMM) has shown promise, although it requires more robust support. Ghana's use of digital technologies for documentation and virtual repatriation projects illustrates innovative approaches to preservation that could mitigate some physical preservation challenges. The study concludes with recommendations for improving artifact preservation in Nigeria and Ghana. These include increasing funding, enhancing training programs for preservation professionals, fostering international collaboration, and leveraging digital technologies. By addressing these key areas, both countries can better safeguard their cultural heritage for future generations.
Keywords: Preservation method, West Africa, Museums, Ghana, Nigeria.

Introduction

Generally, museums are home to safe-keeping and safe-guarding of tangible and intangible items and objects of cultural heritage. The primary responsibility of museums in developed and developing nations is to protect and promote natural and cultural heritage. United Nations Education

Scientific and Cultural Organization, (UNESCO) (2023) defines the museum in the 21st century context "as a non-profit institution in service to society and its development open to the public developed by modern society to stop as much as possible the deterioration and loss of objects treasured for their cultural values". The primary function of the museum institution on any object it acquires is to conserve, maintain, and guarantee the safety of such object (UNESCO, 1982; 1987; Okpoko, 2006).

Incidentally Nigeria and Ghana have ten officially recognized museums each. The museums in Ghana are National Museum of Ghana - Accra, Cape Coast Castle Museum - Cape Coast, Kwame Nkrumah Mausoleum and Memorial Park- Accra., Museum of Science and Technology - Accra, Volta Regional Museum - Ho, Elmina Castle Museum - Elmina, Manhyia Palace Museum - Kumasi, Ussher Fort Museum- Accra, Museum of Archaeology - Legon (University of Ghana) and W.E.B. Du Bois Memorial Centre for Pan-African Culture, Accra. On the other hand, Museums in Nigeria includes National Museum, Lagos; Nike Art Gallery, Lagos; Benin City National Museum, Benin City; National War Museum, Umuahia; Jos Museum, Jos; Calabar Museum, Calabar; Owo Museum, Owo; Gidan Makama Museum, Kano; Esie Museum, Esie; and Badagry Heritage Museum, Badagry. In today's world about 25,000 museums spread around the globe have impacted heavily on global culture. Art and religion play a vital role in any society by helping the citizens to memorize things that happened in the past generation through history. They also work hand in hand to form deep recesses of history. Art objects can be religious items or artifacts that served as a means of communication of the past to present and finally the future generation when they are properly preserved and understood.

All museums whether federal, state or local are embodiment that serve the historic relics of the particular culture in a said region. The role of museum is that it encompasses cultural artifacts and administrator's offices used by both the colonial and post-colonial administrators of the State. The preservation of museum helps in creating archaeological sites and monuments in terms of heritage protection. Instances in Nigeria and Ghana show that some museums are capable of such inert functions like managing the archaeological heritage of a particular nation. Museums serve as institutions responsible for the preservation of the nation's heritage materials.

Once artifacts are acquired, next in line is to draw the historical and cultural storyline of the host societies. This is laid bare by archaeologists through a sustained system of artifact preservation which offers a wide range of processes and activities leading to the restoration and exhibition of natural and cultural collections. The import of this aspect of the curatorial profession brings to the fore the essence of museum activities, because without preservation monumental loss of our cultural heritage stares us in the face. A lot of meaningful pieces of art and cultural collections will be absent in places of cultural and historic interest.

The preservation of artifacts in museums as well as historic landmarks, relics etc. is one of the daunting tasks engaged by the archaeologist in his bid to restore indigenous natural and cultural heritage in the society. This is a key aspect of the art of the institution of museum and curatorial studies. Critical spatial challenges bring about the dearth of human resources needed to maintain the task involved in heritage preservation.

Kunta (2012), asserts that "the social and economic role of museums has become an important developmental tool for planners in some countries. These countries such as Britain, Kenya, and Egypt have now become aware of the potential of museum in the value chain process for economic growth of host communities. This is made possible by attracting economic and social activities to historical and natural landmarks within their political and administrative territories. In close collaboration with the museum, communities endowed with cultural and natural heritage have become economically buoyant in comparison with other communities that are not so endowed. Museums have also become key institutions in sustaining socioeconomic development in most countries. In some countries, museums have become an important part of the creative cultural industries offering ready-made, conveniently packaged cultural experiences to visitors.

This work focuses on museums in Nigeria and Ghana. The task of preserving museum artefact is anchored on the background of the various challenges facing the heritage institutions in these nations. According to Sekler, (2001), "Libraries, archives, and museums hold disparate collections in a variety of media, presenting a vast body of knowledge accumulated over the institutions' history, and the mission of these institutions is to make their collections accessible to intended user.

Statement of the Problem

African countries as a whole are faced with the problem of loss of cultural heritage due to influence of globalization and advancement in technology which brought about changes in the societies and organizations. Bowers, (2016), states that "societal perception of cultural heritage is altering through the lens of an interactive era." The preservation methods of African museums lack behind as a result of inadequate facilities and resources to manage social and economic importance, though it appears to the general public that they have adequate facilities and resources to maintain these social and economic functions.

The importance of museums cannot be overlooked because of the role they play as the domicile for care of tangible and intangible natural or cultural heritage globally. This is due to its economic, historical, tourist, aesthetic, educational and research significance. Museums play a significant role in understanding and assessing the cultural heritage by preserving and presenting it to future generations. Oyinloye, 2015 notice that museums are established for the purposes of collecting, preserving, educating, and

exhibiting the cultural or natural heritage of the country for information and enjoyment of the public.

National museums in Nigeria were basically established to safeguard the cultural heritage from theft, illegal exportation and religious fanatics, and destruction by environmental factors. Museums play a crucial role in preserving local culture. Given careful documentation and artifact preservation, a culture can be recorded and remembered regardless of its future. It can also be shared and understood by those from different cultural backgrounds. Here are a few of the reasons why museums are so essential for cultural preservation:

(a) Museums and other cultural sites are the focus of many tourism and cultural plans that are being used to stimulate economic development.
(b) Museums are remarkable centers of socioeconomic development, changing tourist/visitor patterns and reviving social and economic fortunes" (Culley, (2010 and McManus, 2006).

The paucity of essential instrument, equipment, materials, facilities, chemicals and personnel to embark on artifact preservation in African countries on one hand coupled with the lack of awareness and political will to sustain the tempo of regular and timely maintenance of these artifacts raises a critical question and a big puzzle in the answer to a critical attempt at improving cultural and heritage institutions through methods of artifact preservation in Africa with a view to restoring social and economic functions. The aim of this work is to critically examine the preservation methods of artifacts in Nigerian and Ghanaian museums. The objectives are as follows; to identify the measures of preservation adopted by Nigeria and Ghana and to examine the role museum plays in the socioeconomic developments of Nigeria and Ghana

Concept of Museums

The word 'Museum' originates from the word "muse" which means goddess in Greek mythology, and it comprises of 9 in number. Gill, (2012) considers the nine muses to be the offspring of Zeus and his aunt and 'memory' which he called Titaness Mnemosyne. In Gill classification of muse as an individual goddess, doubt still exists in some stories to agree with him about the individual goddesses and the specific functions.

Concept of Preservation

Preservation is vital because of its capacity to promote the past ways of life that are useful to contemporary societies. Arguably, the past is essentially the key to the present and platform into the future. An understanding of the preservation of Nigerian cultural heritages can best be described in three dimensions namely the precolonial, colonial and post-colonial. According to Keitumetse (2016) preservation is the "protection of

resources that involves placing them in a non-use state". Preservation according to Eluyemi, (2002) quoted by Onyima (2016) preservation "is the promotion of cultural property whether of concrete or non-concrete nature, past or present, written or unwritten/oral. He also states that "preservation involves the identification, documentation (appropriate registration) and proper storage of cultural objects whether in private hands or in museums." The preservation of African cultural heritages is still in doubt in the present world today due to some activities and forces that interact together to form the complexity of it nature, be it human activities, natural forces or biological and chemical agents among other that are bond together to influence the process and techniques involve in preserving African museums. However, the efforts make by the world toward preserving African museums create a little success over the years in preservation of Nigerian and Ghana cultural heritages. "The success can be attributed to conscious systematic and scientific efforts, and researches conducted by professionals in the disciplines of archaeology, cultural anthropology, linguistics, ethnography, palynology, paleontology, geology, geography, museum studies, among other cultural resource managers" (Ogundele, 2014; Onwuka, 2002; Andah, Okpoko & Folorunso 1993; Okpoko, 2011). Preservation is a necessity, capacity as well as solution or way forward to transform contemporary societies from the past ways of life. More so, the past and the present curdle the future. Adequate knowledge towards preservation of Nigeria and Ghana museums help to strengthen African cultural heritages. This can best be understood in three perspectives, namely: the pre-colonial, colonial and post-colonial. Nigerian cultural heritages during the pre-colonial era were preserved in royal palaces of tribal kingdoms and empires by kings, heads of families and kindred, deity priests in charge of shrines and sacred grooves among others (Fasuyi, 1973). Therefore, preservation is the protection of resources that involves placing them in a non-use state.

Concept of Artifact

Artifacts as a broad concept has no defined boundary, it keeps on evolving and will continue to evolve around the globe. Many scholars in different fields of study provide several definitions of artifacts based on the way they understand it. But according to Ogundele, (2014) "artifacts are objects and/or features made and/or used by man/humans in an attempt to cope with the challenges and problems of social and natural conditions. The above definition of artifacts by Ogundele raised this particular question from the researcher, "Can man survive without construction and use of artifacts?

The answer to this question is no, this is because artifacts are a part of man's daily survival, and without artifacts man will face with life challenges and difficulties. Artifacts are physical and man-made products that can be seen and touched and can be moved from its original state. [1]Artifacts objects include mortars, temples, pestles, architecture/buildings, iron furnace, defensive walls, food, knives ditches, crafts, tools, ivory, cowries, paintings,

textiles, wooden objects, tombs & grave goods, dresses, pottery & potsherd pavements, monuments, works of art, books etc. Onyima (2016) possess that most of the "artifacts and collections from remarkable culture areas in Nigeria and Ghana are displayed in museums and galleries all over the world.

Literature Review

The related literature is based on three types of museums selected in two African countries.

In Nigeria, museum preservation efforts include the use of traditional materials and methods to protect heritage buildings, as seen at the Museum of Traditional Nigerian Architecture (MOTNA) in Jos. Challenges like rainfall and lack of preservation policies are significant hurdles. Digital preservation is also gaining traction, with libraries adopting digital methods to preserve these and other documents [oai_citation:1,The Impact of Rainfall on The Conservation of Traditional Nigerian Heritage Buildings: A Case Study of the Museum of Traditional Nigerian Architecture (MOTNA), Jos - British Journal of Environmental Sciences (BJES)] (https://eajournals.org/bjes/vol11-issue-1-2023/the-impact-of-rainfall-on-the- conservation-of-traditional-nigerian-heritage-buildings-a-case-study-of-the-museum-of-traditional-nigerian-architecture-motna-jos/). .

In Ghana, museums such as the Cape Coast Castle Museum and Elmina Castle Museum focus on the conservation of artifacts related to the slave trade, employing both traditional conservation techniques and modern museum practices [oai_citation:2,The Impact of Rainfall on The Conservation of Traditional Nigerian Heritage Buildings: A Case Study of the Museum of Traditional Nigerian Architecture (MOTNA), Jos - British Journal of Environmental Sciences (BJES)] (https://eajournals.org/bjes/vol11-issue-1-2023/the-impact-of-rainfall-on-the-conservation-of-traditional-nigerian-heritage-buildings-a-case-study-of-the-museum-of-traditional-nigerian-architecture-motna-jos/). Additionally, efforts are being made to return and preserve cultural artifacts taken during colonial times [oai_citation:3,The Impact of Rainfall on The Conservation of Traditional Nigerian Heritage Buildings: A Case Study of the Museum of Traditional Nigerian Architecture (MOTNA), Jos - British Journal of Environmental Sciences (BJES)] (https://eajournals.org/bjes/vol11-issue-1-2023/the-impact-of-rainfall-on-the-conservation-of-traditional-nigerian-heritage-buildings-a-case-study-of-the-museum-of-traditional-nigerian-architecture-motna-jos/).

The Museum

The word museum is a derivative of the word "muse". A muse is a goddess in Greek mythology and the muses are nine in number. The nine muses are the offspring of Zeus and his aunt, Titaness Mnemosyne "Memory", (Gill, 2012). According to Tufts and Milne (1999), the shortest and most common definition of a museum is "an institution which serves to collect, conserve, interpret, and exhibit society's material culture" (p.613).

Art Museums

According to Sullivan 2008, the first museums in the United States were art museums, and most of the iconic museums that were established in the United States today are predominantly art museums, examples are the Guggenheim, the Met; the National Gallery.

Living History Museums, Historical Sites, and Historical Societies

Living history museums are a special type of open-air museum where costumed interpreters portray a period of life in an earlier era. The interpreters act as if they are really living in a different time and place, such as the colonial era, and perform everyday household tasks, crafts and businesses. The goal is to demonstrate older lifestyles to modern audiences (Kuntaa, 2012). According to Gills (2012) quoted by Kuntaa (2012) the nine muses considered to be individual goddess as follows:

(a) *Clio* - the deity who inspires the revelation of history
(b) *Euterpe* - the deity who inspires music and lyric poetry.
(c) *Thalia* - the deity who inspires comedy.
(d) *Melpomene* - the deity who inspires tragedy.
(e) *Terpsichore* - the deity who inspires dance.
(f) *Erato* - the deity who inspires love poetry and marriage songs.
(g) *Polyhymnia* - the deity who inspires the sacred song and oratory.
(h) *Urania* - the deity who inspires astronomy.
(i) *Calliope* - the deity who inspires epic or heroic poetry.

The word 'muse' or goddess in the earlier days played a crucial role in everyday society. During this period all scholarship was directly under the control or patronage of the muses. The presence of the deities helps in inspiring art, science, poetry and music. The above enumeration about the muse reveals that during ancient periods the Schools of Thoughts had devoted a shrine to the Muses. Given this premise, the word '*mouseion*' symbolized and described a place that was dedicated to a shrine and is the source of the word 'museums' used interchangeably in our contemporary society today (www.greek-mythology-gods.com/muses).

When Plato, the great scholar established his Academy, he initially dedicated a shrine to the goddesses of learning which he considered as the foundation of his academy. Another great scholar 'Aristotle' founded the School of Peripatos, also had a shrine he dedicated to the goddess which contained their statues. The great and famous Museum that was established by Ptolemy at Alexandria, was considered as a temple of learning dedicated to a shrine. Customs and tradition in other hand demanded that as a poet or storyteller seek and invoke the inspiration and protection of the *Muses* before one can recite their work in a public or private place (www.greek-mythology-gods.com/muses). In this context muses are considered as the source of knowledge, related orally for centuries in the ancient culture that was contained in poetic lyrics and myths (www.en.wikipedia.org/wiki/Muse).

The word "museum" was coined in Europe about 15th-century ago and was used to describe the collection of Lorenzo de' Medici in Florence. But the term "museum" conveyed the concept of comprehensiveness rather than denoting a building. (www.Wikipedia, the free encyclopedias). It is also used in Europe in the 17th century to describe collections of curiosities. During the 19th and 20th centuries a building was erected to house cultural materials for access to the general public. Kuntaa, (2012) is of the opinion that "museums have long had the reputation of being stuffy and dry places filled with old art and dusty artifacts while others see museums as places of discovery and wonder, full of artistic and historical treasures. The word "museum" as defined by different scholars means different things to different people.

Tufts and Milne (1999) provide the shortest and easy definition of a museum "as an institution which serves to collect, conserve, preserve, interpret, and exhibit society's material culture." British Museum Association (BMA) assigned most concise definition of museum as a place that "collects, documents, preserves, exhibits and interprets material evidence and associated information for the public benefit" (Heumann and Gurian, 2002).

The American Association of Museums (AAM) defined museum as "an organized and permanent non-profit institution, essentially educational or aesthetic in purpose, with a professional staff, which owns and utilizes tangible objects, cares for them and exhibits them to the public on some regulation, on some regular schedule" (Genoways & Ireland, 2003). Museums are institutions that are able to "represent competing histories, contested certainties and cultural differences through their structures, spatial arrangements, collection policies and exhibition strategies" (Dean & Rider, 2005). According to International Council of Museums' (ICOM's) quoted by Umanah & Okwueze, (2015), defined museum as "a non-profit making permanent institution that is open to the public, collects, conserves, researches, communicates and exhibits for the purpose of the study, education and enjoyment of material evidence of mankind and his environment".

Afigbo & Okita, (1985) define museum as an institution responsible for the preservation; incorporate the method of living history, as well as tools of re-enactment in order to train/educate staff and visitors about life and society during past historical periods. A museum is an institution that collects, studies, exhibits and conserves artifacts or objects for cultural and educational purposes (Okpoko, 2011). Umanah & Okwueze (2015), "museum as an institution that cared for (conserved) a collection of artifacts and other objects of scientific, artistic, cultural, or historical importance and made them available for the public viewing through exhibits that may be permanent or temporary". "Museum is a building, house or an open air to the whole communities where cultural and heritage property of a community is preserved for the purpose of conservation, teaching, learning and for entertainment/enjoyment" (Kuntaa 2012).

Method of Study

The study adopts the following techniques to explore some of the methods used by Nigeria and Ghana in preserving museum artifacts. The first method of preservation is washing of bones artifacts and objects with black soap and water. These items are later sun dried, secondly is the use of the traditional cleaning agent like dual purpose kerosene (DPK) on brass/bronze objects. Thirdly is the cleaning of clay/terracotta objects with white kaolin. Fourthly is the cleaning of iron with palm kernel oil. Fifthly is the preservation through the use of charcoal and mud, applying cow dung, polishing the wooden artifacts with wax and lastly the technological method of preservation.

Result of the Study

The result presented above shows that there are two divisions of museum artifacts in Nigeria and Ghana, these are:

(a) The monuments section and
(b) The museums Division.

In general, the two divisions are responsible in serving different purposes in the countries. The first section is called 'the monument section' and is responsible for all monument activities within and outside the country while the second division is called 'the museum division' and is responsible for all museum activities in Nigeria and Ghana.

Although the museums in Nigeria and Ghana have other areas called 'the specialized section' and are responsible for specific duties in the museum, this section houses both direct and indirect effects on the socio-economic implication for Nigerians and Ghanaians. The advancement in technology leads to the establishment of Conservation Laboratory in Nigeria and Ghana museums. The role of Conservation Laboratory is to conserve and preserve materials of cultural trends in Nigeria and Ghana. Other materials required to be conserved and preserved by museums conservation laboratory include ethnography, history/archaeology and cultural materials from other African nations and abroad. The result also reveals that the Ghanaian method of preservation is lacking behind, in comparison of the two artifacts between the two countries of study reveals that Nigeria artifacts are more preserve than that of Ghana. Nigeria museums still adopt the traditional methods of artifacts preservation. The active use of artifacts and religious objects as farm tools like climbing ropes, wood carving i.e. masks (for masquerade) for interior decoration as shown in plate one and crafts like bamboo chairs were produced locally and sold to people in other parts of Nigeria.

The result also shows that Nigeria and Ghana museums are fully equipped with modern equipment such as chemicals for treatment and restoration of damaged exhibits and general conservation is carried out in the preparatory and diagnostic rooms. The laboratory is equipped with modern microscopes, magnification lamps, work benches and stools, computer workstation for digitization of collection, surgical tools, wash basins, therm-

hygrometers, micro-drill for cleaning and assorted chemicals. The traditional method of preservation in Nigeria is still adopted irrespective of advancing technology and this makes Nigerian artifacts better preserved than Ghana artifacts.

In comparing the image on plate 2 it is noticed that Ghana museums do not have any single manila in their artifact's shelves unlike Nigeria. Museums play an essential role in comprehending the sustainability of cultural heritage, preserving the artifacts and presenting it to the next generations (Del Barrio et al., 2009).



Plate 1: A section of the gift shop wooden artifacts at the National Museum Ghana.



Plate 2: Ekpo mask for interior decoration
Source: Raffia and Traders' Association Market, Ikot Ekpene, Akwa Ibom State, Nigeria.



(a) **(b)** **(c)**



(d) **(e)**

Plate 3a-e: A Section of the Wooden Artifacts at National Museums Oron, Nigeria.



Plate 4: A Section of the Metal Artifacts of various types.
Source: National Museum, Oron, Akwa Ibom State, Nigeria.

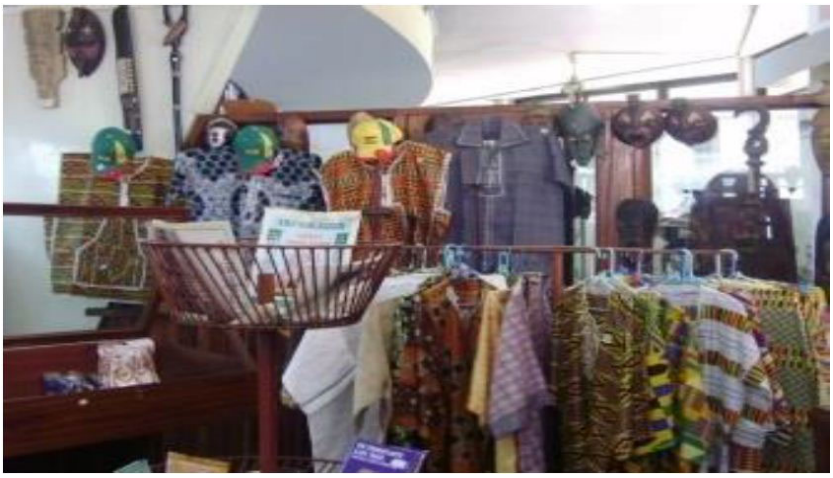


Plate 4: A section of the gift shop Textile Artifacts at the National Museum Ghana.

Some of the Methods Adopted by Nigeria and Ghana in Museums Artifacts Preservation

According to Agbontaen-Eghafona (2001, pp.199-201) cited in Okpoko (2011) commented on the "Alternative Conservation Methods: The Benin Example", where he enumerated the effectiveness of the use of traditional substances for conservation of cultural objects. He identifies the following traditional method adopted by Nigeria museums; these methods include the following:

i. Cleaning

Winkler (1997), describes leaning as one of the first undertaking tasks of the preservation process used in preservation and conservation of artwork and artifact, sometimes done before initial examination to remove accumulated dirt in order to reveal the real state of the object. Ahmed (2015), states that "cleaning process for historical objects has to consider not only the effectiveness of the treatment but also the potential damage for the artwork and artifact objects. It is essential that cleaning is sympathetically undertaken to avoid serious, long-term damage to the objects." Cleaning is probably the most common of the treatment processes used on pottery objects, not only in the preservation/conservation studio but also in a domestic context. It was stated that a major objective of all conservation treatment is to increase the chemical stability of the object being treated (Allah *et al*., 2010).

ii. Bone objects: bones object that are kept in the museum should be washed with black soap

using clean water and sun dried after washing in other to prevent the object free from dust and the treatment applied improved the shine of such artifacts.

iii. **The cleaning agent on brass/bronze:** artifacts objects that are made using brass/bronze should be clean using scouring powder in order to make them

shine, the use of palm kernel oil served as anti-rust and lubricant, thus preventing corrosion.

iv. **Cleaning clay/terracotta objects:** The word terracotta is derived from the Latin word terra-cocta- literally, "cooked earth." Terra-cotta clays vary widely in color according to geography and types, ranging from red and brown to white (Tiller 1979). Earthenware is a clay-based unglazed or glazed ceramic, where the fired body is porous. Any artifacts object made with clay/terracotta, the preservation method of such artifacts are the use of white kaolin clay and water which served as a sealant and seal the cracks and breakages. The typical firing temperature of terracotta is around 1,000 °C (1,830 °F). The iron content gives the fired body yellow, orange, red, "terracotta", pink, gray or brown color (Ahmed, 2015).

(d) Fibers that were sun dried and brushed got laundering, scoured and bleached.

(f) **Cleaning of iron artifacts:** artifacts object made by iron should be prevented using palm kernel oil, this oil prevent oxidation by air thus preventing rusting and as such served as antioxidant

(g) **Ivory artifacts:** the washing of artifacts object made by ivory should be done using black soap and clean water, and at times sand papered resulted to scouring and shine

(h) Cleaning of the mud shrines with charcoal and adding more mud served as sealant and added more coating. The cow dung applied occasionally was for its offensive smell to drive away termites attacking objects placed on the mud structure.

(I) Objects fashioned out of shells were also washed with black soap and water which gave it shine and water.

(j) Objects carved out of stone and washed in black soap and water gained a certain polish.

(k) Wooden artifacts: when these artifacts are dusted the best way to preserve it is to clean them with rag and polish it shine again, sometime apply kerosene on monthly basis to prevent the object from being damage by termite.

(l) Ceramic artifacts: Ceramic objects are subjected to various deterioration factors, starting in manufacturing process and passing through burial and excavation stages, in addition the cracks and broken from mishandling and packing, fluctuation in temperature combined with humidity. If the porous ceramics, the moisture gets into the pores, when the temperature freezes, there is an increase the amount of water and ceramic breaks (Ahmed, 2015). This process we are seeing on the ceramic vessels that remain open atmospheric conditions. In the realm of preservation there are two distinct practices: First, with non-intervention types of preservation and conservation, to control the surrounding environment such as light, humidity, and temperature. Secondly, active preservation is when a preservationist practices treatment to alleviate physical problems in the object such as fading, chipping, or brakes (Aripdjanov 2013).

Technological methods adopted by Nigeria and Ghana in preserving museum artifacts

Technological changes combined with social changes threaten the presence of organizations that are very preservative and conservative. Use of technology, understanding social media and adaptation according to (Fu et al., 2015) is critical. The establishment of a laboratory for artefact treatment fully equipped for preserving the integrity of objects through mechanical and chemical treatment on surfaces adversely affected by excavation as well as re-form missing fragments of historical statues as well as those of archaeological excavation.

Role of Artefact Preservation in Socioeconomic and Cultural Development

In Nigerian and Ghanaian museums, artefact preservation plays significant roles in cultural preservation as well as the sociological and economic development of host nation. Museums as an institution was first established in 1945 at Esie, Jos Museum was established in 1952, Ife Museum 1954, Lagos Museum 1957, Akwa Ibom museum (1959), Benin and Kano museum (1960) among other museums in Nigeria with the aim of displaying local art treasures/traditions as a means of promoting nationalistic pride and providing outlets for intellectually stimulating recreation enlightenment (Ekpo, 2004).

According to Alexander et al., (2008) "Museums have varying aims, and types ranging from serving researchers and specialists to serving the general public such as children's, archaeology, art, biographical, encyclopedic, historic house, history, maritime, military and war, mobile, pop-up, science, and music museums".

Directly or indirectly, museum preservation contributes to the socioeconomic development of Nigeria and Ghana through improvement of growth and management of resources in a particular state of life. The location of museums, whether in the hamlet, village, community or town create people relationship with others both locally and internationally so that social and economic benefits can be restored within themselves and the visiting public. Kuntaa (2012) observed that "social and economic importance of the museum is boundless because the collections in the museums are about people and their socioeconomic enhancement."

Museum preservation plays a major role in the social development of each country. In clarification, the term 'Social development' according to Kuntaa, (2012) refers to all the "activities that lead to an enhanced peaceful cohabitation among people in a community. Social development also includes the usage of the available resources and the opportunity to harness other resources in the community by the community members for advancement of their social livelihood. It includes all social development activities associated with the well-being of all the members in Nigeria and Ghana."

Social development takes place when visitors migrate from one geographical location into a particular state or country. It results in interaction between the visitors and the indigenous residents which helps to create social

standards in the community at large. During the period of interaction some of the economic opportunities that were hidden begin to be revealed in order to receive recognition and investment with the aim of establishing local and foreign partnerships. Arguably, social interaction creates dividends which result in partnership uplifts of the social and economic status of the partners and the entire community when their investments are domiciled.

Museums generally hold social and economic advantages especially in the area of development of any given region through the platform of communication of values, sharing of ideas and skills as well as creating a standard way to create a forum to discuss about cultural heritage.

Another area museum preservation plays a crucial role is the families. Some family members visit the museum for leisure, to learn about past culture and to relax in order to educate their children about some of the past and present events by exhibiting where the children listen and ask questions.

Every museum has similar characteristics and attributes, for example, halls and open spaces around the museum premises that can be hired for social functions for social groups. Social functions such as conferences, meetings, marriage weddings, and training programmed. Another social function museums preservation brought to the society is that every museum is opened daily to the public, researchers, tourist, school services, diplomatic missions, private exhibitors and other interest groups.

In Kunta word (2012) quoted by Udong (2021):

> …the presence of museums in Nigeria and Ghana, brought development planners like the assemblies and non-governmental organizations, as part of their social responsibility, provide portable water and improved road networks, electricity, hospital, security and places of convenience. These amenities also enhance the development of leisure centers such as golf courses, swimming pool, guest houses and restaurants. As more and more visitors patronize the museums, opportunities for other social services are identified and developed, thus expanding the development opportunities in the community to be harnessed by the community members as well as outsiders. As people meet in the galleries of the museums they inspire and educate each other during discussion. The discussions bridge knowledge gaps and consequently bridge cultural differences. This prepares the grounds for unified and peaceful social and economic development. The people involved in these discussions are well placed to explain the cultural relationships between the peoples of the nation thereby defusing any potential pent-up conflict that would arise on the basis of cultural and linguistic differences.

In examining the economic role of museum preservation in Nigeria and Ghana reveals the attraction by which cultural heritage or artifacts/object are reserved in a museum for visitors. The location of tourist site in an area

improves local businesses through buying and selling as the tourist workers and visitors spending on basic necessities. As the museum workers live near to where the museums are located, help in outgrowing and sustaining the community business located along tourist line of activity.

Another economic role museums preservation add to Nigeria and Ghana is that it helps to create employment opportunities for thousands of youths that are jobless as well as small and large service providers.

The museum managers also employ front line officers that are capable of serving their clients. Economically, museum establishment leads to the employment of different categories of workers i.e. conservators, secretaries, security men, cleaners, school service tour guides needed in the available vacancies existed in the museum, this is because salaries earned by these categories of workers in the museums create provision for the utilization and management of their domestic expenditure requirements for the month.

The absence of these in the community or country can create domestic violence and school children drop out. Museum preservation creates employment through hospitality contractors, the work of hospitality contractors is to encourage employment and investment in the country.

Another economic role museum preservation create is infrastructural construction. The employees of the museum manager to carryout infrastructural service and social amenities in the country are paid for services rendered which directly creates employment opportunities to inhabitants of the area. The unemployed might end up in crime or violence.

Discussion

Preservation methods for cultural heritage and historical sites in Nigeria and Ghana face several challenges that offer opportunities for improvement. Here are some areas of potential enhancement:

(i) Stock keeping and Digitization:

- Enhance the documentation of cultural heritage sites and artifacts through detailed records, photographs, and digital archives.
- Benefit: Digital archives make it easier to share and protect information, and they provide a backup in case of physical damage or loss.

(ii) Funds:

- Increase government and private sector funding for preservation efforts.
- Benefit Adequate funding ensures proper maintenance, conservation efforts, and the implementation of advanced preservation techniques.

(iii) Capacity Building:

- Provide extensive training programs for local conservators, archaeologists, and museum staff.
- Benefit: Enhanced skills and knowledge among local professionals' lead to better preservation practices and reduced reliance on external experts.

(ix) Public Enlightenment:

- Implement educational programs to raise public awareness about the importance of cultural heritage.

- Benefit Greater public awareness and involvement can lead to community-driven preservation initiatives and better protection against vandalism and neglect.

(v) Community Participation:

- Engage local communities in preservation efforts, ensuring that they have a stake in protecting their heritage.
- Benefit: Community involvement fosters a sense of ownership and responsibility, leading to more sustainable preservation practices.

(vi) Legal Framework

- Strengthen and enforce laws

Merriman states that "the common roles of the museum, however, are the preservation of sites "by record" through the duration of the finds and records made in advance of the destruction of sites through development, and the dissemination of a conservation ethic through public education programs." Therefore, the researcher identified that storage areas in the museum premises are overcrowded, artifacts' material is in poor condition. The result also indicates that artifacts and religious objects can be kept in a museum in panels and shelves kept unused, unattended to and with no history of the art works themselves.

Umana (2015) is of the opinion that "even if there were to be a documentation concerning those art works, they have not fulfilled the essence in which they were created by lying unused in the museums." Along the same vein Horne (1986) found that ethnographic museums are no more immune to criticism than any other institution responsible for spending public funds.

Conclusion

In conclusion, the critique of museum preservation methods in Nigeria and Ghana reveals a complex interplay of challenges and opportunities. Both countries face significant hurdles, including inadequate funding, insufficient infrastructure, and limited professional expertise in conservation practices. These issues are compounded by environmental factors such as humidity and pests, which threaten the integrity of cultural artifacts.

Despite these challenges, there are notable efforts and initiatives aimed at improving preservation methods. Collaborations with international organizations, capacity-building programs, and the adoption of modern conservation techniques are steps in the right direction. However, these efforts need to be scaled up and supported by robust policy frameworks and increased investment from both governmental and non-governmental organizations.

Furthermore, public awareness and community engagement are crucial for the sustainable preservation of cultural heritage. Museums must actively involve local communities and leverage indigenous knowledge systems in their conservation strategies. In summary, while Nigeria and Ghana have made progress in museum preservation, there is a pressing need for a more coordinated and well-resourced approach to safeguard their rich

cultural heritage for posterity. This involves a comprehensive strategy that includes enhanced funding, infrastructure development, professional training, and community participation.

In drawing conclusion from the result, African people had been rooted in their beliefs of cultural heritage through supernatural and supremacy of God. The supremacy of God takes charged of control over nature and natural incidents.

This research critical provides some new insights into the role museums play in socioeconomic development of both nations. In analyzing the social and economic import of museums in West African context we discovered that Nigeria and Ghana are endowed with rich cultural and heritage.

Recommendation

The research has identified the status of preservation methods in both countries. It is based on these findings that the following recommendations are made:

Improving museum preservation methods in Nigeria and Ghana requires a multifaceted approach that addresses environmental, technological, educational, and resource-based challenges. Here are the recommended steps:

(i). Environmental Control

- Climate Control Systems: Install and maintain climate control systems to regulate temperature and humidity, which are crucial for the preservation of artifacts.

(i) Lighting Management Use UV-filtered lighting to prevent damage from light exposure and ensure that light levels are appropriate for sensitive materials.

(i). Maximize Technological Input

- Digitization: Digitize collections to create digital archives that can be used for research, education, and as a backup in case of physical damage.
- Conservation Technology: Invest in modern conservation technology and equipment to aid in the restoration and preservation of artifacts.

(iii) Training and Capacity Building

- Professional Training: Provide regular training for museum staff on the latest preservation techniques and best practices.
- Educational Programs: Develop partnerships with academic institutions to create specialized programs in museum studies and conservation.

(iv). Resource Allocation

- Funding: Secure funding from government bodies, international organizations, and private donors to support preservation projects.
- Material Resources: Ensure a steady supply of conservation materials, such as archival-quality storage boxes, acid-free paper, and conservation-grade adhesives.

(v) Policy and Advocacy

- National Policies: Advocate for stronger national policies that support cultural heritage preservation.

- Public Awareness: Increase public awareness and

The museum directors in both countries (Nigeria and Ghana) should consult the Education Service to include museum studies in their curriculum in order to promote national acceptance and participation in the work of the museum development strategies.

The museum's board of directors should also invite Nigerian and Ghanaian investors to put up multipurpose leisure facilities for recreation sports such as swimming pools, lawn tennis courts, sandy volleyball courts and cybercafe facilities for commercial use by visitors especially foreigners who visit the museums.

References

Ahmed, H (2015). Restoration of Historical artifacts and made available for exhibition in museums. Article *in* Journal of American Science · January 2015 and *Life Sci J* 2015;12 (5):183-192]. (ISSN: 1097-8135).

Andah, B. W., Okpoko, A. I., & Folorunso, C. A. (Eds.) (1993). Some Nigerian Peoples. Special Book Issue, West African Journal of Archaeology. Ibadan, Demos Printers.

Anigbogu, K.C. & Onyima, B.N. (2013). 'New Technology and Challenges of the Blacksmithing Industry in Awka: Implication For Entrepreneurship Development'. *African Journal of Microfinance and Enterprise Development*, Vol 3(1):46-56.

Eluyemi, O. (2002). The Preservation of Nigerian Cultural Heritage: Challenges & Prospects. Fourth Bassey Wai Andah Memorial Lecture. Ibadan, Textflow Limited.

Kuntaa, D. D. (2012). The Museum in Ghana: Their Role and Importance In Ghana's Social And Economic Development. A Thesis Submitted to the School of Graduate Studies, Kwame Nkrumah University of Science and Technology, Kumasi, in partial Fulfillment of the Requirements for the Degree of Master of Arts in African Art and Culture.

Michael, A.O. (2018). 'Sustaining Aspects of Cultural Heritage Management in Nigeria: Case Study of Wooden Objects in The National Museum In Oron, Nigeria'. *International Journal of African Society, Cultures and Traditions* Vol.6, No.1, pp.28-40, February 2018 Published by European Centre for Research Training and Development UK.

Ogundele, S. O (2000). Fundamentals of archaeology: An introduction. Ibadan, Ejimasons Nigeria Enterprises.

Ogundele, S. O. (2014). Understanding Contemporary Archaeology. Ibadan, John Archers Publishers Limited.

Onwuka, J.O. (Ed.) (2002). Nigerian Peoples and cultures: Historical & Socio-structural Perspectives. Enugu Nigeria, Echris & Company.

Okpoko, A. I. (2011). Fundamentals of museum practice. Nsukka, University of Nigeria Press Ltd.

Özer Sarı, F., Nazlı M., (2018). 'Sustaining Cultural Heritage by Means of Museums in an Ever-Changing World', *Gaziantep University Journal of Social Sciences*, 17 (1), 1-14, DOI: 10.21547/jss.316178, Submission Date: 26- 05-2017, Acceptance Date: 07-09-2017. Araştırma Makalesi.

Oyinloye, M. A., (2018). 'Sustaining Aspects of Cultural Heritage Management in Nigeria: Case Study of Wooden Objects in the National Museum in Oron, Nigeria'. *International Journal of African Society, Cultures and Traditions* Vol.6, No.1, pp.28-40, February 2018. Published by European Centre for Research Training and Development UK (www.eajournals.org)

Umanah, V. S. & Okwueze, M.I. (2015). "Museum and Traditional Method of Preservation of Artifacts in Akwa Ibom State". In *International Journal of Theology & Reformed Tradition (IJTRT*). Society for Research and Academic Excellence, University of Nigeria, Nsukka. Vol. 7. pp. 20-32.

http://www.eolss.net/Eolss-sampleAllChapter.aspx

http://www.lifesciencesite.com