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Landscape Heritage Conservation: Toward Value-Based Planning and Management of Dala Hill, Kano, Nigeria

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Abstract: Despite its historical significance as a landmark and heritage scenic spot, Dala Hill faces significant threats from both natural factors and human activities. The hill is increasingly subjected to erosion, while the surrounding community encroaches upon it in various ways. These issues are primarily attributed to the absence of proper management and inadequate conservation planning. This study explores the challenges encountered in the management and planning of urban cultural landscapes, identifying the typology of constraints and proposing viable tools to inform decision-making on natural landscape heritage in Kano Metropolis, Nigeria. A value-based planning and management scheme is established, aiming to preserve the natural and cultural heritage, which positively impacts the well-being of local communities and bolsters the economic prospects of Kano and Nigeria as a whole. These efforts align with the Sustainable Development Goals (SDGs), particularly targets 11.3 and 11.4, which emphasize the conservation and safeguarding of cultural heritage. A qualitative research methodology, incorporating a review and explanatory approach, is employed, alongside field observations that examine the challenges experienced by the host community and researchers. The study reveals that the hill sustains minimal flora and fauna due to its intense land-cover and deserted character, with scant vegetation confined to higher elevations within the Kano region. The presence of such vegetation indicates ongoing erosion towards the lower hill levels. Physical and environmental aspects, alongside cultural and environmental management, are identified as key challenges. Poor conservation efficacy, inadequate policies and legislation for heritage and protected areas, and a shortage of funding are highlighted as principal problems. Strategies suggested for conserving and restoring heritage sites include increased investment in Historic Urban Landscape (HUL), research implementation, and legal interventions, among others.

Keywords: Cultural landscapes; Sustainable Development Goals (SDGs); Dala Hill; Protected areas; Heritage conservation; Historic Urban Landscape (HUL)

1 Introduction

The conservation of the existing HUL, encompassing urban annotations, evolutionary processes, constructions, historical sites and buildings, and indigenous practices, and aimed at preserving their importance, is referred to as a landscape-based approach. Furthermore, a key objective of this approach is to view conservation as a means to mitigate the unfavourable effects of environmental and socio-economic progress on elements deemed important. This is achieved by blending urban growth and heritage preservation, as highlighted the works [1–3].

The term landscape finds extensive usage. Apart from its diverse general functions, it features prominently in numerous fields, including history, geography, archaeology, architecture, planning, art, and ecology, among others. There are also figurative applications like 'political landscape' and 'linguistic landscape' that exemplify this versatility [4]. Nevertheless, Whitehand [4] also noted that the exploration of historical urban landscapes within urban morphology commences with delineating the intrinsic function of urban landscapes in the initial evolution of urban morphology within the realm of geography. The term 'landscape' has historical roots tracing back to ancient China in the 5th century, where it was associated with the aesthetics of landscapes. However, it gained formal recognition as a classified field of knowledge in the late 19th century. Several foundational principles of landscape studies can be attributed to the contributions of German-speaking geographers. Correspondingly, Shluter [5] proposed that the morphology of the cultural landscape should be the focal point of investigation in cultural geography.

A landscape and/or seascape, specifically designated for the safeguarding of biological variety, as well as natural and related cultural assets, and overseen by legal or relevant efficacious methods can be termed as Protected Area [6].

As per IUCN [6], protected areas can be classified into six classifications based on their primary management aims:

a. First Category: Protected areas primarily administered for scientific exploration or preservation of pristine environments (i. a) specific Nature Reserves, and (i. b) Wilderness Areas.

b. Second Category: Protected areas mostly overseen for the safeguard of recreational and ecosystem principles (National Park).

c. Third Category: Protected areas primarily supervised for the conservation of particular natural attributes (Natural Monument).

d. Fourth Category: Protected areas principally managed for conservation through active intervention.

e. Fifth Category: Protected areas primarily managed to conserve landscapes/seascapes and support recreation (Protected Landscape/Seascape).

f. Sixth Category: Protected areas primarily managed for the sustainable utilization of natural ecosystems (Managed Resource Protected Area).

Although each of the distinct categories of protected areas possesses varying sets of management objectives, there is a common requirement among all categories: the implementation of a well-considered Management Plan process to ensure optimal results. Nonetheless, this research will specifically concentrate on protected areas primarily designated for landscape/seascape preservation and recreational use, referred to as "Protected cultural and natural heritage landscapes."

The conservation of both natural and cultural heritage exerts a substantial influence on people's quality of living while also contributing to the economic well-being of the environment [7]. Cultural heritage holds invaluable and exceptional reserves of resources and knowledge that foster economic advancement, job opportunities, and societal unity [8]. In today's modern society, the deterioration of heritage sites due to factors such as decay, natural disasters (e.g., earthquakes and floods), and human actions (theft, terrorism, civil unrest, negligence, conflict, and destruction) is an unavoidable reality [3, 9–13]. Therefore, the principal goal of this research is to provide inclusive insights, shed light, and promote contemplation regarding the consequences of neglect and weathering caused by flooding on the heritage values of Dala Hill. This approach aligns with the SDGs 8.9 alongside 11.4, which prioritize the protection and preservation of heritage, alongside the promotion of sustainable tourism that generates employment, supports local culture, and showcases local products [14].

The HUL approach serves as a safeguard to ensure that smart city development is rooted in local cultural assets, aligning with the eco-town/eco-city strategy that prioritizes culture-centered development [15]. This strategy transforms locations into spatial 'points' for implementing synergistic and circular processes, promoting the integration of cultural landscapes into urban planning. This approach supports the SDGs, particularly SDG Target 11.3, which focuses on comprehensive and sustainable urbanization, management, and planning, and SDG Target 11.4, which emphasizes the safeguarding and preservation of natural and cultural heritage.

Kano metropolis, like many urban areas, has undergone significant changes in its urban space infrastructure [16]. Urban land utilization can be viewed as both an artistic and scientific practice for organizing land use, determining building locations, public and primary pathways, communication routes, industrial and commercial spaces, and recreational zones [17, 18]. This practice aims to achieve efficiency, convenience, and aesthetic landscaping, contributing to the overall well-being of local communities and economic prosperity.

Studying Dala Hill's significance within the broader focus on cultural landscape conservation highlights its multifaceted role in preserving historical, cultural, and natural heritage. This aligns with the HUL approach, which integrates local cultural assets into smart city development, emphasizing the importance of cultural values alongside technological advancements [15]. By preserving cultural landscapes like Dala Hill, communities can retain their unique identities and heritage, fostering sustainable urban development.

Despite its historical prominence, Dala Hill faces numerous challenges, both human-induced and natural. Weathering and erosion have led to the gradual degradation of the hill's surface and the formation of gullies. Additionally,

local encroachment, improper waste disposal, and open defecation have further deteriorated the site. The absence of effective management and maintenance practices has led to the degradation of the stairs and the protective barrier, transforming the site into a neglected area that attracts unsupervised children, delinquents, and criminals [19].

While assessing previous research, this study identifies the need for a detailed management plan that incorporates both cultural and natural heritage conservation strategies for Dala Hill. Also, there is a gap in understanding how modern urban planning practices can be integrated with traditional cultural values in the conservation of Dala Hill. More so, there is limited research on the socio-economic impacts of preserving Dala Hill on the local communities and the broader region. Consequently, the research identifies and intends to cover these gaps.

1.1 Research Aim

This study will investigate a natural landscape heritage site, Dala Hill, within Kano metropolis, Nigeria. The primary objective is to develop a planning and management scheme that assigns value-based principles with the intention of safeguarding both cultural and natural heritage. This endeavor holds significant influence over the well-being of local communities and contributes to the economic prosperity of Kano and Nigeria as a whole. Importantly, this initiative aligns seamlessly with SDGs, particularly SDG Target 11.3, focusing on all-inclusive sustainable urbanization, planning, and management, as well as SDG Target 11.4, centered on the 'protection and preservation of the world's cultural and natural heritage.'

1.2 Research Questions

1. What are the current challenges and threats facing Dala Hill, and how do they impact its cultural and natural heritage?

2. How can a value-based planning and management scheme be developed to effectively safeguard Dala Hill's heritage?

3. What are the potential socio-economic benefits of preserving Dala Hill for the local communities in Kano and Nigeria as a whole?

By addressing these objectives, questions, and gaps, this study aims to contribute significantly to the conservation of Dala Hill, ensuring its preservation for future generations and aligning with broader SDGs.

2 Literature Review

2.1 Historical Significance

Dala Hill has been a central element in the history of Kano and the Hausa states. According to Olofson [20], the early iron industry of the Hausa states, with Dala Hill as a focal point, dates back to at least the seventh century. This industry is one of the earliest known iron industries in West Africa, highlighting the historical importance of Dala Hill in early economic development. Usman [21] elaborates on the transformation of this iron industry, noting significant technological and social changes over time. The historical narrative is further enriched by Barkindo [22], who provides a detailed account of the establishment and growth of Kano around Dala Hill, underscoring the hill's central role in the founding of the Kano Kingdom.

2.2 Cultural and Spiritual Significance

Dala Hill is also deeply embedded in the cultural and spiritual fabric of Kan [23, 24] emphasizes the hill's status as a sacred place, intertwined with local mythology and spiritual practices. The mythological significance is further explored by Barkindo [25], who describes the hill as the dwelling place of the deity Tsumburbura and her priest Barbushe, pivotal figures in local mythology who were believed to protect the inhabitants from adversaries. While an investigation on the myth about Kano ancient Hill [26], highlighting its role as a site of pilgrimage and spiritual reflection. This spiritual significance contributes to its cultural heritage and the identity of the local community.

2.3 Socio-Economic Impact

Dala Hill has significant socio-economic influences on Kano as discussed in some study on great attraction and tourism [19, 27, 28], noting the hill's potential for heritage tourism. The hill attracts visitors, contributing to the local economy and offering opportunities for economic development. However, Falola [29] discusses the strategic importance of Dala Hill in the urban landscape, noting its historical role in defense and observation, which has shaped the settlement patterns around it. Despite its potential, contemporary challenges such as erosion and encroachment threaten the site's preservation and its ability to attract tourism.

2.4 Contemporary Issues and Conservation Efforts

The preservation of Dala Hill faces both natural and human-induced challenges. Agbabianka et al. [19] highlight issues such as erosion and weathering that have significantly impacted the hill. Human activities, including encroachment by local residents, improper waste disposal, and a lack of effective management practices, exacerbate these problems. As such, there is a clear need for a comprehensive planning and management scheme that incorporates value-based principles to safeguard both the cultural and natural heritage of Dala Hill. Such efforts align with the SDGs, particularly SDG Target 11.3 on sustainable urbanization and SDG Target 11.4 on protecting cultural and natural heritage.

The existing literature on Dala Hill underscores its multifaceted significance in Kano, Nigeria. From its historical role in the iron industry to its cultural and spiritual importance, Dala Hill is a landmark of great value. However, contemporary challenges necessitate concerted conservation efforts to preserve this heritage site for future generations. By aligning these efforts with global sustainability goals, Dala Hill can continue to contribute to the cultural and economic vitality of Kano and Nigeria as a whole.

3 Materials and Methods

Kano functions as the administrative heart of Kano state and stands as the third largest urban centre in Nigeria following Ibadan and Lagos (Figure 1). The population expansion of Kano can be attributed to its favorable and fertile terrain, its role as a commercial hub, and its accessibility and welcoming atmosphere [3, 30]. Kano accommodates a population exceeding 10 million individuals, with the metropolitan area alone housing over 4 million people, solidifying its position as the primary trading epicentre of Northern Nigeria [30, 31]. Geographically, the Kano metropolis is strategically situated at the heart of Kano state, between latitudes $11°52'$N and $12°07'$N, as well as longitudes $8°24'$E and $8°38'$E.

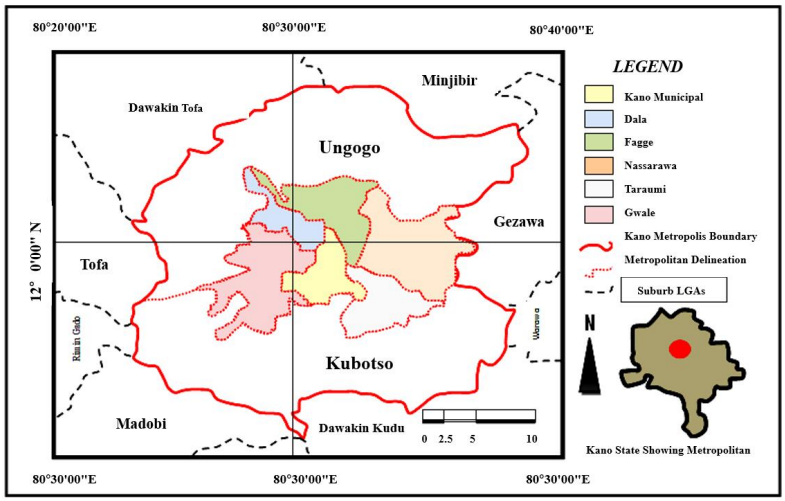

Figure 1. Kano metropolitan map

3.1 Study Area: Dala Hill

Dala Hill situated in Dala local government area of Kano Metropolis, Nigeria, represents a crucial natural and cultural heritage site. Its historical significance dates back to the establishment of the Kano Kingdom, believed to have originated around Dala Hill [32, 33]. The hill, standing at 534 meters with a circumference of 788 meters, was a primary source of iron ore, attracting skilled artisans in the seventh century [34]. Mythologically, it was the dwelling place of the deity Tsumburbura and her high priest Barbushe, who protected the inhabitants [2, 32, 35, 36]. Moreover, its geographical location is $12°00'33''$N, $8°30'32''$E in Dala Local Government bordered by several other settlements including Yalwa, Madigawa, Gwammaja, Dogon Nama, Kantudu, Bakin Ruwa, Adakawa, and Kabuwaya [19].

3.2 Methods

The study employs a qualitative research methodology and conducts fieldwork involving direct observations and focused discussions with influential community elders and custodians. Descriptive research is also adopted, entailing data collection to explore and explain current practices, conditions, attitudes, reasons, and ongoing processes [37, 38].

An inclusive sequence of landscape investigations was conducted from December 2022 to March 2023, comprising two distinct investigative phases at various times and locations (uphill and along the hill), to examine the status

and potential for optimization measures. Site observations began with the collection of ethnographic data relevant to the landscape for subsequent analysis. This fieldwork complements the findings obtained from a thorough review of existing literature. Various methods were used to find and assess sources, with three specific databases—Scopus, Web of Science, and Google Scholar—chosen for this purpose. Inclusive criteria were employed to identify pertinent publications, encompassing works discussing heritage conservation and planning principles, particularly within the context of the HUL and specifically focusing on the ancient city of Kano. To capture older scholarly works, the snowball approach was employed as an additional search method. The assessment included significant reports, book chapters, and scholarly articles from journals [39, 40]. Specific search parameters were defined for each segment of the research to ensure the selection of relevant materials.

Additionally, supplementary sources such as grey literature were incorporated to identify primary frameworks for defining the conservation of heritage landscapes.

4 Research Findings

4.1 The State of the Art

Dala Hill stands as a prominent and culturally significant landmark within Kano [23, 33], Nigeria, with substantial potential for heritage tourism [19]. However, despite its historical prominence, the hill is currently grappling with a range of challenges, both human-induced and natural factors. Over time, the hill has undergone weathering (refer to images in Figure 2), which has exacerbated erosion, leading to the gradual loss of portions of the hill's surface and the formation of gullies in its vicinity.

(a) (b) (c) (d)

Figure 2. Dala Hill, State of the Art: (a) Poor maintenance causing footsteps degradation; (b) Weathered area and unsupervised children; (c) Scanty flora at hill top from neighbourhood view; (d) Waste disposal and resident encroachment

Simultaneously, the hill has fallen victim to significant encroachment by local residents, manifested through

activities such as constructing dwellings, improper waste disposal, and open defecation on and around the hill. The absence of effective administration and upkeep practices has further contributed to the deterioration of the stairs and the protective barrier (as illustrated in Figure 2).

Presently, the site has devolved into a neglected area that attracts unsupervised children, delinquents, and criminals who engage in both moral and immoral activities. This stands in stark contrast to its intended role as a site of cultural attraction, capable of generating economic activities for the local community.

The study further conducts an observation checklist by visiting the site to complete the micro-space analysis survey.

While preparing the micro-space observation checklist, the heritage space was demarcated based on the landscape index, whereas vegetation, drainage, land use, traffic, accessibility, social amenity, and management were considered as variables used to assess the existing features along the spaces. Table 1 analyzes the micro-spaces around the hill, mainly focusing on its land use and ecological dispensation. This area is divided into three micro-spaces (hill top, weathered surface, and core boundary).

Table 1. The micro-space survey of heritage landscape

Micro Space	Vegetation	Drainage	Land-Use	Traffic	Accessibility	Social Amenity	Management
Hill Top	Fair vegetation with sedum and other drought-tolerant species of flora	Runoff water is left to drain naturally down the hill	Initially divine place, recently a scenic area	Minimal tourist activities due to insecurity	Poor accessibility due to the weathered steps	Void of tourist facility	The core structure and space require regular maintenance
Weathered Surface	Is void of vegetation that expose the area to extreme harsh weather condition	Rain water are absorbed through the eroded/ permissi-ble weathered surface with few into soil	Mainly gullies in its vicinity which serves as hideout for unsu-pervised children	Minimal tourist activities due to insecurity	Poor accessibility due to the weathered steps	Void of tourist facility	Running track not in good condition and require upgrade
Boundary Space	Scanty vegetation with little shrubs and grasses	Drainage of water is natural as it drains into con-structed surface drainage channels	Hill eroded residue as well as a place for waste disposal and open defecation	Minimal tourist activities due to insecurity	Easy accessibility from adjoining roads with fair circulation	Void of tourist facility	The core boundary requires regular maintenance

Hill Top: Features fair vegetation with drought-tolerant species like sedum. Natural runoff drainage occurs, and it has transitioned from a divine place to a scenic area. However, it suffers from minimal tourist activities due to insecurity, poor accessibility because of weathered steps, and a lack of tourist facilities. Regular maintenance is needed.

Weathered Surface: This area lacks vegetation, exposing it to harsh weather. Rainwater is absorbed through the eroded surface, and gullies serve as hideouts for unsupervised children. Tourist activities are minimal due to insecurity, and poor accessibility persists. Tourist facilities are absent, and the running track requires an upgrade.

Boundary Space: Characterized by scanty vegetation with small shrubs and grasses, natural drainage into constructed channels, and use as a waste disposal site. Accessibility from adjoining roads is fair, but the area lacks

tourist facilities. Regular maintenance is necessary for the boundary.

Overall, Dala Hill requires improved accessibility, enhanced tourist facilities, and consistent maintenance to preserve its cultural and natural significance. The analysis is to validate findings from the literature survey; the micro-space data serve as an initial estimate of the weaknesses and potential services offered by the heritage landscape. The socio-ecological assessment can be used in different means to support policy and its implementation.

4.2 Conservation Effort and Intervention Processes

Conservation and intervention approaches: Given the central focus of the study, the concept of conservation theory emerged as a pivotal tool for elucidating the subject matter. Conservation theory emerges as a constructed endeavour shaped by a tapestry of social, political, economic, religious, spiritual, and cultural dynamics. This intricate interplay guides the efforts to safeguard the subject matter in question. This theory serves to elucidate the shifts within the transformative scheme; from the physical constitution of heritage material to the intrinsic standards that cultural heritage embraces for individuals. This theory operates through three overarching principles: value-based, material-based, and people-based. These principles acknowledge external influences encompassing technical, political, social, and economic aspects. A distinctive departure from conventional heritage preservation practices, this theory has evolved into a mechanism for cultivating and revitalizing culture [41, 42].

Applying these principles, the materials-based facet entails determining the minimum essential actions needed to ease the situation. For example, Dala Hill, a heritage asset, is undergoing gradual deterioration and weathering due to climatic factors (Figure 3). Addressing this necessitates a coordinated intervention involving social, political, technical, and financial considerations to ensure its stabilization and conservation. However, the intercession should adopt a measured approach to retain, sustain, and augment the cultural impact embedded in the hill. Ultimately, this belief underscores the significance of engaging the local communities. As such, the aspirations of the inhabitants living in the community where the subject matter resides are integral components guiding the restoration process.

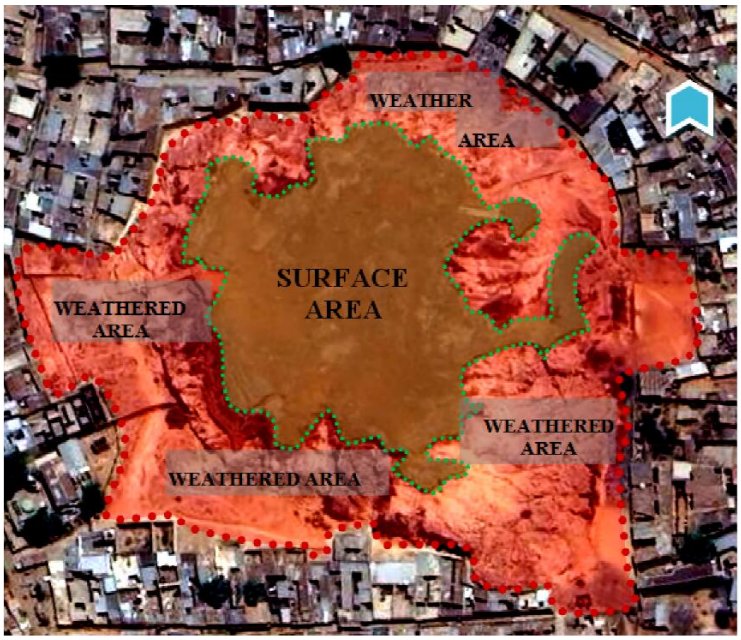

Figure 3. Aerial view of Dala Hill, climatic impact and residents encroachment outlined

4.3 Challenges

The challenges encountered in natural planning can be traced to three key domains: Physical and natural Challenges, Cultural and ecological Management:

4.3.1 Challenges in physical development and the environment

These challenges can be assessed through both socioeconomic and environmental lenses. The escalating city population has led to an increase in slums and makeshift settlements. The rampant growth of these shantytowns contributes to sprawling urban growth, presenting a significant planning quandary. Providing and effectively managing essential infrastructure such as roads, drainage systems, sewage networks, and other facilities becomes an intricate task. Moreover, slums give rise to a host of issues, including criminal activities, heightened poverty levels, urban confrontations, environmental degradation, and disease outbreaks. The challenges in physical development

and the environment encompass conflicting land usages, such as the encroachment of commercial functions into residential zones. This, in turn, results in unappealing aesthetics and an undesirable urban landscape, characterized by dense building arrangements and a heightened incidence of structural failures. The encroachment of informal shanties into planned regions further compounds these difficulties. Infrastructure-related predicaments manifest in narrow and inadequately constructed roads, often devoid of proper drainage provisions. The environmental landscape is plagued by issues like traffic congestion, pollution encompassing noise, atmospheric pollutants, and water contamination, as well as problems like flooding and tidal surges. These issues are particularly pronounced in areas inhabited by economically disadvantaged individuals. The rapid population growth and the accelerated urbanization occurring within the metropolis have led to the concentration of a growing number of people, particularly the impoverished, in ecologically fragile areas [43, 44].

4.3.2 Cultural challenges

This phenomenon is primarily linked to local residents' reluctance, especially when facing obligatory success or the threat of eviction. The 1978 Land Use Decree grants governors the power to invoke the concept of overriding public interest. Section 28 of the Decree states that a military governor can nullify a right of occupancy for overriding public interest ([45]). Section 28(2) details this concept in cases involving statutory rights of occupancy, including:

a) Transfer of occupancy rights against the decree's stipulations.

b) Land needed by the state or federal government for public purposes.

c) Land required for mining, oil pipelines, or related purposes.

d) Land needed for plot allocation.

The respondent points out that this resistance occasionally results in loss of life and property due to the disturbances it triggers. Likewise, the strong cultural attachment that certain individuals, particularly within the walled city, feel toward a specific area obstructs effective urban renewal efforts.

4.3.3 Challenges in environmental management

This encompasses barriers posed by insufficient technical resources and manpower, legislation, instances of corruption, and a lack of public engagement. Additionally, complete community involvement remains unrealized. Planning still largely remains a process "for the people" rather than "with the people." Consequently, planning often becomes unsustainable as the populace doesn't perceive a sense of responsibility toward their environment.

4.3.4 Phases of challenges

While analyzing field data, the authors identified planning obstacles manifesting in distinct stages: pre-development, development, and post-development (see Figure 3).

In the pre-development phase, challenges often relate to land acquisition, its governing stipulations, suitability for development, and official registration. These factors impact planning processes and the sustainability of new settlements. Additionally, managing land outside urban areas is problematic. According to the 1978 Land Use Decree, all rural land should be managed by the local government or traditional authorities through the customary right of occupancy.

The development phase pertains to the phase where land is poised for developmental endeavours. This encompasses matters such as the failure to seek approval for building plans or the absence of designation as a development zone (implying that it has not undergone surveying and transformation into layouts or zoning).

The post-development phase denotes the period during which properties have been developed, with instances of unauthorized conversions or developments occurring within an area.

4.4 Problems

This pertains to the manner and strategy applied in the planning process or the execution thereof, aimed at ensuring the systematic advancement of the heritage landscape (Dala Hill). Planning regulations and guidelines are intended to uphold impartial principles; however, practical implementation often leads to perplexity and instances of inequity. Among the prominent challenges is the occurrence of jurisdictional clashes between government bodies and departments tasked with city development. Such conflicts frequently give rise to uncertainties regarding agency responsibilities, promoting redundancy in functions, imprudent allocation of limited resources across agencies, and subsequently causing a dearth of synchronization in city management.

Another underlying issue arises from the technical inadequacies inherent in the prevailing land policy and the mechanisms driving its enactment. These issues can be further categorized and elaborated upon as follows:

1. Legislative Gaps: A deficiency in specific legislation pertaining to cultural heritage and protected areas, incomplete coverage of resource-related laws, and a limited extent of regulatory measures.

2. Ineffectiveness in Conservation: Inability to achieve substantial conservation outcomes, resulting in a lack of discernible conservation impact.

3. Inadequate Management and Internal Discord: Instances where the same agency pursues diverse objectives and mandates, leading to confusion and facilitating corrupt practices.

4. Insufficient Funding: Limited financial support for fundamental activities such as preliminary surveys and routine patrols. Restrictions on fund usage, coupled with unstable funding sources, pose challenges.

Additional Challenges: Issues concerning conservation planning, community regulation and benefits, innovative research initiatives, comprehensive resource inventory, and the deployment of conservation measures.

4.4.1 Inconsistent policies

Another significant impediment to achieving sustainable planning within Kano Metropolis is the inconsistency in government policies. Despite the existence of several commendable policies in Kano and Nigeria, their execution remains inadequate. For example, while urban and regional planning laws have established planning agencies at federal, state, and local levels, these measures have not yet led to substantial actions. Moreover, these policies sometimes favour the affluent and powerful, neglecting the interests of the less privileged. The current democratic era exacerbates this situation, as politicians frequently alter policies for short-term gains, particularly during election campaigns. Additionally, planners find themselves directed and controlled by politicians, complicating their efforts to fulfil their planning duties. Even more concerning is the fact that policies are formulated without engaging the general populace, often resulting in resentment and misconceptions regarding the rationale behind these policies, thus making them unpopular. Akinbamijo and Alakinde [46] observed that, "the implementation of state land use laws often occurs in an inefficient, if not perplexing, and contradictory manner. Planning regulations and policies undergo constant changes based on the ruling government or politicians in power at any given time, as well as the bureaucrats responsible for drafting the legislation. Furthermore, the development time frames frequently exceed the lifespan of planning policies and trends, from conceptualization to conclusion. Such frequent policy changes pose a significant challenge."

4.4.2 Lack of political fortitude to corroborate compliance

This pertains to the enforcement of planning rules and regulations. Respondents contend that despite the clarity and precision of legislation regarding unauthorized development, enforcing these regulations becomes a challenging task. Instances of unauthorized settlements emerging without proper planning, particularly on the outskirts of towns and cities, often go unnoticed by planners. By the time action is taken, these areas have undergone advanced development, making enforcement difficult. This exacerbates the city's planning challenges and places a financial burden on the government during urban renewal efforts. The approach of shelter first, plan afterwards has proven unfavourable to the sustainable administration of the urban atmosphere.

4.4.3 Technical setbacks

This pertains to the absence of contemporary and cutting-edge planning tools and equipment. One of the key functions of planning is to stay aligned with the evolution and progress of towns and urban areas, which can only be realized through access to current data collection and analysis tools. Access to these tools enables planners to make informed decisions that reflect the dynamic nature of urban development, ensuring that strategies and interventions are responsive to the changing needs and circumstances of urban areas. The advent of Geographic Information Systems (GIS) has revolutionized the approach to planning. In the past, planning practices were relatively straightforward, encompassing basic land use exercises and addressing issues such as problematic intersections and substandard housing layouts. Traditional tools like T-squares and drawing boards were the primary instruments in every planning office, with information being stored in physical files, sometimes prone to being misplaced unnoticed. In response to changing demands and dynamic urban land use patterns, planning has had to adopt new strategies and programs, necessitating improved methodologies and dependable tools. T-squares and drawing boards have now become obsolete and have been replaced by computer networks, while GIS has emerged as the principal tool in the planning process. GIS facilitates effortless data storage, retrieval, and updates, producing well-organized maps. It has the capability to input, store, manipulate, and analyze data crucial for planning, decision-making, and implementation.

4.4.4 Funding matters

This aspect can be viewed from two perspectives: Firstly, the lack of funds for procuring equipment like base maps and modern computing devices that assist in spatial planning and innovative conservation methods; and secondly, the insufficient financial resources for employing and retaining skilled personnel, as well as cultivating capable manpower. Due to inadequate funding, the essential facilities required for planning activities are unavailable. Therefore, the department's activities are confined to approving layouts and building plans submitted by families, communities, and individuals, as well as granting statutory land occupancy rights to landowners [47]. Land use and city planning often receive little to no direct financial allocation, as these activities are typically excluded from state budget proposals. Most funds are directed toward staff salaries and compensations. This financial constraint hinders the initiation of land use and management plans. Furthermore, the responsibility for providing essential infrastructure and amenities has shifted to political officeholders and contractors due to resource shortages.

4.4.5 Corruption issues

Some developers undertake construction activities without following proper planning procedures, often with the complicity of corrupt planning officials. Bureaucratic obstacles in seeking planning consent and land registration make the development process arduous, complex, and prone to abuse [48, 49]. A relevant example is the Federal Capital Territory (FCT) of Abuja, where corrupt land administrators and public officials misused the Abuja Master Plan, leading to widespread demolitions from 2005 to 2007 by the FCT Minister. Kano faces similar issues, with state governors demolishing allocated plots in 2011 and again in 2023. The expiration of the Kano Master Plan, prepared by Trevallion [35] in 1963, without an updated version, leaves the city vulnerable to manipulation.

4.5 Protected Area Planning Schemes

Planning serves as the conduit guiding us from the present into the future. Planning strategy involves crafting and executing methods that bridge the gap between our current state and the desired future state, often set a few years ahead (5 or 10 years). It's a process of informed decision-making, as asserted by Sawarkar [50].

4.5.1 Management plan

A management plan functions as a tool to aid managers in shaping their conservation objectives and navigating the management journey. It's the document that establishes the link between resources and objectives, efficiently utilizing the former to attain the latter. Resources can encompass human, financial, social, and informational assets, while objectives encompass desired management levels, encompassing vision and goals. A management plan is pivotal in the context of protected area management, serving as a guiding framework. It also acts as a measuring stick, allowing us to monitor changes and track progress. However, the creation of a management plan is not the final step; it should be both descriptive and prescriptive, with a crucial element of flexibility. The approach conceptualized by Thomas and Middleton [51], which has been proven effective by Poudel [52], holds several key attributes:

i) It's a continuous process rather than a one-time event;
ii) It's future-oriented;
iii) It involves making value judgments;
iv) It follows a systematic and predetermined methodology;
v) It's an ongoing, iterative process;
vi) It adopts a holistic perspective.

Although this concept may be symbolic at the neighbourhood level, it is more aptly applied in the realm of protected area management, serving as a guide for activities over a designated time span. A management plan should encompass various aspects, such as the wildlife population, their habitats, and the concerns of local communities. Particularly for the effective management of eco-tourism, the plan should encompass activities related to planning, organizing, staffing, directing, coordinating, reporting, and budgeting within the designated study area.

4.5.2 Conservation Action Plan (CAP)

The practical framework aims to mitigate the urban strains on Dala Hill. It adopted a strategy of PEBOSCA aspects (Physical, Ecological, Bio-cultural, Organisational, Social, Cultural, and Aesthetical) regulating urban forces. Valuable management can significantly improve socio-cultural and ecological diversity.

The implementation frame presents a set of processes to lessen urban dependency. Figure 4 briefly illustrates the expected systemic implementation and action plans for landscape heritage optimisation based on PEBOSCA resources. The CAP is briefly outlined below. The operational plans will place emphasis on the grey-coloured boxes, which represent the main implementation actions and directly derived actions as below:

Stage IA: Physical and Organisational

The first phase of Level 1 covers enhancing the physical functions and activities of the hill, establishing efficient community accessibility, developing efficient and economical land-use, and an inclusive management and landscape plan.

Stage IB: Bio-cultural

This comprises increasing biodiversity, reducing bio-degradation of the hill, conserving the cultural heritage, and enhancing access to cultural sites.

Stage IIA: Socio-economic

The first phase of Level 2 entails fostering social interaction, improving local and international tourism, raising government tax income, increasing property values, promoting social equity, and improving living conditions.

Stage IIB: Aesthetical

This includes community and core boundary beautification, guided by improving visual landscapes.

While the PEBOSCA model requires partnership between the local communities and government, both parties should work strongly in agreement with related bylaws and policies to revitalise this cultural and tangible landscape.

To ensure the enduring conservation and management of the endangered hill, a collaborative effort involving various levels of government (local, state, and federal) as well as relevant professionals such as historians, geographers,

landscape architects, geologists, planners, and conservationists, among others, is necessary. This collaboration aims to formulate and execute action plans that recognize the ongoing commitment required to safeguard and conserve these sites indefinitely.

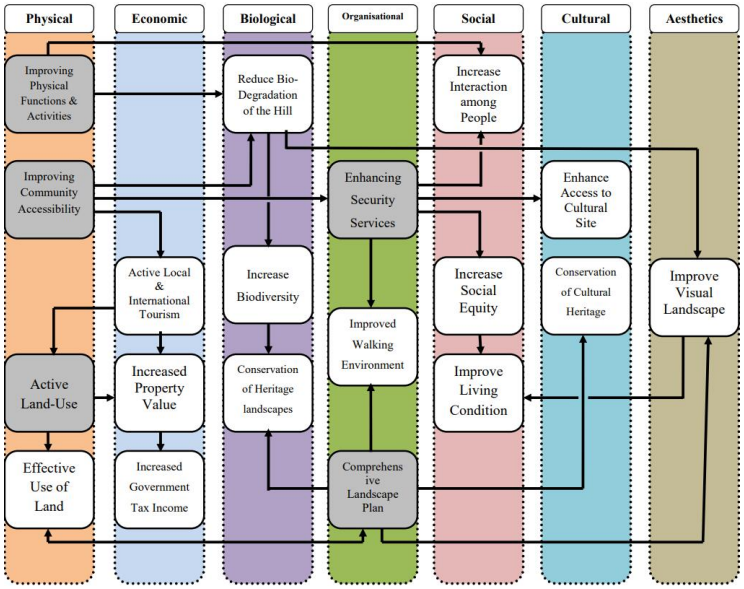

Figure 4. Diagram of CAP

4.5.3 The effectiveness of management

Criticism regarding management effectiveness has spurred the National Commission for Museums and Monuments (NCMM) and UNESCO's World Heritage Centre to prioritize evaluation practices. These organizations are establishing specific benchmarks for member states. Nations committed to developing assessment systems for management effectiveness aim to report on 30 percent of their protected areas by Hockings et al. [53].

The frameworks developed by IUCN [6]and WCPA [54] delineate six essential elements to assess management effectiveness: planning, outputs, processes, context, inputs, and outcomes (refer to Figure 5). These elements are categorized into three main themes: design (context and planning), adequacy and sufficiency (inputs and processes), and execution (outputs and outcomes).

The current state of management plan execution for the landscape heritage could be described as unplanned but partially initiated. Even with various research policies in place, there has been no evaluation of the efficacy of the management of the protected area by NGOs or local communities. The viewpoints and feedback from those responsible for conservation efforts are seldom considered by policymakers and decision-makers. There is a compelling requirement to encourage the establishment of a monitoring and evaluation system that focuses on safeguarding resources, promoting tourism and recreation, and fostering community development.

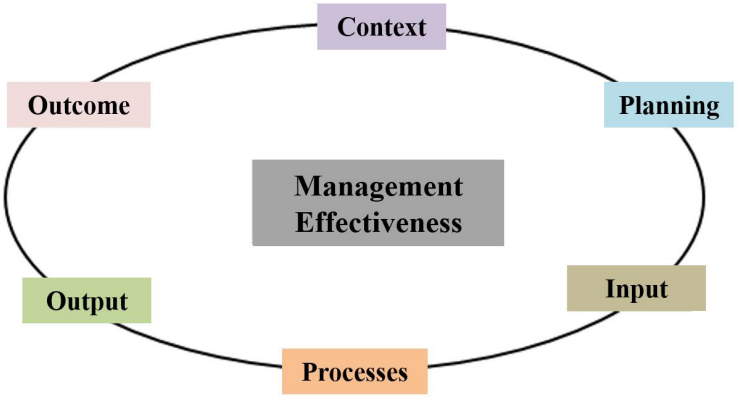

Figure 5. Management effectiveness assessment framework by Hockings et al. [53]

5 Summary and Discussion

The Dala Hill exhibits limited flora and fauna due to its deserted nature, dense land cover, and unique composition. While this is a common characteristic of hills in the Kano region and its surroundings, the vegetation on Dala Hill is sporadically distributed in minute patches and mostly found at higher elevations. The presence of such vegetation suggests ongoing weathering that has lowered the hills' elevation, and these pockets of vegetation are remnants of a once-extensive land cover from the past. Consequently, their protection is necessary. Interestingly, the richness of vegetation is observed not in fully covered or completely open areas, but rather in a partially degraded state.

However, findings through literature highlight significant threats to Dala Hill, including neglect, decay, and deterioration caused by weathering and human activities, which is in line with the fieldwork by the authors. The site suffers from improper waste disposal; open defecation, unsanitary conditions, poor accessibility, and serves as a haven for criminal activities.

The finding also highlights the perspectives of the host community regarding the potential of the site from an economic standpoint; Dala Hill has the potential to boost the local economy through shopping opportunities, investment spending, employment prospects, livelihoods, quality of life, land and housing prices, property taxes, communal funding, and the rehabilitation of basic infrastructure. It could also interrupt normal business operations and contribute to foreign exchange earnings.

From a socio-cultural viewpoint, the site has the potential to achieve several objectives: fostering a sense of identity and value, revitalizing arts, showcasing local culture, supporting festival celebrations, meeting leisure needs, safeguarding local cultural uniqueness, aiding in the documentation and preservation of heritage properties, providing social and entertainment support, encouraging interactions with locals, promoting safer communities, commercializing local traditions, and facilitating cultural exchange.

Residents also recognize the site's environmental potential, which includes conserving and restoring heritage sites, making substantial investments in infrastructure, enhancing environmental aesthetics, raising awareness about the importance of resource conservation, improving parks and recreational areas, attracting protective measures, and stimulating planning efforts to enhance amenities, among other benefits.

6 Conclusion and Recommendations

The study aimed to analyze Dala Hill and establish a planning and management strategy that considers its historical and utilitarian value. Additionally, the study aimed to document, protect, and conserve the landscape heritage of Kano's ancient city to support tourism, community development, and resource preservation. The hill's primary draw is its historical evolution. However, despite its historical significance, the hill has been threatened by decay and deterioration due to both weathering and human activities. Currently, the site suffers from inadequate sanitation, inappropriate waste disposal, limited right of entry, open defecation, and serves as a criminal hide-out.

Finally, the research delves into the influence of culture on landscapes, investigating not just its current effects but also its potential influence on future landscape conception and conservation. Furthermore, the study underscores the significance of safeguarding cultural landscapes as a means to counter the ongoing deterioration of both the biological and cultural dimensions of landscapes. In achieving this, the research identifies tangible and intangible attributes linked to landscapes, along with the various types of connections they foster. Additionally, the study showcases the amalgamation of diverse fields of knowledge, essential for a holistic grasp of cultural landscapes.

Based on the foregoing, this study has attempted to attain its aim by developing a planning and management scheme that assigns value-based principles with the intention of safeguarding both cultural and natural heritage. This endeavour holds significance with SDGs, particularly SDG Target 11.3, focusing on 'inclusive and sustainable urbanization, planning, and management,' as well as SDG Target 11.4, centered on the 'protection and preservation of the world's cultural and natural heritage.

To address the challenge highlighted in the findings, the CAP, along with the following strategies, were recommended for execution:

1. Policy Implementation: Enforce urban planning policies that prioritize the preservation of heritage and cultural landscapes.

2. Funding and Investment: Secure funding from NGO funds, government budgets, and international grants for the preservation of heritage and cultural landscapes.

3. Public Awareness: Raise public awareness about the benefits of heritage and the cultural landscape.

4. Collaborative Efforts: promote collaboration among government institutes, non-governmental organizations, and the private sector to extend innovative solutions for urban landscape challenges.

7 Future Research

This paper presents a value-added plan as a valuable tool for future conservation and management plans. However, its limitations, for instance, the temporal constraints, geographic scale, and contemporary implementation challenges, should be considered when applying its findings to other contexts or over longer timeframes. Meanwhile, future

research should focus on exploring more approaches to achieving sustainable heritage and tourism. However, Kano ancient city also hosts several other noteworthy sites within its walls that warrant investigation. These include the relics of the ancient Kano walls, thirteen ancient city gates, the Gidan Rumfa (Emir's Palace), the Gidan Makama (Historical Museum), Masallacin Shatsari (Ancient Arabian Mosque), 500-year-old Kofar-Mata dyeing pits, and the Kasuwar Kurmi (African famous Kurmi market), to mention a few, among others. These heritage properties surround the subject of the present study and deserve exploration as they contribute to the area's external aesthetics.

Data Available

The data used to support the research findings are available from the corresponding author upon request.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

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