



Mapping Ghana's Heritage Loss: A GIS Approach to Inform a National Inventory

Kelvin Asare

To cite this article: Kelvin Asare (28 Apr 2026): Mapping Ghana's Heritage Loss: A GIS Approach to Inform a National Inventory, Conservation and Management of Archaeological Sites, DOI: [10.1080/13505033.2026.2644952](https://doi.org/10.1080/13505033.2026.2644952)

To link to this article: <https://doi.org/10.1080/13505033.2026.2644952>



Published online: 28 Apr 2026.



Submit your article to this journal [↗](#)



Article views: 63



View related articles [↗](#)



View Crossmark data [↗](#)



Mapping Ghana's Heritage Loss: A GIS Approach to Inform a National Inventory

Kelvin Asare 

Department of Archaeology and Heritage Studies, University of Ghana, Current – Louisiana State University, Legon-Accra, Ghana

ABSTRACT

This article advocates for the urgent development of a centralised digital and context-based heritage inventory system in Ghana. Drawing on Ghana's rich archaeological landscape, the article identifies threats posed by unregulated urban expansion, mining, and inadequate legal protections. Using GIS-based analysis to visualise the spatial distribution and vulnerability of heritage sites in Ghana, the study reveals patterns of destruction and potential risk zones. It reviews international case studies and theoretical discussions around heritage documentation, emphasising the ethical, political, and practical implications of inventory-making. The discussion situates Ghana within a broader comparative framework, considering models from other countries while highlighting postcolonial and local governance challenges unique to West Africa. The paper recommends a phased, selective inventory grounded in ethical practices, participatory heritage principles, and sustainable policy frameworks. By doing so, Ghana can build an inventory system that balances accessibility, security, and cultural relevance, enabling both preservation and responsible development.

KEYWORDS

Heritage inventory; GIS; heritage management; critical heritage studies; Ghana; archaeological sites

Introduction

GIS analysis of Ghana's archaeological heritage sites reveals an increasing pattern of destruction. In this article, I visualise the vulnerability of heritage sites in Ghana, revealing these patterns of destruction and potential risk zones. I utilise spatial and site data that I digitised from older surveys and recent field studies (see Asare 2021). This troubling trend highlights a critical issue in the management of heritage sites in Ghana, underscoring the urgent need for a solution – the establishment of a comprehensive heritage inventory. Efforts aimed at the protection, conservation, and promotion of heritage and archaeological sites are part of the major goals of archaeology and heritage studies (Deur and Butler 2016; Egloff 2019; Fagan 2006; Matero et al. 2012; Sharer and Ashmore 2010; South 1972).

Over the years, many archaeological surveys, including the ones undertaken by Oliver Davies (in the 1960s), resulted in the discovery of over 2000 sites across Ghana (Asare 2021; Davies 1970a, 1970b, 1970c, 1976). Recent archaeological field studies have added more sites, but there is no database to combine all this data, leaving them fragmented.

Elsewhere (Asare 2021), I highlighted the scale of this issue by digitising and analysing these documented sites using GIS tools. By working with a quarter of these sites, I created spatial data for them, demonstrated the seriousness of this danger, and stressed the need for a planned approach to heritage documentation. There is a need to systematically collect site information to centralise it into a single inventory. Scholars such as Kankpeyeng and DeCorse (2004) have highlighted the need for an accessible compilation of archaeological, historic, and cultural resources. Without such an inventory, safeguarding Ghana's heritage becomes futile, reactive rather than proactive. Heritage stakeholders will only respond to threats rather than prevent them.

The lack of a comprehensive system to inventory archaeological and other heritage sites in Ghana is a critical concern that often escapes thorough discussion, particularly in light of the pandemic-related surge in indiscriminate mining or looting activities (known in Ghana colloquially as 'galamsey'). While galamsey has been an issue well before 2020, looting and other illicit digging activities significantly increased as many Ghanaians lost their livelihoods. A study conducted by the Ghana Statistical Service, in collaboration with the United Nations Development Programme and the World Bank, revealed that the earnings of approximately 770,000 workers had significantly declined, and 42,000 employees were laid off during Ghana's COVID-19 lockdown (World Bank 2020). In many rural communities, young people turned to galamsey as the retail, fisheries and tourism sectors collapsed and gold prices rose by 40% (Ayaaba et al. 2024, 2), making illegal mining more lucrative than traditional jobs. Indeed, the factors that have contributed to the surge of illegal mining transcend the pandemic, but undoubtedly, this period saw a significant increase in these activities. Kuuwill, Kimengsi, and Giessen (2026) note that the COVID-19 pandemic triggered a 70% increase in primary forest loss in 2022 (Kuuwill, Kimengsi, and Giessen 2026, 3). Illegal mining is one of many indiscriminate activities negatively affecting heritage sites in Ghana. Ghana, like the rest of West Africa, faces a similar challenge. Ghana is characterised by a rich cultural and historical heritage, from ancient archaeological sites to colonial architecture, sacred lands, and underwater sites. Despite this, many of these historical places are not recorded, risking destruction by urban growth, environmental dangers, and neglect. Such situations can be attributed to the underdevelopment of archaeology as compared to other countries, such as Egypt or South Africa, where archaeology is more institutionally developed. Kodzo Gavua (2006) acknowledged the challenge involved in the practice of archaeology in Ghana as it is generally misunderstood and taken lightly even in government and academic spheres (see also Gavua and Nutor 2014; Insoll 2008).

In this article, which stems from a larger body of work (Asare 2021), I explore heritage management in Ghana, tracing its evolution, institutions, and the legal frameworks that support it. Additionally, I anchor the presentation in a review of international case studies of heritage documentation and a discussion of current theoretical debates, emphasising the ethical, political, and practical implications of inventory-making. The discussion situates Ghana within a broader comparative framework, considering models from other countries while highlighting postcolonial and local governance challenges unique to West Africa.

While the management of archaeological and other cultural heritage sites aligns with the ethical and social responsibilities of scholars, the burden to protect sites falls mostly on state governments and their legislative institutions (Martí Gil 2023; Pacifico 2018).

Cultural heritage management fosters connections between experts and stakeholders, including local communities whose history scholars study, policymakers, and practitioners in the heritage tourism sector. Protecting and properly managing these sites is essential, as it allows archaeologists and other scholars to conduct research and make interpretations that benefit both present and future generations.

Unlike countries that have systems to profile and monitor heritage places, Ghana lacks a single or centralised digital system to monitor, safeguard, and manage its heritage sites. Inventory creation is situated in archaeological and heritage resource management, constituting efforts aimed at effectively and efficiently managing and promoting cultural heritage and archaeological sites.

The proper management of heritage sites serves as a framework for developing policies related to these sites and promotes them for tourism. This approach aligns with the Cultural Policy of Ghana, which states that, 'Through State and private initiative, Ghana shall develop its heritage and cultural assets and promote their use and appreciation' (National Commission on Culture 2004, 35). Balancing tourism and preservation should be a concern as tourism models must integrate conservation efforts, ensuring that the cultural and historical significance of a site is not compromised. Tourism revenue can be leveraged to fund conservation, research, and local development, but must not take precedence over the ethical responsibility to sites. To uphold this responsibility, there must be an implementation of stringent management policies that safeguard both the environment and heritage. Furthermore, reinvesting profits back into conservation initiatives is crucial, as it not only enhances the sustainability of these sites but also empowers local communities. Ethical tourism practices are integral to this endeavour, as they encourage respect for cultural heritage while prioritising preservation above exploitation. By nurturing a tourism industry that values its custodial role, heritage custodians and stakeholders can celebrate our shared history while ensuring that it endures for future generations to appreciate.

This paper pursues two interconnected goals: first, to use GIS-based spatial analysis to document patterns of destruction and vulnerability among Ghana's archaeological sites; and second, to argue for the establishment of a national heritage inventory as a proactive safeguarding tool. Drawing on digitised spatial data from surveys and recent field studies, I identify high-risk zones and assess the scale of existing and potential site loss. The analysis is framed by comparative case studies of heritage inventories from other regions, with attention to their applicability in the Ghanaian context. While cultural heritage encompasses both tangible and intangible expressions of the past, this study focuses primarily on archaeological heritage sites, which currently lack systematic inventorying in Ghana.

The paper proceeds as follows: I begin by discussing postcolonial heritage management, highlighting inventory issues faced in West Africa. Following that, I will examine heritage management in Ghana, where I present a GIS analysis of documented sites along with evidence of their destruction or endangerment. This leads to my argument for the creation of comprehensive inventories. Next, I explore the process of making heritage inventories, including definitions, types, and documentation standards, and I place this within the context of critical heritage studies. A review of international cases of heritage inventories will inform the discussion, integrating all these elements to demonstrate how an inventory could help address the preservation challenges of sites in Ghana. Finally, the

conclusion reflects on the urgent need for a heritage inventory in the face of human-related activities that negatively affect heritage sites. Additionally, it broadly underscores the importance of using spatial technologies in heritage management in postcolonial African contexts and then proposes an adaptive approach to safeguard heritage amid global rapid changes. While inventories and documentation have historically been associated with colonial heritage administration, they are not inherently colonial tools. Rather, their political character lies in how they are produced, whose knowledge they privilege, and how they are mobilised. A postcolonial heritage inventory re-centres indigenous knowledge systems, community authority, and local meanings of heritage, transforming inventorying from an extractive exercise into a co-creative process.

Postcolonial Heritage Management and Inventory Issues in West Africa

Colonialism significantly affected indigenous cultures and their heritage, leading to the denial of indigenous peoples' rights to manage their own heritage. Western management practices were imposed on African indigenous heritage, often attempting to fit these practices into a Western framework. For instance, the traditional Western view of 'heritage' focuses on the physical objects that represent heritage (Smith 2006). African heritage has been reduced to 'exotic' artefacts and other material representations, neglecting local communities and what they deem as their heritage (Abungu and Ndoro 2022). Consequently, this marginalised the voices and perspectives of indigenous communities. The current challenges faced in preserving cultural heritage in Africa arise from imposed colonial European views termed as 'Authoritative Heritage Discourse' (Smith 2006, 29). In response, postcolonial perspectives have emerged to challenge these dominant narratives and practices. These perspectives advocate for a decolonisation of heritage management, emphasising the need to acknowledge and incorporate indigenous knowledge systems, values, and practices. Scholars in postcolonial contexts argue that heritage management must be responsive to local socio-political conditions (Fontein 2006; Smith 2006).

In West Africa, heritage management is shaped by colonial legacies, underfunded institutions, and tensions between state agencies and traditional authorities. This current tension between state and traditional authorities is rooted in the historical interference of European powers during the colonial period, which imposed foreign governance structures and often marginalised indigenous leadership. As a result, traditional authorities have been rendered less effective, struggling to reclaim their roles and influence in a landscape increasingly dominated by Western legal and administrative systems. This dynamic not only hampers effective heritage management but also raises important questions about cultural identity, community autonomy, and the preservation of local traditions in the face of modern governance challenges. Kankpeyeng and DeCorse (2004) have emphasised how state-led responses have often lacked a systematic approach to effectively address how 'development' threatens archaeological resources. Thus, the absence of a heritage inventory must be understood not only as a technical gap but also as a postcolonial governance issue. Many African countries encounter similar challenges in managing and preserving their heritage.

Several African countries face similar challenges in the management and preservation of their heritage. The inadequacy of both technical and policy aspects is further

complicated by governance and funding issues. Nigeria, through the National Commission for Museums and Monuments (NCMM), has a central register of sites, although its accessibility and update frequency remain debated (Nwafor and Ekunke 2021). While efforts have been made to document many sites, the lack of accessibility hampers effective utilisation by stakeholders and the public alike. In Senegal, the Direction du Patrimoine Culturel has compiled lists of heritage sites; however, these inventories have not been integrated into a national Geographic Information System (GIS), and many remain only partially digitised (UNESCO n.d.-b). This lack of integration limits the ability to analyse and manage cultural resources effectively across the country, posing challenges for both conservation efforts and tourism development.

Burkina Faso presents a different scenario where heritage inventories often originate from initiatives funded by international donors rather than from robust state policy. Despite having a national policy intended to specifically safeguard intangible heritage, the effectiveness of this policy is often undermined by the reliance on external funding. Notably, UNESCO's Intangible Cultural Heritage Fund has played a crucial role in supporting various projects aimed at documenting and promoting the cultural heritage of Burkina Faso (UNESCO n.d.-a). This situation underscores the disparate institutional capacities across West Africa and illuminates the broader difficulties in adapting and replicating effective heritage management systems that are often found in the Global North. The region's unique cultural landscapes and historical contexts demand tailored approaches, raising questions about the sustainability and efficacy of external interventions.

Heritage Management in Ghana

Ghana's heritage management system has undergone a significant transformation over the years. It was initially rooted in early colonial and missionary documentation, such as the Gold Coast Blue Books (1846–1938) and the records of the Basel Mission (1828–1918). They served as a source that captured historical and cultural narratives largely through a European lens. During this period, heritage documentation and preservation were driven by the British administration and missionary societies, which prioritised monuments, archaeological sites, and ethnographic collections that aligned with European historical narratives and administrative interests. The early National Museum of the Gold Coast served as a repository for artefacts collected during excavations and ethnographic surveys, often without local consultation, resulting in Eurocentric interpretations (Anquandah, Kankpeyeng, and Apoh 2014). Universities had little direct involvement in heritage management before independence. Historically, archaeological documentation in Ghana has been fragmented and left in the hands of individual researchers and projects. Amateur collectors like Robert Rattray and H.J. Braunholtz from the British Museum collected cultural objects unearthed from mining, building, dredging, and farming activities, as well as from developmental projects such as road and railway construction (Anquandah, Kankpeyeng, and Apoh 2014). However, some of these materials were ultimately exported to England (Kankpeyeng and DeCorse 2004). Other researchers, including Kitson (1916) and Junner (1932), also documented some archaeological heritage. Additionally, early surveys by archaeologists, such as Oliver Davies (1970a, 1970b, 1970c, 1976) in the 1950s and 1960s, documented many archaeological sites which included major settlement areas.

Over time, the approach to heritage management has developed into a more formalised structure following Ghana's independence in 1957. The new national museum was built and most of the collections of the Legon museum of archaeology and anthropology were transferred there. From the 1960s onward, particularly through the University College of the Gold Coast's Department of Archaeology, universities became central in training heritage professionals, conducting site documentation, and collaborating with state agencies. Under Dr. Kwame Nkrumah's presidency in Ghana, significant efforts were made to prioritise heritage issues (Schramm 2004), and later governments also implemented policies to preserve cultural heritage assets.

Following independence in 1957, the Ghanaian government centralised heritage oversight, merging the Interim Council of the National Museum of the Gold Coast (established in 1952) with the Monuments and Relics Commission to create the Ghana Museums and Monuments Board (GMMB) through the Museum and Monuments Board Ordinance 20 of 1957 (Kankpeyeng and DeCorse 2004). Today, Ghana's heritage management, which includes sites of archaeological and historical interest, is predominantly overseen by the GMMB, which is responsible for preserving and promoting the nation's cultural heritage. The GMMB plays a crucial role in safeguarding historical sites, artefacts, and traditions, ensuring that they are not only protected but also accessible to current and future generations. In practice, GMMB's legislative mandate, as provided for by the National Liberation Council Decree (NLCD) 387 of 1969 (refined in 1972 with Executive Instrument 42), focuses primarily on tangible (immovable and movable) heritage (visit gmmb.gov.gh). Other cultural forms, including dance, music, festivals, and other intangible traditions, are largely overseen by the Ministry of Tourism, Culture, and Creative Arts (visit motacca.gov.gh).

The GMMB safeguards heritage sites by maintaining site registers, coordinating conservation projects, and advising on policy. Although GMMB has the mandate of making subsidiary laws such as rules and regulations and orders, they usually have to collaborate with other agencies to successfully execute and safeguard their mandate. For instance, when violations occur, such as illegal construction or looting, the GMMB works with local authorities and the Ghana Police Service. In the absence of a dedicated GMMB enforcement body, enforcement often depends on reports from community members, researchers, or GMMB officers. While statutory protections exist, enforcement is uneven. Traditional governance structures like chieftaincy decrees and sacred grove taboos serve as informal heritage protection, but their effectiveness also is diminishing due to rapid urbanisation and economic pressures from activities like mining and infrastructure development. In many rural areas, site disturbance and looting of heritage materials are often normalised due to immediate livelihood needs.

Legislative instruments, including the National Museum Act of Ghana (1969), National Museum Regulations (E.I. 29) (1973) and the Environmental Protection Agency Act of Ghana (1994), provide the legal basis for heritage protection. The latter encompasses essential provisions for conducting cultural impact assessments, which are critical for evaluating the potential effects of development projects on cultural heritage sites. However, these established regulations often lack enforcement. This lack of legislative enforcing has been worsened by the pressures of rapid urban development, rampant illegal mining activities, and extensive infrastructure expansion, all of which pose significant threats to the preservation of cultural heritage. Consequently, the existing legal measures have struggled to adapt to the

dynamic challenges presented by contemporary societal changes, highlighting the urgent need for more robust and enforceable regulations to safeguard heritage for future generations.

Apart from legislation and enforceability noted above, GMMB also encounters significant challenges in preserving and promoting Ghana's heritage due to inadequate government funding, marginalisation by the government, and weak public engagement. Furthermore, overlapping mandates among institutions, such as the GMMB, and the Environmental Protection Agency (EPA), create bureaucratic delays and weak accountability. There is also limited coordination between heritage management and spatial planning, leaving heritage sites vulnerable to encroachment. This situation is common across the Global South, where countries often struggle with these same factors in their efforts to protect heritage sites (Contreras 2010; Hasan, Chowdhury, and Wakil 2022; Mithen, Rabbani, and Rabbani 2025; Pacifico 2018; Pikirayi 2011).

In sum, legislative, administrative and documentation issues contribute to Ghana's heritage management issues. While universities, particularly the University of Ghana and the University of Cape Coast, have contributed significantly to field research and heritage training, much of this data remains unpublished, stored overseas, and/or inaccessible in digital form. The absence of a centralised digital inventory severely undermines efforts to protect Ghanaian heritage assets. While some ad hoc databases and research-driven mapping initiatives exist, such as those emerging from university projects (example: [archaeositeinventory](#), [heritagequest24](#), and [imaginingfutures.world](#)) (see Addy 2025; Asare 2021), there is no national repository that integrates archaeological, architectural, and cultural data in a usable format for planners, developers, or heritage professionals. This absence makes it difficult to assess the status of sites, enforce regulations, or conduct heritage impact assessments effectively. Ghana might consider improving its heritage management, including the creation of a system to catalogue heritage sites, possibly enhanced by incorporating GIS techniques. The new system should consider international best practices (such as standardised recording, interoperability and inclusivity) while also considering local governance needs. The geographical context and cultural nuance would have to be considered.

GIS Analysis of Site Destruction in Ghana

The absence of a comprehensive inventory system in Ghana is a significant issue that frequently goes overlooked. This situation is exacerbated by ongoing urban expansion and unchecked infrastructural development. The convergence of these factors not only threatens the environment but also highlights the pressing need for a structured approach to heritage resource management and land-use planning in the country. Often, there are concerns regarding uncontrolled activities that negatively impact the environment, leading to the depletion of natural resources. Meanwhile, cultural heritage sites, including archaeological sites, receive insufficient attention. This neglect endangers these heritage sites, risking the loss of knowledge of the past and the lessons that can shape our future and identities. Admittedly, not every site can be physically preserved, but the existence of an inventory enables the preservation of the knowledge associated with them even when they are no longer in existence. It also informs the careful and selective

‘destruction’ of heritage. The lack of a systematic inventory poses challenges to conservation efforts.

GIS plays a crucial role in visualising and analysing heritage site distributions, identifying areas at risk, and informing conservation strategies. The absence of a digital heritage inventory in Ghana makes it challenging to assess the extent of site endangerment. However, by mapping existing data, it is possible to reveal trends and prioritise conservation efforts. The call for a systematic inventory results from the GIS analysis of known Ghanaian heritage sites. In a previous publication, I assessed the condition of selected archaeological heritage sites using field surveys and GIS resources (Google Earth Pro and ArcGIS). I noted them accordingly, plotting and detailing the number and types of sites in various locations across Ghana (Asare 2024).

I utilise this existing spatial data, for this current paper, to produce a geovisualization that illustrates current destruction patterns (where destruction is happening now) as well as predicting areas at risk (where destruction could spread). This was done through spatial smoothing and interpolation. They are both used for visualising spatial patterns and highlighting spatial trends (Wang and Liu 2023). I demonstrate in this section the reason Ghana might consider paying critical attention to the management of its archaeological and other cultural heritage sites through digital inventorying. While this study used ArcGIS Pro for visualisation, similar analyses could be undertaken using open-access GIS platforms (such as QGIS), which may offer advantages for broader institutional adoption. These platforms are entirely free, eliminating licencing costs, which is ideal for organisations with tight budgets.

Spatial smoothing works by converting discrete points to a continuous surface at a location, whereas spatial interpolation does the same but estimates the unknown values at other locations. These tools are usually applied in socio-economic GIS. In this case, I used spatial smoothing (Kernel Density Estimation) to visualise how the existing destruction of heritage sites is patterned across Ghana and interpolated (using Inverse Distance Weighting) to estimate areas where destruction could intensify. Kernel Density Estimation (KDE) smooths point data to show hotspots (destruction intensity in this case) rather than only marking the exact point locations. Using KDE, I create a heat map assigning colours to represent areas with high, moderate, and no destruction (Figure 1). Damage clusters are seen in some areas as well as the general trend in site damage. Inverse Distance Weighting (IDW), as mentioned earlier, estimates likely destruction areas. IDW assumes nearby areas are also at risk without having the exact data for those locations. It will use the data known at several locations to predict or estimate the unknown in other locations (Figure 2). The spatial data created for heritage sites (see Asare 2021) was assigned numerical values to the attributes – ‘Intact’, ‘Fairly’, and ‘Destroyed’ to facilitate their use with the KDE tool. Below are the outcomes of applying these methods to heritage sites to demonstrate how the problem of site destruction is occurring and could occur.

The observed patterns highlight the call for a systematic inventory: to document what is there and put measures in place to safeguard what can be protected, improve policies, and promote tourism. The current patterning of Ghanaian sites is visualised below, indicating the various regional locations of destruction. The map’s key indicates heavy, moderate, and no destruction, represented in red, orange, and green, respectively. One can observe a high intensity in certain areas closely marked by pockets of orange patterning (Figure 1). In Figure 2, an increase in these patterns show some

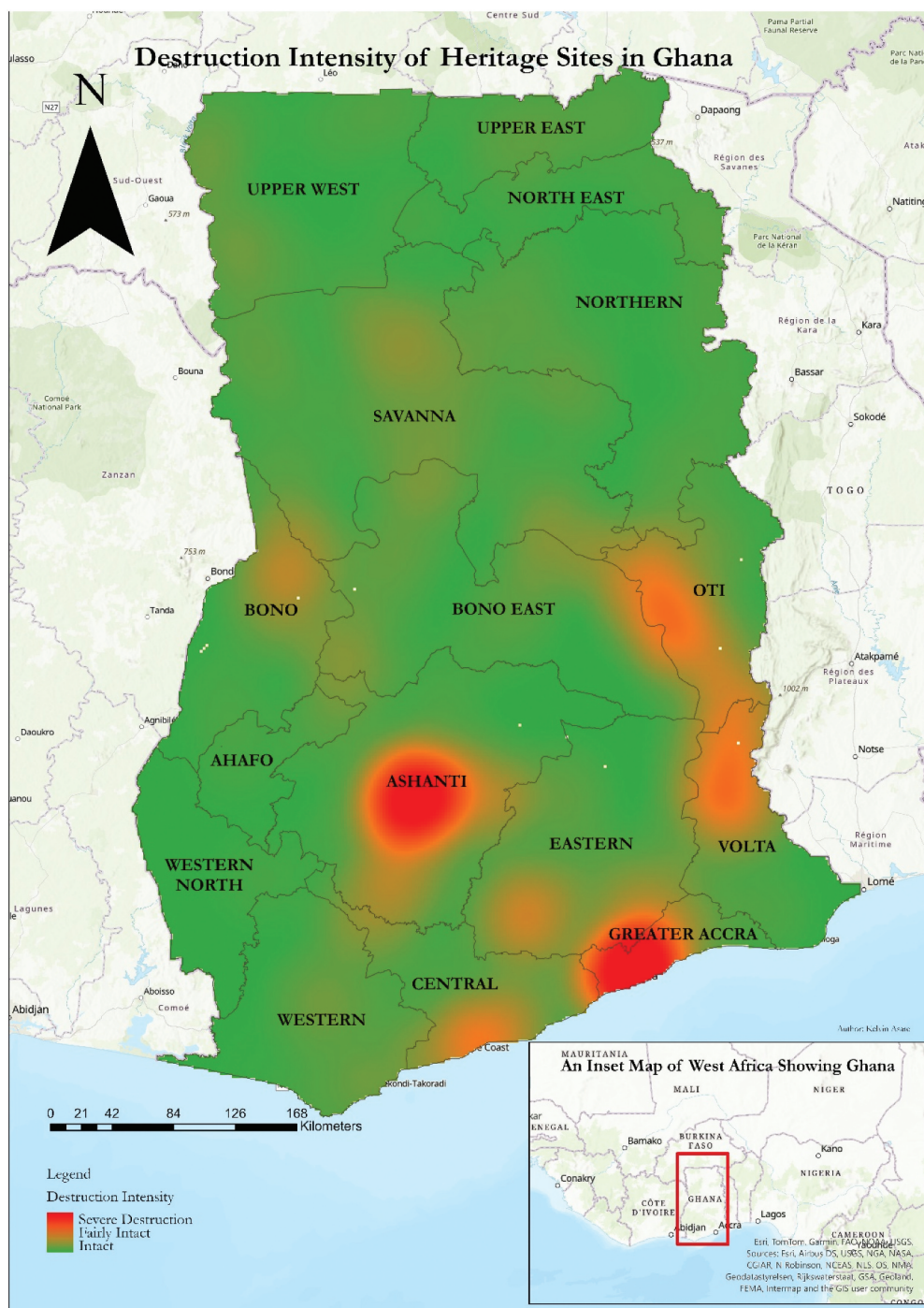


Figure 1. A map of Ghana showing the spatial pattern of sites destroyed across the sixteen administrative regions. Created by Kelvin Asare.

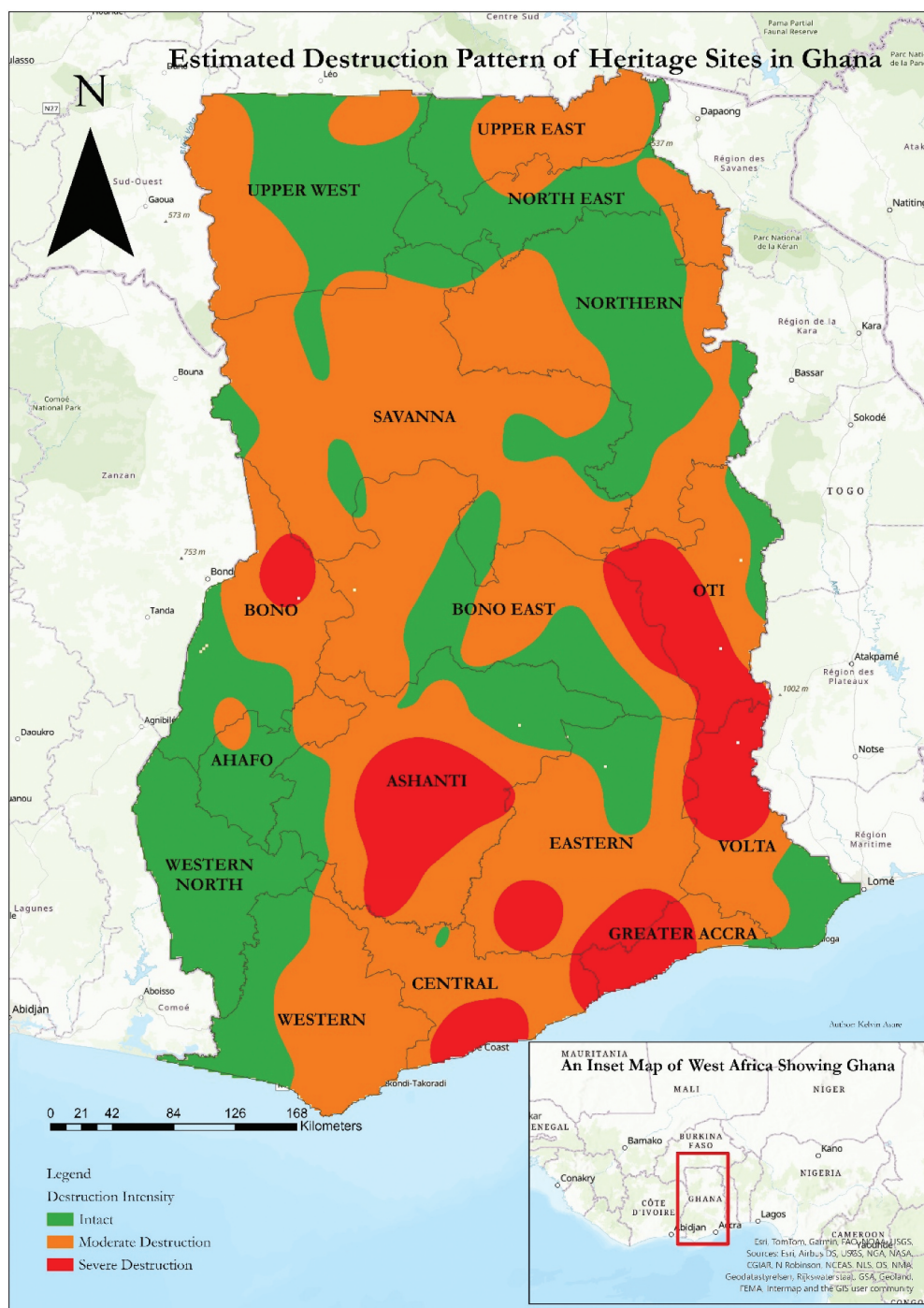


Figure 2. A map of Ghana showing an estimated trend of destructing by interpolating spatial data from Figure 1. Created by Kelvin Asare.

presumably intact areas turning moderately destroyed and the heavily destroyed areas increasing in size. It is pertinent to note that these estimated patterns in the second figure could well be present patterns in Ghana because IDW makes estimates for unknown points. This further demonstrates the pressing need to create a systematic inventory.

Heritage Inventory: Concepts, Types, and Documentation Standards

An inventory is traditionally associated with cataloguing assets, primarily in finance and procurement (Muller 2003; Wild 2002). In the context of archaeology and heritage, an inventory of cultural heritage sites may contain information on historical resources and archaeological sites. The primary files in such inventories may include local, regional, and national registers of archaeological sites, as well as registers of heritage sites (National Park Service's Systemwide Archeological Inventory Program 1993; Neumann and Sanford 2001; Zeidler 1995). Archaeological heritage sites can be understood as locations identified through material evidence of past human activity, which may not be publicly recognised. Cultural heritage sites encompass places recognised for their cultural, historical, social, or spiritual significance and may include archaeological sites alongside other forms of heritage. Specifically, archaeological heritage inventories mainly consist of locating the various sites in a given region. Inventorying involves reviewing known sites, re-evaluating the potential of known sites, researching new heritage sites, and sometimes re-evaluating them. These processes may result in the registration of new cultural heritage sites. The development of inventories for archaeological and other heritage sites forms an important mechanism for safeguarding Ghanaian heritage resources, especially those located in areas susceptible to major earth-moving construction projects.

Archaeologists and heritage experts conduct field inspections in such locations to make sure that cultural heritage sites will not be disturbed, or recommend mitigating strategies, including salvage archaeology and cultural impact assessment. A heritage inventory serves as a crucial tool in this process; it is essentially a listing of heritage sites that have cultural heritage significance with the aim of conserving them. According to Pearson and Sullivan (1995) an inventory of heritage document sites of cultural relevance encompassing all relevant written and graphic information about these places. This documentation is vital for effective conservation and management of heritage sites. Heritage inventories play a crucial role in conservation efforts, particularly in areas undergoing major construction projects. By providing essential data, they allow for informed decisions. Inventory compilations are crucial in establishing the component parts of Ghanaian national heritage in changing times, and prompting public support for its understanding and protection (Bold 2009, 17). Inventorying – the documenting of what is there – is necessary for the purposes of managing. It is for this reason that this paper seeks to highlight some themes for a workable inventory of heritage sites. An inventory is part of a management process. In this sense, it is not an end in itself but part of activities such as heritage impact assessment, land-use planning, physical restoration, or encouragement and management of tourism. It should be a living entity susceptible to revision and improvement.

Types of Inventory: What Would Be the Ideal Type for Ghana?

The types of inventories are determined by the task or purpose at hand as mentioned earlier. John Bold (2009) categorises inventories into four key types: (1) selective, (2) comprehensive, (3) topographical and (4) thematic. Any of these categories can be considered in creating a heritage inventory. According to Bold (2009) selective inventory requires the establishment of explicit criteria, which are based on the understanding of one's task or purpose of the inventory. He notes that such inventories cannot be entirely objective, as their compilation necessarily involves evaluative choices regarding which sites are included or excluded. Topographical inventory focuses on sites within specific geographical regions, while thematic inventory groups sites by common themes, such as European forts or sacred groves. Selective inventory could be considered in Ghana's pilot attempt because comprehensive or exhaustive inventory, as the name suggests, tries to include all sites. Bold (2009) recommends that the exhaustive option be carried out in a limited area rather than nationally because there will be a need to register or document and detail every single asset. This is understandable, seeing as this activity would be more effective. An exhaustive inventory can then be gradually incorporated. For Ghana, a selective inventory would be a practical starting point, focusing on high-risk sites that require immediate intervention while gradually expanding to a more exhaustive national record. Inventories should constantly be going through modifications and updates to suit their geographical context.

Documentation Standards for Heritage Inventories

Documentation standards are a set of best practices that have been tried and tested by professionals and are constantly changing as professional practices change. Documentation standards are also adopted in museums and museum studies. These are how to document a collection and what type of information should be collected for each object. Standards are also used to document heritage sites. These are a set of rules about how to document heritage and what type of information should be collected for heritage inventories. These international guidelines include the International Core Data Standard for Archaeological Sites and Monuments; Core Data Index to Historic Buildings and Monuments of the Architectural Heritage (adopted by the Council of Europe), and MIDAS Heritage- The UK Historic Environment Data Standard. These standards emphasise core data categories essential for cataloguing sites, such as location, historical significance, condition, ownership, and threats. While many international documentation standards emerged within Euro-American heritage management traditions, they are not inherently incompatible with postcolonial contexts. Their applicability depends on how they are adapted, supplemented, or reconfigured to reflect local histories, values, and governance structures. In the Ghanaian context, international standards should be understood as flexible technical frameworks that can be selectively adopted and critically modified, rather than as prescriptive models to be blindly emulated. For example, the inclusion of oral histories or local place names are types of data that can be standardised.

One of the tasks or 'best practices' of documentation is the use of core information. Core data or information are essential and basic categories of an object (heritage sites in this case) that are regarded as necessary for collection. These core data are common to

a number of documentation projects since they are part of documentation standards. The idea of core data has been developed with computers in mind. This is because core data categories make recording, retrieving, and exchanging of information electronically easier. However, it is also helpful in indexing, ordering, and classifying information regardless of whether the information is on paper, card index, or database. Documentation standards can be local. This is developed specially for one's national circumstances. Ghana can therefore develop its own national standard while aligning with international best practices to facilitate global collaboration in future projects. However, it is crucial to acknowledge that what constitutes 'best' practices can vary widely based on context and specific needs. Therefore, it is imperative to exercise caution when selecting and implementing a documentation standard within the framework of these best practices. A careful evaluation should be conducted to ensure that the adopted standards reflect the unique circumstances and capabilities of Ghana, while still promoting efficiency and quality in project execution.

Situating Inventory in Critical Heritage Studies

Critical heritage studies foreground the idea that heritage is not a fixed or neutral category but is socially constructed and politically charged (Harrison 2010; Smith 2006). It challenges the traditional view that heritage is simply a collection of historical artefacts or sites that are valued for their inherent qualities. Instead, they argue that it is created by society depending on cultural, social, and political contexts. This perspective highlights that what is considered 'heritage' can vary from one community to another and can change over time. Heritage is often selected and defined by those in power, making it a politically charged concept. For example, certain historical events or figures may be celebrated or commemorated, while others are overlooked or marginalised, reflecting broader societal values and power dynamics. In essence, critical heritage studies encourage us to think critically about who decides what is preserved, how it is interpreted, and the implications of these decisions in terms of identity, memory, and power relationships within society. Here, I apply this perspective in the creation of heritage inventories.

Inventories function not merely as technical instruments; they play a critical role in defining what is deemed worthy of preservation and determining who holds the authority to make these decisions. The positionality of individuals and institutions involved in the assembly of national heritage inventories must be taken into account, as their professional training, institutional mandates, and historical frameworks influence which sites are recorded, how significance is defined, and which forms of heritage remain undocumented. In this context, it is essential to recognise that just as physical archives can reflect biases (often shaped by the backgrounds and viewpoints of their curators), digital inventories are similarly susceptible to such imbalances if a reflexive and critical approach is not adopted. As highlighted by Hayden Lorimer (2010) in his work on archives, the potential for bias in digital inventories emphasises the importance of transparency and inclusivity in the documentation process. This is significant for digital inventories in Ghana, particularly because the data sources have often been affected by European categorisations or are incomplete. Another example of bias is the selection of heritage resources for a national inventory. This can lead to bias because it raises questions about which resources are chosen to represent the country. National inventories play

a significant role in promoting a nation's heritage, making the selection process critical. Only by acknowledging these factors can archaeologists strive towards a more equitable representation of heritage that respects diverse narratives and values. Digital heritage databases risk becoming biased without deliberate strategies to encourage transparency and multi-perspective inclusion.

Approaching heritage as social action shifts attention from heritage as a fixed inheritance to heritage as something people actively make, use, and negotiate in the present. This perspective, developed by scholars such as Laurajane Smith (2006), Denis Byrne (2008), and Rodney Harrison (2010), emphasises that heritage is not simply about preserving the past, but about the meanings and values communities assign to it today. Smith (2006) explicates that heritage is not only about the past or material things, but it is 'a process of engagement, an act of communication and an act of making meaning in and for the present' (Smith 2006, 1). Within this framework, inventories (typically viewed as technical tools for documentation) must be reimagined as socially embedded instruments that shape whose histories are acknowledged and preserved. Inventories are not neutral; they reflect power dynamics, cultural priorities, and institutional choices. They can either reinforce or disrupt dominant narratives. As such, they must be seen as living entities, responsive to the evolving needs and aspirations of communities. By doing so, archaeologists can recognise inventories as part of a heritage asset, moving beyond the narrow view of them as mere technical documentation tools. This emphasises a more holistic understanding of their role. In contexts like Ghana, where heritage practices are often shaped by colonial legacies and uneven institutional attention, reconceptualising inventories in this way is crucial. It opens up possibilities for more inclusive, participatory, and socially relevant heritage management practices.

David Pacifico (2018) introduces the idea of anarchist heritage practices, where community-based, informal, or non-state actors contribute to heritage protection and knowledge production. Pacifico (2018) calls for dismantling the 'property paradigm' in heritage management, pointing to the exclusions and coercions it produces. Yet this idea of openness raises significant challenges when applied to heritage inventories, particularly regarding the risk of looting or misuse. The question then becomes: can archaeologists create inventories that are not exclusionary, while still protecting sensitive information? Rather than reproducing tiered access grounded in institutional authority, perhaps the answer lies in participatory, negotiated, and context-sensitive forms of disclosure, what might be called 'ethical openness'. This is highly relevant in Ghana, where chiefs, family heads, and community members often serve as *de facto* custodians. Inventory systems should consider including community-validated sites, even if they fall outside current legal definitions. This literature underscores that a heritage inventory is not simply a cataloguing exercise but a political and ethical endeavour that must be tailored to local contexts and sensitivities.

The significance of situating heritage inventories within the lens of critical heritage studies is to demonstrate that inventories can be an active process through which heritage is defined, prioritised, or governed. Understanding inventories as heritage-making practices is essential for assessing how national registers in Ghana may either reproduce exclusionary legacies or support more inclusive and postcolonial forms of heritage management. Incorporating this reflexive, power-conscious approach into Ghana's inventory-making process not only addresses the urgent documentation of at-

risk sites before they are destroyed, but aids in the recognition of heritage places that fall outside formal legal definitions but hold deep meaning for local communities. Such a framework would not only create a richer and more representative record of Ghana's heritage but also model a participatory, ethically attuned approach that could be adapted elsewhere in West Africa.

Case Studies and Models from Other Contexts

Many countries have created inventories for their heritage resources. These are either natural heritage, cultural, or even both. In Palestine, an inventory of natural and cultural heritage sites was created based on 'Potential Outstanding Universal Value' (Taha 2009, 6). This inventory essentially profiled selected sites to show their character. The inventory was made up of twenty sites selected by Department of Antiquities and Cultural Heritage of the Ministry of Tourism and Antiquities with the consultation of experts from both public and private institutions. Twenty out of sixty sites selected were believed to reflect the natural and cultural diversity of Palestine. Subsequently, the inventory identified cultural and natural sites that met the criteria and requirements for the inscription on the World Heritage list set by the Operational Guidelines for the implementation of the World Heritage Convention. Elements included in this inventory are the description of the site, geographic location, justification for outstanding universal value, criteria met, and statement of authenticity.

In the context of inventorying cultural heritage, several countries document both their tangible and intangible cultural heritage to create comprehensive inventories. Azmi, Faizah, and Ali (2015) discuss their efforts in Malaysia to explore heritage place inventory as a conservation tool aimed at establishing the value of heritage sites, ultimately leading to their protection. The article notes that built heritage – meaning buildings or groups of buildings considered to hold special value – has often been neglected in smaller towns and cities. Therefore, creating an inventory can help highlight their significance and protect them.

In their study, the researchers conducted an observational survey and case study to gather background information about identified historic sites. Kampung Kepayang, a small town in the state of Perak, Malaysia, was chosen as a case study. The survey began with well-known locations, supported by existing literature, and then expanded to record lesser-known or overlooked areas.

As a result, a total of 50 pre- and post-World War II buildings, showcasing various styles, uses, and values, were identified as unique characteristics that contribute to the town's distinctiveness. The 50 buildings met the following conditions: 1. the definition of built heritage of the study; 2. at least one of the pre-defined assessment criteria; and 3. they lay within the legal boundary of the town (but exceptions were made for external places that have significant relations to the town) (Azmi, Faizah, and Ali 2015).

The Azmi, Faizah, and Ali (2015) study utilised standardised survey forms to ensure consistency in the data collection process. Each of the 50 buildings was assigned a separate survey form and a reference number to create a systematic inventory record by the end of the survey. In addition to the forms, various data recording tools such as digital cameras, field notes, and maps were used to enhance the data collection process.

Implementing a survey and inventory form is beneficial for preparing a heritage inventory in Ghana, as it helps guide the type of information recorded.

The general recording information included description of a place, cultural values, and character-defining elements. The description gives a general picture of the place and its setting in two or three sentences whereas the cultural value is the significance of the historic place based on value judgement. Cultural values have no internationally agreed typology (Mason 2002). Nonetheless, Azmi, Faizah, and Ali (2015) reviewed internationally accepted, well-established, and best methods for identifying and assessing local cultural sites. They then adopted the criteria used across Australia and England for assessing their heritage places. These criteria are the aesthetic, historic, scientific, social, and economic values of the place. The character-defining elements of a place are the tangible components that make it unique as well as the use, cultural associations, and meanings that make up the place. This set of criteria is applicable and useful in inventorying cultural heritage sites in Ghana. The criteria also have some similarity with the criteria used by UNESCO to select world heritage sites of outstanding (universal) value. The difference, however, lies in its use. While these UNESCO's standards are used to highlight heritage sites or places that stand out worldwide, the Australia/England criteria is used to draw out the value of their local heritage places.

I now turn to the praxis of archaeology to discuss our use of site inventories. Archaeological site inventory is a catalogue or compilation of basic information recorded on archaeological sites. They are enabled by an archaeological site inventory form. The form serves as an indicator on the type of data to be recorded. In Alberta (Canada), supported by the Ministry of Culture and Tourism, is an archaeological data form guide made for archaeological survey (Alberta Culture and Tourism 2017). This guide helps archaeologists to record certain details of a site during a survey for the purposes of preservation and protection. Details are also recorded for likely field excavation (usually the last resort of fieldwork).

In Ghana, archaeological fieldwork forms lack standardisation. Depending on the researcher, specific site details or information points may be omitted or included. Although this recording activity occurs during fieldwork, archaeologists can still adopt some of these data elements retroactively. More details can thus be added to legacy archaeological fieldwork following the initial data collection. Some data types that can be recorded include 'Land Owner and contact', 'Environment/Site Setting', 'Sub-type', 'Site type', 'Cultural affiliation', 'Name and date of the observer', among others.

A more specific aspect of archaeology where inventories have been used to supplement research is underwater archaeology. In the U.S, a report was prepared by the Bureau of Ocean Energy Management (BOEM) and TRC Environmental Corporation where this subject was discussed (T.R.C. Environmental Corporation 2012). The BOEM established a database of historic shipwrecks and submerged prehistoric sites to adhere to the National Historic Preservation Act (T.R.C. Environmental Corporation 2012). This inventory utilised GIS tools to assess site distribution and potential risks, supporting resource management and conservation planning.

The Department of the Interior delegated its Outer Continental Shelf Lands Act (OCSLA) responsibility to the Bureau of Ocean Energy Management (BOEM), thereby giving BOEM the authority to lease areas of the Outer Continental Shelf (OCS) for activities focused on oil and gas and non-energy minerals including sand and gravel

(T.R.C. Environmental Corporation 2012, 3). The BOEM currently has the responsibility under the OCSLA of permitting undertakings within such waters of the OCS. The BOEM is required to consult on cultural resource stewardship while conducting permitting activities in Outer Continental Shelf (OCS) areas, as stipulated by the National Historic Preservation Act. To align with this Act and to improve the management of known and potential cultural resources, BOEM has requested an updated study on historic shipwrecks and prehistoric sites.

The study built on two earlier studies (ICA (1979); SAI 1981) from about 44 years ago that covered portions of the Atlantic OCS. Both studies provided an overview of the geology, prehistory, and sea level rise data that may affect submerged prehistoric site preservation as well as a predictive model for locating historic shipwrecks. The goal of the study was to improve the predictive model for identifying intact, submerged prehistoric archaeological sites on the Atlantic Outer Continental Shelf by looking at more current studies on archaeological research, prehistoric habitation patterns, and relative sea level curves (T.R.C. Environmental Corporation 2012). This was done by assembling a team of experts in underwater archaeology, history, prehistory, geoarchaeology, and marine geology from notable institutions in the U.S. The research on historic shipping and shipwrecks was supplemented by the creation of a database (inventory) of known and suspected shipwrecks. The database contains locations of historic shipwrecks with a summary of maritime history for the study area. It also presented current thinking on submerged prehistoric sites and the coastal landscape they occupied within what is now the Atlantic OCS as well as expectations for where sites might be found and how to go about finding them. According to the report in T.R.C. Environmental Corporation (2012), the sources for this database included both primary and secondary sources from several repositories, institutions, and agencies with an interest in maritime history. The information drawn from these places about each shipwreck was assembled into a Microsoft Access database. This served as a searchable tool that BOEM can use to identify known and likely historic sites within an area of concern. In addition, a geodatabase for all entries with coordinates within the Atlantic OCS also was generated to work with ArcGIS.

The importance of GIS software in documenting historic sites, including underwater sites, is underscored above. The area of maritime or underwater archaeology has been mildly explored in Ghana. This is rather unfortunate because Ghana's 500 km+ coastline along the Gulf of Guinea contains several shipwrecks due to the Transatlantic commerce and trade in enslaved people (Cook 2014; Pietruszka 2011). It would be essential to create an inventory of shipwrecks located in Ghana's seas and to conduct further studies, as Gregory Cook (2014) has rightly suggested. Cook's work was the first and only maritime archaeology research project conducted in Ghana. The limited experience in underwater archaeology in Ghana makes creating an inventory for underwater sites seem unimportant.

Discussion: Comparative and Contextual Insights

The spatial analysis presented above reveals a clear pattern of destruction, with particular regions in Ghana experiencing intense site loss due to indiscriminate land-use such as urban expansion and illegal mining. The patterns of destruction, indicated in red and orange on [Figure 1](#), are mainly observed in areas that are undergoing

extensive urban expansion, such as Greater Accra, Ashanti, and the Central Region (see Asare 2021 for an extensive catalogue of the state of archaeological sites in Ghana). In Greater Accra, several sites have been destroyed, including, but not limited to, Asokrochona near Tema (Andah 1979), Bawaleshie, and the Accra Golf Course (Davies 1976). The expansion of Cleland Road, for example, has impacted an archaeologically rich area in Jamestown (English Accra) (Gavua and Apoh 2011, 213). Boyase Hill in Kumasi was documented by Joanna Casey and Roland Sawatzky as destroyed due to mining activity (Casey and Sawatzky 1997). Currently, sites under threat of destruction include locations such as Larteh Amanfu (Appiah 2021), Nsakyé (Asare 2025) (in the Eastern Region) and Kormantse (Central Region) (Arkoh 2022). In Mankessim (Central Region), a recent field survey conducted by archaeologists, including the author (see Ayensu 2025), revealed that the town's archaeological resources are under serious threat. Numerous ironworking locations have been destroyed due to the town's expansion and building construction.

The above highlight the impact of urban expansion and other human activities on the preservation of heritage resources. Further analysis in Figure 2 indicates an alarming trend: the destruction trend increases in perimeter, highlighting the gradual destruction of heritage resources over time. The orange pattern, indicating moderately intact sites, dominates almost every region, which consequently implies the eventual complete loss of these sites. This situation raises urgent concerns about the sustainability of heritage conservation efforts in the face of rapid development and calls for immediate intervention to safeguard these critical resources. The spatial patterns identified align with several risk factors commonly recognised in international heritage management frameworks, including those highlighted by UNESCO. These include rapid urban expansion, infrastructure development, environmental degradation, land-use change, and insufficient legal or institutional protection. In rapidly growing metropolitan areas such as Accra and Kumasi, these pressures intensify the vulnerability of archaeological heritage. While this paper does not implement a formal UNESCO damage assessment or management framework, it demonstrates that such frameworks depend fundamentally on the existence of a comprehensive and accessible inventory. Without baseline data on site location, type, condition, and context, risk mitigation strategies cannot be systematically designed or evaluated. In this sense, the inventory is not the endpoint of heritage management but its necessary foundation.

The purpose of this spatial analysis is to emphasise the need for assessment and inventory in efforts to manage heritage sites. Spatial smoothing and interpolation techniques (Wang and Liu 2023) reveal general trends; however, the absence of a centralised, regularly updated inventory could hamper real-time response. Compared to contexts like Alberta, Canada, or the BOEM initiative in the U.S., where GIS-informed inventories feed into planning and permitting decisions, Ghana lacks a formal mechanism for translating spatial data into protective action. In France, the Mérimée database integrates architectural and archaeological data into national planning frameworks. Similarly, the UK's Historic Environment Records (HERs) are maintained at the county level but feed into national policy. These systems benefit from clear legislation, regular updates, and integration with planning and environmental review processes. In contrast, Ghana's GMMB holds fragmented paper records, with limited GIS use and no direct link to urban planning systems.

Palestine's use of the 'Potential Outstanding Universal Value' approach (Taha 2009) shows how inventories can also serve aspirational or strategic purposes. Beyond documentation of cultural heritage, the broader significance is recognised. This method aims to highlight heritage sites that contribute to cultural identity and have global relevance, moving beyond local appreciation to a more universal recognition. In Malaysia, Azmi, Faizah, and Ali (2015) demonstrate the utility of standardised forms and local values in documenting under-recognised built heritage. These examples show that context-sensitive inventories can be both technically rigorous and socially grounded. This is crucial for fostering appreciation and ensuring the preservation of local heritage.

One recurring challenge in the management of open inventories is the heightened risk of looting and site damage. In Ghana, where resource constraints limit site security, an openly accessible database could unintentionally expose sites to harm. An openly accessible database, while beneficial for transparency and information sharing, could inadvertently make these culturally significant sites more vulnerable to illicit activities and degradation. To mitigate this risk, a viable solution would be to establish a tiered access system (Dennis 2020; Heitman 2022). In this framework, sensitive location information such as precise GPS coordinates and detailed descriptions of vulnerable sites would be obscured from public view. This 'tiered access' should seek to be participatory, where the rules of access are collectively agreed upon. Additionally, there should be regular auditing of user activity and access logs to ensure compliance and detect suspicious behaviour. By doing so, archaeologists can balance the need for open access to information with the imperative to protect and preserve Ghana's invaluable heritage for future generations.

Another challenge is defining who has the authority to nominate or validate sites. Should inventories only include sites documented by professional archaeologists or the national museum? Pacifico (2018) suggests that such an approach overlooks the value of community-based knowledge. Researchers who study anarchist theory believe that it can be applied to examine heritage management decisions and to provide insights into how practices might be improved, changed, or entirely reframed (Borck and Sanger 2017). For instance, incorporating oral histories and community-identified sacred spaces may enhance the inventory's legitimacy and usefulness. This approach aligns with efforts across Africa to decolonise heritage practices and involve local stakeholders more actively (Schmidt and Pikirayi 2016). The collaborative approach in archaeological practice deconstructs the notion of authority or 'hierarchy', which fosters stronger heritage management and awareness.

Finally, implementation is a key hurdle. A national inventory requires coordination among universities, GMMB, traditional authorities, and local governments. It also depends on digital infrastructure and long-term funding – both of which are scarce in Ghana. International partnerships, such as those with UNESCO or universities, may offer support, but the inventory must remain under Ghanaian control to avoid dependency and ensure cultural relevance.

Conclusion

The GIS analysis presented in this article provides clear evidence of the ongoing destruction and vulnerability of Ghana's archaeological and cultural heritage sites. Spatial patterns reveal that urban expansion, illegal mining ('galamsey'), and environmental pressures are actively threatening many documented and undocumented sites, underscoring the urgent need for systematic monitoring and protection.

At the national level, the absence of a centralised heritage inventory means that efforts to safeguard these sites remain fragmented and largely reactive. Establishing a comprehensive and dynamic inventory is therefore a critical first step towards enabling proactive heritage management, fostering coordination among government agencies, scholars, and local communities. Such a system would also facilitate integration of cultural heritage considerations into urban planning, environmental conservation, and sustainable tourism development.

More broadly, Ghana's challenges mirror those faced by many postcolonial West African countries, where rich cultural legacies coexist with limited heritage infrastructure, complex governance structures, and competing socio-economic priorities. International case studies (Bold 2009; Taha 2009; Zeidler 1995) demonstrate that structured heritage inventories could play a vital role in preservation efforts, providing a blueprint for Ghana and the wider region. Starting with a selective inventory focused on high-risk sites, as suggested by Bold (2009), offers a manageable and participatory approach towards building a comprehensive system.

Ultimately, this work contributes to broader critical heritage studies by demonstrating how spatial technologies and inventory-making can empower postcolonial societies to actively engage with their histories and identities in the face of rapid social and environmental change. Heritage inventories are important tools for managing and protecting culture around the world. They should be seen as living resources that adapt over time, rather than just static lists.

Recommendations

Ghana might consider the following to develop a functional and effective heritage inventory:

- Aggregate existing data from past surveys and archaeological reports.
- Standardise documentation procedures based on the country's needs, but taking inspiration from international best practices.
- Critically examine and consider colonial legacies and be reflexive about heritage resource documentation.
- Incorporate GIS mapping to visualise and assess site distributions.
- Establish a centralised, accessible database for managing heritage records.
- Collaborate with local and international entities to continuously update and refine the inventory.

While archaeological surveys have documented thousands of sites, this information remains fragmented, making it difficult to implement effective conservation strategies. Countries with well-maintained heritage inventories, such as France's Mérimée Database or the UK's Historic Environment Records, have demonstrated how systematic documentation can mitigate the risks posed by rapid development. These systems not only catalogue historical sites but also serve as crucial tools in guiding policymakers and urban planners in making informed decisions that balance growth with the preservation of cultural heritage. Ghana stands to benefit from a similar approach, integrating heritage data into urban planning and environmental conservation efforts. By developing a national heritage inventory, Ghana could protect

its archaeological sites, historic structures, and intangible cultural assets from the pressures of modernisation.

Notwithstanding, the issue is more complex and nuanced in the Ghanaian and broader West African context, where various challenges complicate the implementation of such a 'blueprint'. Factors such as varying local governance structures, limited resources for effective data collection and management, socio-economic disparities, and the effects of globalisation present significant challenges. Additionally, the diverse cultural practices and historical narratives across different regions further complicate the standardisation of heritage data. It is therefore pertinent that such complexities be taken into account. According to the categories of inventories proposed by Bold (2009), starting with a selective inventory can be an effective first step in developing a comprehensive or exhaustive inventory. This process requires collaboration, particularly because determining what should be prioritised for inventory can lead to differing opinions and discussions. My recommendations provided here are not intended to be prescriptive, but an attempt to provide a guideline or course of action in the effort to preserve tangible heritage in light of the current destruction shown above.

By leveraging GIS technology, standardising documentation, and considering 'best' practices, Ghana can create a heritage inventory that is borne from a participatory, collaborative, and context-based approach yet facilitates proactive conservation, sustainable heritage management, and ethical stewardship. Without such a system, the country risks losing irreplaceable cultural landmarks to unchecked development and environmental degradation, coupled with cultural narratives that define its historical legacy. This system can be strengthened by functional legislation and policies. The government must revise the legislation and policies relating to archaeological and cultural resources, making them an integral part of development and land-use (Kankpeyeng and DeCorse 2004). Establishing a national heritage inventory is not just a scholarly necessity but an urgent imperative for safeguarding Ghana's rich cultural legacy for future generations. It is a crucial tool for decision-making, aiding in sustainable development and responsible resource management.

Acknowledgements

This article builds on research undertaken during the second year of an MPhil programme at the University of Ghana. I am grateful to supervisors Dr. William Narteh Gblerkpor and Professor Kodzo Gavua for their guidance and support throughout the original project. Special thanks to Dr. David Chicoine at Louisiana State University for his insightful feedback on the revised manuscript.

Disclosure Statement

No potential conflict of interest was reported by the author(s).

Funding

The original project and my MPhil programme was supported by The Social Sciences and Humanities Research Council (SSHRC) Partnership Development Grant "Improving African Futures Using Lessons from the Past" [SSHRC 890-2017-0003] led by Professors Ann Stahl, Kodzo Gavua and Wazi Apoh.

Notes on contributor

Kelvin Asare is a PhD student in Anthropology at Louisiana State University with interests in Ghanaian archaeology, GIS, remote sensing, and heritage studies. His current research leverages co-creation and collaboration in exploring the archaeology of Nsakyé, a community of the Eastern Region of Ghana. Prior to his PhD programme, he completed a Master of Philosophy at the University of Ghana, Department of Archaeology and Heritage Studies.

ORCID

Kelvin Asare  <http://orcid.org/0009-0000-2611-1612>

References

- Abungu, G. O., and W. Ndoro. 2022. *Cultural Heritage Management in Africa: The Heritage of the Colonized*. London: Taylor & Francis.
- Addy, E. 2025. "Websites as Tools for Archaeological Data Management and Information Dissemination in Ghana." Unpublished MPhil Thesis, University of Ghana.
- Alberta Culture and Tourism. 2017. "Archaeological Site Inventory Data Form Guide." Alberta Culture and Tourism.
- Andah, B. 1979. "The Early Palaeolithic in West Africa: The Case of Asokrochona Coastal Region of Accra, Ghana in Perspectives on West Africa's Past." *West African Journal of Archaeology* 9:47–85.
- Anquandah, J., B. Kankpeyeng, and W. Apoh. 2014. "Archaeology of Ghana: An Introduction." In *Current Perspectives in the Archaeology of Ghana*, edited by J. Anquandah, B. Kankpeyeng, and W. Apoh, 1–17. Legon: University of Ghana.
- Appiah, A. L. 2021. "An Archaeological Investigation of Larteh Amanfu (Amanfro)." MPhil Thesis, University of Ghana.
- Arkoh, E. K. 2022. "A Preliminary Archaeological Study of Iron Slag and Ore Shrines at Kormantse, Central Region of Ghana" [University of Ghana]. <http://ugspace.ug.edu.gh:8080/handle/123456789/40853>.
- Asare, K. 2021. "Inventorizing Selected Archaeological and Cultural Heritage Sites of Ghana." MPhil Thesis, University of Ghana.
- Asare, K. 2024. "New Approaches in Ghanaian Archaeology: Using GIS Resources to Assess the State of Archaeological Sites in Ghana." *Nyame Akuma* 101 (1): 29–37.
- Asare, K. 2025. "A Report on Preliminary Fieldwork at Nsakyé, the Third Capital of the Akwamu Empire." *Nyame Akuma* 104 (2): 17–23.
- Ayaaba, E., K. Adusei-Asante, V. Fannam Nunfam, K. Rumchev, and S. K. Amponsah. 2024. "Mining Through Pandemic Crisis: A Systematic Review of the Impacts of COVID-19 Management Strategies on Mining Industries in West Africa and Western Australia." *Critical Public Health* 34 (1): 1–23. <https://doi.org/10.1080/09581596.2024.2438654>.
- Ayensu, R. K. 2025. "An Archaeological Contribution to the Cultural History and Socio-Political Transformation in Mankessim, Central Region, Ghana." Unpublished MPhil Thesis, University of Ghana.
- Azmi, N. F., A. Faizah, and A. S. Ali. 2015. "Heritage Place Inventory: A Tool for Establishing the Significance of Places." *Journal of Design & Built Environment* 15 (1): 15–23.
- Bold, J. 2009. *Guidance on Inventory and Documentation of the Cultural Heritage*. Italy: Council of Europe Publication.
- Borck, L., and M. Sanger. 2017. "An Introduction to Anarchism in Archaeology." *The SAA Archaeological Record* 17 (1). https://www.researchgate.net/publication/312940281_An_Introduction_to_Anarchism_in_Archaeology.
- Byrne, D. 2008. "Heritage as Social Action." In *The Heritage Reader*, edited by G. Fairclough, R. Harrison, J. H. J. Jameson, and J. Schofield, 149–173. London & New York: Routledge.

- Casey, J., and R. Sawatzky. 1997. "Obituary for Boyasi Hill: A Kintampo Site in Ashanti Region, Ghana." *Nyame Akuma* 48:29–31.
- Contreras, D. A. 2010. "Huaqueros and Remote Sensing Imagery: Assessing Looting Damage in the Virú Valley, Peru." *Antiquity* 84 (324): 544–555. <https://doi.org/10.1017/S0003598X0006676X>.
- Cook, G. 2014. "Maritime Archaeology in Ghana." In *Current Perspectives in the Archaeology of Ghana*, edited by J. Anquandah, B. Kankpeyeng, and W. Apoh, 89–105. Legon: University of Ghana.
- Davies, O. 1970a. *Ghana Field Notes, Part 1: Togoland*. Legon: University of Ghana, Department of Archaeology and Heritage Studies.
- Davies, O. 1970b. *Ghana Field Notes, Part 2: Northern Ghana*. Legon: University of Ghana, Department of Archaeology and Heritage Studies.
- Davies, O. 1970c. *Ghana Field Notes, Part 3: Ashanti*. Legon: University of Ghana, Department of Archaeology and Heritage Studies.
- Davies, O. 1976. *Ghana Field Notes, Part 4: Southern Ghana*. Legon: University of Ghana, Department of Archaeology and Heritage Studies.
- Dennis, L. M. 2020. "Digital Archaeological Ethics: Successes and Failures in Disciplinary Attention." *Journal of Computer Applications in Archaeology* 3 (1): 210–218. <https://doi.org/10.5334/jcaa.24>.
- Deur, D., and V. L. Butler. 2016. "Incorporating Archaeology into Local Government Historic Preservation and Planning: A Review of Current Practice." *Journal of the American Planning Association* 82 (2): 189–203. <https://doi.org/10.1080/01944363.2015.1137222>.
- Egloff, B. J. 2019. *Archaeological Heritage Conservation and Management*. Summertown, Oxford: Archaeopress Publishing Ltd.
- Environmental Protection Agency Act of Ghana. 1994. Act 490.
- Fagan, B. M. 2006. *Archaeology: A Brief Introduction*. Upper Saddle River, NJ: Pearson Prentice Hall.
- Fontein, J. 2006. *The Silence of Great Zimbabwe: Contested Landscapes and the Power of Heritage*. New York: Routledge.
- Gavua, K. 2006. "Rethinking African Archaeology from Inside-Out." <https://static1.squarespace.com/static/5bd0e66f8d97400eb0099556/t/5bdcb6564d7a9c61bc41afa4/1541191254497/SAFA2006Gavua.pdf>.
- Gavua, K., and W. Apoh. 2011. "Alternative Site Conservation Strategies in Ghana: The Adome Ancient Ironworking Site." *Conservation and Management of Archaeological Sites* 13 (2–3): 212–230. <https://doi.org/10.1179/175355211X13179154166150>.
- Gavua, K., and K. Nutor. 2014. "Bringing Archaeology to the People: Towards a Viable Public Archaeology in Ghana." In *Current Perspectives in the Archaeology of Ghana*, edited by J. Anquandah, B. Kankpeyeng, and W. Apoh, 264–275. Legon-Accra: Sub-Saharan Publishers.
- Harrison, R. 2010. "Heritage as Social Action." In *Understanding Heritage in Practice*, edited by S. West, 240–276. Manchester University Press in association with the Open University. https://www.academia.edu/776657/Heritage_as_Social_Action.
- Hasan, M. H., M. A. Chowdhury, and M. A. Wakil. 2022. "Community Engagement and Public Education in Northwestern Part of Bangladesh: A Study Regarding Heritage Conservation." *Heliyon* 8 (3): e09005. <https://doi.org/10.1016/j.heliyon.2022.e09005>.
- Heitman, C. C. 2022. "Theorizing the Archive and Ethics of Open Access Archaeology." In *Digital Heritage and Archaeology in Practice: Data, Ethics, and Professionalism*, edited by E. Watrall, L. Goldstein, E. Watrall, and L. Goldstein, 0. Florida: University Press of Florida. <https://doi.org/10.5744/florida/9780813069302.003.0011>.
- ICA (Institute for Conservation Archaeology). 1979. Summary and Analysis of Cultural Resource Information on the Continental Shelf from the Bay of Fundy to Cape Hatteras. Final Report (Vols 1–4). Cambridge, MA: Prepared by the Institute for Conservation Archaeology, Peabody Museum, Harvard University, for the Bureau of Land Management under contract number AA 551-CT8-18.
- Insoll, T. 2008. "Archaeology in the University of Ghana, Legon. Survey of Emic Perspectives on Its Profile and Future, with an Etic Commentary." *Cambridge Monograph in African Archaeology* 74:1–12.
- Junner, N. R. 1932. "The Geology of the Obuasi Goldfield with Coloured Geological Map and Section." *Gold Coast Geological Survey Mem* 2:71.

- Kankpeyeng, B. W., and C. R. DeCorse. 2004. "Ghana's Vanishing Past: Development, Antiquities, and the Destruction of the Archaeological Record." *African Archaeological Review* 21 (2): 89–128. <https://doi.org/10.1023/B:AARR.0000030786.24067.19>.
- Kitson, A. E. 1916. "The Gold Coast." *The Geographical Journal* 48 (5): 369–392. <https://doi.org/10.2307/1779611>.
- Kuuwill, A., J. N. Kimengsi, and L. Giessen. 2026. "Linking Health Shock-Induced Institutional Change Mechanisms with Forest Management Outcomes: Insights from Ghana." *Society and Natural Resources* 1–29. <https://doi.org/10.1080/08941920.2026.2620018>.
- Lorimer, H. 2010. "Caught in the Nick of Time: Archives and Fieldwork." In *The SAGE Handbook of Qualitative Geography*, edited by D. DeLyser, S. Herbert, S. Aitken, M. Crang, and L. McDowell, 248–273. London: SAGE Publications, Inc. <https://methods.sagepub.com/hnbk/edvol/the-sage-handbook-of-qualitative-geography-srm/chpt/14-caught-the-nick-time-archives-fieldwork>.
- Martí Gil, I. 2023. "Fighting the Illicit Antiquities 'Artworld': A Critical Approach to the Heritage Laws of Guatemala." PhD dissertation., Department of Geography & Anthropology, Louisiana State University.
- Mason, R. 2002. *Assessing Values in Conservation Planning: Methodological Issues and Choices*. Los Angeles: The Getty Conservation Institute.
- Matero, F., K. L. Fong, E. Del Bono, M. Goodman, E. Kopelson, L. McVey, and C. Turton. 2012. "Archaeological Site Conservation and Management: An Appraisal of Recent Trends." In *Archaeological Sites: Conservation and Management*, edited by S. Sullivan and R. Mackay, 15–17. Los Angeles: Getty Conservation Institute.
- Mithen, S., M. A. Rabbani, and M. Rabbani. 2025. *Cultural Heritage, Community Engagement and Sustainable Tourism: Case Studies from Archaeological Sites in the Global South*. New York: Taylor & Francis.
- Muller, M. 2003. *Essentials of Inventory Management*. New York: AMACOM.
- National Commission on Culture. 2004. *The Cultural Policy of Ghana*. Accra: Ministry of Tourism, Arts and Culture.
- National Museum Act of Ghana. 1969. NLCD 387.
- National Park Service's Systemwide Archeological Inventory Program. 1993. *Produced by the Anthropology Division*. USA: National Park Service, U.S. Department of the Interior.
- Neumann, T. W., and R. M. Sanford. 2001. *Practicing Archaeology: A Training Manual for Cultural Resources Archaeology*. London and New York: Bloomsbury Academic.
- Nwafor, O., and E. Ekunke. 2021. "The Nigerian National Museums and the challenges of national unity and development: The Black Benz and the return of lost treasures." In *National Museums in Africa: Identity, History and Politics*, edited by R. Silverman, G. Abungu, and P. Probst, 191–205. 1st ed. London: Routledge.
- Pacifico, D. 2018. "Beyond the Property Paradigm: Fragments for an Anarchist Approach to Archaeological Heritage." *Journal of Contemporary Archaeology* 5 (2): 283–302. <https://doi.org/10.1558/jca.33414>.
- Pearson, M., and S. Sullivan. 1995. *Looking After Heritage Places: The Basics of Heritage Planning for Managers, Landowners and Administrators*. Melbourne: Melbourne University Press.
- Pietruszka, A. T. 2011. "Artifacts of Exchange: A Multiscalar Approach to Maritime Archaeology at Elmina, Ghana." PhD Dissertation., Syracuse University.
- Pikirayi, I. 2011. *Tradition, Archaeological Heritage Protection and Communities in the Limpopo Province of South Africa*. Oxford: African Books Collective.
- SAI (Science Applications, Inc.). 1981. *A Cultural Resource Survey of the Continental Shelf from Cape Hatteras to Key West* [4 Vols]. Report Submitted to the U.S. Dept. of the Interior, Bureau of Land Management. New Orleans, LA.
- Schmidt, P., and I. Pikirayi, Eds. 2016. *Community Archaeology and Heritage in Africa: Decolonizing Practice*. London: Routledge. <https://doi.org/10.4324/9781315621708>.
- Schramm, K. 2004. "Senses of Authenticity: Chieftaincy and the Politics of Heritage in Ghana." *Etnofoor* 17 (1/2): 156–177.
- Sharer, R., and W. Ashmore. 2010. *Discovering Our Past: A Brief Introduction to Archaeology*. New York: McGraw-Hill company.

- Smith, L. 2006. *Uses of Heritage*. London and New York: Routledge.
- South, S. 1972. "The Role of the Archaeologist in the Conservation-Preservation Process." *Research Manuscript Series* (22).
- Taha, H. 2009. *Inventory of Cultural and Natural Heritage Sites of Potential Outstanding Universal Value in Palestine*. Ramallah: Al Nasher Advertising Agency.
- T.R.C. Environmental Corporation. 2012. *Inventory and Analysis of Archaeological Site Occurrence on the Atlantic Outer Continental Shelf*. New Orleans: U.S. Department of the Interior, Bureau of Ocean Energy Management.
- UNESCO. n.d.-a. "Capacity Building for Stakeholders Involved in Safeguarding the Intangible Cultural Heritage in Burkina Faso." UNESCO Intangible Cultural Heritage. Accessed August 8, 2025. <https://ich.unesco.org/en/assistances/capacity-building-for-stakeholders-involved-in-safeguarding-the-intangible-cultural-heritage-in-burkina-faso-01501>.
- UNESCO. n.d.-b. "Support for the Establishment of the National Inventory of Cultural Heritage of Senegal." UNESCO World Heritage Centre. Accessed August 8, 2025. <https://whc.unesco.org/en/activities/462/>.
- Wang, F., and L. Liu. 2023. *Computational Methods and GIS Applications in Social Science*. 3rd ed. Boca Raton: CRC Press. <https://doi.org/10.1201/9781003292302>.
- Wild, T. 2002. *Best Practice in Inventory*. Oxford: Elsevier Science Ltd.
- World Bank. 2020. COVID-19 Forced Businesses in Ghana to Reduce Wages for Over 770,000 Workers, and Caused About 42,000 Layoffs—Research Reveals. August 3. <https://www.worldbank.org/en/news/press-release/2020/08/03/covid-19-forced-businesses-in-ghana-to-reduce-wages-for-over-770000-workers-and-caused-about-42000-layoffs-research-reveals>.
- Zeidler, J. A. 1995. *Archaeological Inventory Survey Standards & Cost-Estimation Guidelines for the Department of Defense*. Illinois: US Army Corps of Engineers, Construction Engineering Research Laboratories.