

Sustainable Safety and Preservation Mechanisms for Cross River Monoliths

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Abstract

Monoliths are age-long stone formations that have represented and given clues to the reconstruction and interpretation of the extinct cultures. Their tourism motivation to localities is inestimable. Incidentally, these monumental edifices of human cultural history have faced the challenges of safety and preservation. For example, the Cross River Monoliths have continued to deteriorate and are being destroyed in the recent past due to the activities of man and nature along with other safety issues facing the monoliths, its owners and visitors. Some rescue mechanisms have been employed made in including the assembling of these monoliths to a designated location in an open-air museum. This paper contends that more needs to be done in this regard. The study proposes Mix Method Approach (MMA), which is a conglomeration of interdependent practices, to enhance the safety and preservation of the Cross River monoliths for both posterity and tourism development in the area. The implication of the study is the introduction of further directions in monolith studies and preservations in Africa and beyond.

Keyword: Monoliths, Heritage resources, Methodology, Safety, Preservation, Sustainability

Introduction

Evidence from monoliths has given impetus to the understanding of past human cultures. It promotes an understanding of the artistic masterpiece of the extinct societies (Doehne & Price, 2010), and gives insights into the cultural attributes and geological formations that have received varying interpretations by various communities across the globe. Monoliths are age-long stone formations with manifestations of the artistic masterpiece of past cultures. Human interference by way of creative designs and religious significance has made monoliths one of the leading heritage resources among those communities where they are located. They are perceived as both natural and cultural resources according to the individual interpretations.

However, heritage resources which are amongst the living legacies of past societies or inhabitants have been pronged with various threats to their safety and preservation for the next generation (see also Gheradi, Gulotta, Goidanicks, Colombo & Toniolo, 2017; Ekundayo and Abutu 2014). In many traditional societies, heritage resources are highly esteemed due to their embodiment of the cultural and habitational history of the people. Many at times, where these heritage resources are depleted, destroyed, vandalised,

stolen or defaced, they are irreplaceable, and this has untold implications on the people's cultural antecedents. Cross River Monoliths as one of the living histories of the Ikom people of Cross River State, Nigeria has faced a multiplicity of threats to their safety and preservation for tourism, research, and cultural promotion. These threats have different directions ranging from human (vandalism, destruction, and defacement), to environmental threats (harsh weather condition like sunshine, temperature, rains, etc.), and poor management.

Berti (2016) notes that the knowledge of techniques of the past and natural environment of the stone are keys to sustainable preservation. In their study, Van der Werf, Ditaranto, Picca, Sportello and Sabbatini (2015) proposed that scientific conservation treatment should be used for the consolidation, protection, and inhibition of biofilm formation of stone monuments. This view corroborated the assertion of Ozturk (1992) when he maintained that, with an understanding of the terrain (culture, environment, science and mechanisms) for the stone heritage, sustainable preservation could be achieved.

Charola, (2016) identified deteriorating factors for stone heritage like monoliths and other natural stone formations to include air pollution, the presence of soluble salt, and bio-colonization. He advocates correct scientific diagnosis of the origin and observed deterioration as the most appropriate way to solve the challenges. Also, Aldoasri, Darwish, Adam, Elmarzugi, and Ahmed (2017) are of the view that emulsion polymerization method is amongst the conventional means in conserving stone monument. For instance, after their scientific tests and analysis, their study "confirmed that the preparation of nanocomposites by in situ emulsion polymerization method is suitable for the application in the conservation of stone monument" (Aldoasri et al., 2017, p. 14). Doehne and Price (2010) believed that thorough research into these stone heritage is key to understanding their challenges of preservation and right attitudes of their sustainable preservation. They concluded their study by noting that "the efforts to preserve our heritage in stone includes research in the conservation of rock art, the preservation of historical quarries, and the specialized conservation needs of some ornamental stones" (Doehne & Price, 2010, p. 58).

Almeida, (2012) examined the challenges of monoliths preservation using the lens of "post-media theory" and proposed the concept of the "new repository" as it concerns digital curation, commodification, authenticity, and intentionality. He noted that the Variable Media Approach (VMP) and new repository model would go a long way in enhancing the digital preservation of monoliths. For Griswold and Uricheck (1998), a collaborative approach to stone preservation should be applied for sustainable stone

preservation. After identifying the various challenges to stone preservation, he notes that “cross-disciplinary communication among related practitioners (conservators, stonemasons, chemists, engineers, and others) should be encouraged and exercised” (Griswold & Uricheck, 1998, p.1).

Pinna (2014) agreed with some of the previous authors that amongst the causes of threats to stone heritage are the activities of biofilms and lichens. He recommended a standard test method for the evaluation of the extent of damage done by the biofilms and lichens. It is only after this has been done that one can propose indexes of risk or damage of biofilms and lichens on different stone resources. Also, Gherardi et al. (2017, p.1) after their study informed that “soiling, condensed water, atmospheric pollution, and biological attack are among the main factors responsible for the stone deterioration in an urban environment.” They suggested the application of both commercial and innovative treatments based on TiO₂ nanoparticles as part of the solution to tackling challenges of stone deterioration (Gherardi et al., 2017).

The above have raised questions on the effectiveness of the methods adopted to preserve Cross River monoliths. What are their shortcomings and what alternative are available? These questions among others are what this paper intends to address. The article will review the current methods currently used for the safety and preservation of Cross River monoliths and suggest the way forward.

Cross River Monoliths

The monoliths are found among the Ejagham people of Cross River State of Nigeria. Cross River State, Nigeria. The state has vast potential tourism resources and over the years has witnessed massive tourism development initiatives. A typical example is the development of the famous Obudu Mountain Resort which has been described by pundits as Nigeria’s tourist heaven owing to the astonishing tourism resources in the site. The existence of the monoliths adds to the tourism value of the state if sustainably developed.

However, the traditional name for the monoliths is ‘Akwanshi or Atal.’ The monoliths are distributed amongst the 30 communities of the Ejagham people. The stones are either found in circles or standing erect and facing each other. This their natural position has been tampered with by either man and weather. Like in the case of Alok and Agba communities, the stones are found in central places for the village meetings or community square. This is different from what obtained in Etinan and Nabrokpa communities where the monoliths were located at the centre of thick uncultivated forests (Anietie, 2015).

It is worthy to note that the Cross River Monoliths were produced mainly from medium-textured basaltic rock, and some of them from sandstone and shelly limestone. Whichever is the case, they were all carved. According to UNESCO (2017):

The characteristic features of the monoliths are that they are hewn into the form of a phallus ranging from about three feet in height to about five and half feet. They are decorated with carvings of geometric and stylized human features, notably two eyes, an open mouth, a head, crowned with rings, a stylized pointed beard, an elaborately marked navel, two decorative hands with five fingers, a nose, and various shapes of facial marks.



Fig 1 and 2: Samples of the Cross River Monoliths from one of the dedicated museums. (Source: Anietie, 2015).

The Ikom monoliths are arranged in a similar way to that of Stonehenge in the United Kingdom, and may give a clue to the understanding of this famous Stonehenge in the UK. It also has a close semblance to that of Melk arts in Tanzania and stone circuits in the Gambia. The number of identified Cross River monolith has been estimated to 450. The major threats to these monoliths are caused by the local communities. Although proper archaeological dating like the radiocarbon dating is yet to be conducted on these monoliths, their age is estimated to range from 1500 to 500 years before present (Anietie, 2015).

In a bid to preserve the monoliths, various open-air museums like Alok Open Air Museum, Emangabe Open Air Museum, Edamkono Monolith

Sites, etc., were established to bring these monoliths to a central location (see Figures 1 & 2 above). The current attempt to preserve the Cross River Monoliths started in 2016 with collaborated efforts from the host communities, Trust for African Rock Arts (TARA), Prince Claus Fund (PSF) Amsterdam, Factum Arte Foundation (FAF) Madrid, University of Calabar Nigeria, Ahmadu Bello University, Zaria, Nigeria and with the support from relevant government agencies and other individual experts. Abu Edet had reported that the state of these monoliths is deplorable at these museums (Anietie, 2015). Routine human activities within the vicinity of these museums like farming, bush burning, deforestation, construction works, etc., have not helped in the preservation of the monoliths.

Methodological Issues and the Way Forward

Our attempts here is not to write off or discredit these previous methods so far used, but to look at the areas where such methods failed and discuss the way forward by proposing a methodological pattern that will contribute significantly to the preservation of the monoliths for posterity and tourism.

It is worthy to note that the unique nature of these monoliths attracts the attention of different sections of the public including the government. It also has the potentialities to attract tourists and generate revenue for the host communities and the state. These benefits culminated into the various attempts that have been made and still being made to preserve them (Aldoasri et al., 2017). Some approaches have been designed, adopted and implemented to help secure the future, religious, cultural and tourism values of these monoliths. These methods include establishment of open-air museums, collection of these monoliths from different localities to be assembled in unique and central locations, submission to the UNESCO by NCMM for possible enlistment in the list of world heritage sites, 3D digital documentation of these monoliths, and historical approach by some team of experts, among others. Despite these methods, their safety and preservation are not yet guaranteed for these rich heritage resources of the Cross River people. This has raised a critical question on the effectiveness of the adopted methodologies.

Mixed Method Approach (MMA)

This methodology is a conglomeration of five distinctive but interrelated approaches that include indigenous approach, ethnographic approach, archaeological approach and, collaborative and informative approach. It is imperative to look at the details of these MMA units.

Ethnographic Approach

Ethnography as a research concept is defined as the idea of studying research subjects or community by intermingling in their socio-cultural lives to understand their livelihood pattern, socio-cultural characteristics, economic activities, and political institutions. This method gives the researcher the opportunity to obtain first-hand information on the socio-cultural and other indigenous activities of the community he is studying. The focus of such studies is on the activities of the extant society; their ideologies, traditional practices, habitational and settlement pattern, traditional dishes and responses to stimuli from the environment.

Furthermore, ethnography also entails an understanding the cultural history of these communities where the monoliths are found, their patriarchal system, how they preserve their precious heritage resources, their historical connection with these monoliths, their cultural attachment to these monoliths, their ritual and religious systems with respect to natural resources, their traditional belief on the ownership and management of monoliths, their traditional perception on the concept of monoliths and finally their indigenous view on the protection of these monoliths. This aspect of the MMA approach requires membership from the host communities to produce an unbiased result. This is because the understanding of these facts, would give an indigenous conceptualization of these monoliths in Cross River and subsequently serve as a step to the actualization of their sustainable safety and preservation.

Ethnographers should be engaged to conduct detailed ethnographic study amongst those communities in Cross River State Nigeria, with the aim of understanding the critical cultural practices and attributes of the extant society. Such would give a clue to the understanding of their extinct society, and the cultural or traditional significance of their extinct cultures through their extant cultures. In this case, ethnographic studies should be conducted by experts with the use of digital recorders, field notes, GIS mapping device and enticement techniques to get the needed support from these host communities. The result of this should be analyzed and reconciled with some other approaches in MMA.

Collaborative and Informative Approach

This is another distinctive approach in the MMA. This approach has two crucial functions of collaboration and information. In the area of information, this approach organises orientation programmes for all the stakeholders that are either directly or indirectly related to the monoliths. This is aimed at giving them an up-to-date knowledge and keep them informed and involved in the preservation of these monoliths. People can

only protect what they know about and strive to ensure its sustainable preservation. Such information dissemination should equally be done using the media both within and outside the state through documentaries and other formal media channels to develop the interest of the general public to love, cherish and visit the monoliths.

Another aspect of this approach is the collaborative approach. The achievement of sustainable safety and preservation for Cross River Monoliths may not be realized in isolation without the support of varying degrees from some quarters (see also Griswold & Uricheck, 1998). This should have a greater focus on the area of funding, awareness, investments and industrial linkages. In this regard, the current management of the monolith should be commended in their effort in collaborating with the NCMM in submitting Cross River Monoliths to the UNESCO in 2007 for possible enlistment in the World Heritage List. There are some other local and international cultural and tourism agencies that can make a useful impact if collaborated with, in the sustainable safety and preservation of these Cross River monoliths. Apart from the funding from the collaborative efforts, various tourism agencies (local and international) like the Cross River State Tourism Board (STB), Nigerian Tourism Development Corporation (NTDC), World Tourism Organization (WTO), etc., have the potentialities of attracting both investment opportunities and promotional benefits to these monoliths.

We strongly recommend that these Open Air Museums in the sites be converted to Cross River Monoliths Park (CRMP) with two or three distinctive centres within the communities where monoliths are found. This will not only involve the host communities in the management but also attract many tourism investments and infrastructures to those communities. The CRMP should be a Cross River State Government's project under the auspices of the State Tourism Board. With enhanced collaborative mechanisms from the international agencies, the management can be contracted out to an independent management body. These collaborative mechanisms can also attract funds for the development of these parks with adequate tourism promotion to attract tourists/visitors both locally and internationally.

Archaeological Approach

Another aspect of the MMA is the archaeological approach which would give further scientific base or understanding to Cross River State monoliths. In this case, various archaeological and geological approaches shall be adopted to further understand the existing monoliths in Cross River State. These include systematic ground reconnaissance, Site Catchment

Analysis (SCA), excavation, rock sample analysis, and dating. For instance, the systematic ground reconnaissance would aid in the discovery of many other new monoliths that are still lying in-situ in addition to relevant surface collections in the undisturbed forest region of Cross River State that would further give a clue to the understanding of the nature of the monoliths. Also, some of the communities where monoliths are found in Cross River State need to be sampled for Site Catchment Analysis (SCA) in the area. This would lead to further excavation through the opening of trenches in selected parts of the undisturbed forest region in search of clues to the understanding of the monoliths. In the end, samples from the archaeological trenches and surface lying monoliths could be dated to ascertain the age of these monoliths. Some dating methods like the potassium-argon dating which can be used to date rocks that were formed as late as 20,000 and as far back as 5,000,000,000 (five billion) years, is relevant in this regard. This method has been used in dating stone tools like flakes and chopping tools from notable archaeological sites like the Kobi Flora in Northern Kenya. This was approximated to 2,000,000 years BP with remains of *Zinjathropus* approximately dated 1,750,000BP. Radium-strontium dating which is primarily used to date ancient igneous and metamorphic terrestrial rocks can also be used to cross-check dates from potassium-argon dating to ensure that the strontium element is not diffused by mud heating (Larmoureaux, 2009). Furthermore, uranium-lead dating which uses radioactive uranium can be used in dating to get the exact age of lithic tools like the monoliths. This is because, geologically, when rocks are formed through the process of volcanic reaction or other cataclysmic events, they contain a kind of minute quantity of radioactive substance, which starts to deplete from the day the rock was formed through a volcanic process. In that case, laboratory analysis will be used to measure the loss to ascertain the loss rate and subsequently attribute age to the material.

Implications for Sustainable Safety and Preservation

MMA has the potentialities of revitalizing the diminished significance and respect for these monoliths amongst the people. It will facilitate in-depth knowledge of these monoliths from both mythological and scientific point of views and give further directions to the management of these monoliths. Such understanding would enhance the value of these monoliths through public perceptions and that of the host communities. More importantly, the host communities and their views about these monuments need to be respected to bridge the gap between them and the developers. The tourism aspect is the one that will motivate not only the government but also the private sector for necessary investments in the area.

Tourism is one of the major instruments in the revitalization and preservation of ailing heritage resources. Most growing economies seek an alternative route to rapid economic growth of their GDP. And tourism has been identified with such potentialities. It (tourism) gives relevance to such heritage resources which will not only be developed but also preserved for the posterity. With the promotion of the diverse values of these monoliths, the communities, the government and visitors would begin to appreciate the existence and significance of these monoliths.

However, Adoption of this proposed Mix Method Approach (MMA) by the management of Cross River monoliths would enhance the socio-economic and cultural relevance of the monoliths through the establishment of Cross River Monoliths Park in three distinctive areas in those communities from where these monoliths originated. This would enhance their tourism potentialities and possibly give birth to another typology of tourists known as 'Monoliths Tourists.' Tourism has been identified as one of the mechanisms for conserving natural and cultural attractions. For instance, as the interests of tourists on a given attraction increases, the value and positive perception of the attraction equally increases amongst members of the host communities, investors, associated government agencies and the general public. MMA and the establishment of CRMP would improve the rate of tourists visit these local communities drastically and also enhance their infrastructural base. This is enough motivation for the members of these host communities and security agencies, to see to the sustainable safety and preservation for these monoliths and their visitors. It is imperative to note that, as the rate of the value for these monoliths increases, the tendencies to see to their sustainable safety and preservation.

Conclusion

The current state of Cross River monoliths calls for urgent and sustained attention to preserve and protect the cherished and irreplaceable monoliths. Ozturk (1992, p.79) had maintained that "... it is only through a complete understanding of traditional materials and technologies and mechanisms of decay that suitable approaches can be developed for a wide variety of issues in conservation". In this paper, we maintained that the mechanisms that are currently adopted in the preservation of monoliths need total overhauling. Consequently, a Mix Method Approach (MMA) is proposed as a sustainable approach to the safety and preservation of the monoliths. This method is a conglomeration of various distinctive forms, namely, ethnographic approach, archaeological approach and collaborative and informative approach. This is to be managed by a Monoliths Management Committee (MMC). For this committee to be efficient and

purposeful, it requires representatives from the host communities, the government, tourism experts, archaeologists, developers, ethnographers, security representatives, etc (see also Griswold & Uricheck, 1998).

Finally, there is a need to extend the methodologies towards ensuring the safety of members of the host communities, tourists or visitors and the infrastructural base of these communities. For efficiency and result, there should be a well constituted Monoliths Management Committee (MMC) that shall be charged with the responsibility of overseeing the maximum implementation of the MMA. The effort of this committee should culminate in the establishment of Cross River Monoliths Park (CRMP) in two or three central locations within the communities where these monoliths are found in Cross River State. This is against the currently established open-air museums in some of the host communities. Establishment of parks would attract more tourists inflow to these communities subsequently, enhance their tourism receipts and infrastructural base. This is expected to raise consciousness amongst members of those communities, the government, investors, security operatives and other relevant experts. It will further spur sustainable preservation for the monoliths and safety for the visitors and host communities.

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