



Disaster and Conflict Management Strategy for Sustainable Conservation of Heritage Resources

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Abstract

Heritage resources are increasingly being threatening by environmental phenomena like flooding, drought and climate change. The aftermath effects of all these catastrophes on the lives of the people and heritage resources being conserve is precarious hence there is need to develop appropriate strategies for adaptation. The paucity of knowledge on the management strategies for sustainable conservation of the heritage resources in the face of disaster and conflicts has necessitated this study. Systematic review of published articles, conference proceedings, interacting documents, conventions, frameworks, treaties and guidelines that inform the conservation of these resources was undertaken with a view to develop appropriate framework. This paper revealed that heritage sites are not exempted from the increasing waves of disasters and conflicts. This calls for society to build their resilience from upsetting peace, progress and sustainable development arising from disaster and conflict in their communities. Policy makers, Non-Governmental Organisations, Government agencies and other relevant stakeholders will benefit tremendously from the blueprint that emanated from this study towards developing appropriate sustainable management strategies to addressing the issues of disaster and conflict threatening sustainable management of heritage resources.

Keywords: Environmental Phenomena; Conflict; Disaster; Heritage Resources; Management Strategies

Introduction

The increasing cases of disaster and conflicts across the world are becoming serious concern. According to a report by the United Nations Environment Programme (UNEP, 2023) [1] the world has witnessed more than 2500 cases of disasters and 40 major conflicts and these have impacted the lives of estimated 2 billion people (UNEP, 2023) [1] While disaster is perceived as cases of potentially negative events where a variable of vulnerability is present and prevention is not effectively possible (CAPRA, 2024) [2] conflict is considered as negative impacts of a series of episodes including latency, feeling, perception, manifestation, and aftermath in which the effective management between stakeholders can significantly reduce these factors (Wang et al, 2016) [3].

Unlike disaster, risk may be understood, studied, quantified, and reduced with a view to preventing disaster. Thus, risk is the

probability that the occurrence of a natural, technological, or natural/societal event among a highly-vulnerable population will result in human, infrastructure, economic, or financial loss. Risk comprises several elements, primarily hazard (e.g., tsunami, hurricane, intense rain, technological accident, etc.), exposed elements, and the vulnerability of the latter to the event (e.g., poorly built housing, riverbank construction, lack of social safety nets, etc.). Shen et al, 2023 [4] opined that literature review and information obtained from the hazard data across the world revealed increasing trends of more natural and technological disasters and greater risk impacts, especially when the trends are considered together with growing urbanization, increasing population and deepening industrialization globally over the past 50 years.

In the quest to achieve peace and tranquility in the World, the 2030 Agenda for Sustainable Development, adopted by all United

Nations Member States in 2015, provides a shared blueprint for peace and prosperity for people and the planet, now and into the future (UN, 2023) [5]. At its heart are the 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all countries - developed and developing - in a global partnership. They recognize that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth – all while tackling climate change and working to preserve our oceans and forests.

Heritage sites are not exempted from the increasing waves of disasters and conflicts simply because of their uniqueness and outstanding qualities. Heritage resources are tangible and intangible cultural and natural products that are expression of the societies that are living or lived in the area including landscape, sacred forests, vast buildings, historic monuments, works of art and folklore, traditional ways of life, festivals, archeological sites, craftsmanship, artefacts and language (Ezenagu and Geraghty, 2020) [6]. Bonastra and Deulofeu, 2024) [7] emphasized the roles played by monuments in contemporary urban life as living spaces of memory, conflict resolution and potential transformation

Disaster and Conflicts in Natural and Cultural Heritage Resources

It is expedient for any society wishing to develop and rise from poverty to have effective disaster risk and conflict management policies and strategies to prevent the impacts of these from thwarting progress and sustainable development in their communities. Peace is considered an integral part of sustainability, this formed the basis for its inclusion in the global political Agenda 2030 as “Peace, Justice and Strong Institutions”, the 16th Sustainable Development Goal (SDG) [8]. The integral and interlinked character of the SDGs signifies that human well-being and peace is indivisible from environmental goals (including sustainable natural resource management in SDG 6 on water, 7 on energy, 12 on consumption and production, 13 on climate change, 14 on oceans, and 15 on terrestrial ecosystems).

Findings from literature revealed that Cultural Heritage is being advocated as the fourth pillar of sustainability together with ecology, society, and the environment (Sabatini, 2019) [9]. Effective management of Cultural Heritage resources has been identified as a veritable toll towards achieving the 2030 sustainable development goals (UNESCO, 2012) [10]. This has led to a paradigm shift in the integration of Cultural Heritage into disaster risk management (DRM) theory and practice (De Masi et al., 2021) [11]. This integration is very important in view of the perceived vulnerability of Cultural Heritage to the increasing severity and frequency of disaster events as a result of climate change (Bosher et al., 2019; Oladeji et al., 2023) [12,13].

The United Nations Environment Programme (UNEP) suggests that in the last 60 years, at least 40 per cent of all intrastate conflicts have a link to natural resources, and that this link doubles the risk of a conflict relapse in the first five years (UNEP, 2023) [1]. A report from UN- Peacekeeping revealed that since 1990, at least 18 violent

conflicts have been fueled by the exploitation of natural resources, whether high-value resources like timber, diamonds, gold, minerals and oil, or scarce ones like fertile land and water. Quite a good number of these natural resources are found in heritage sites that are seriously being threatening. IUCN, 2010 observed that over a third of Natural World Heritage Sites designated by UNESCO are under threat from myriad problems with climate change, illegal fishing and by-catch, coastal development and water quality issues all posing major threats to their future. Notable among the threatening natural heritages sites are the Great Barrier Reef of Australia, Virunga and Garamba national parks in the Democratic Republic of Congo, and the Rio Platano Biosphere Reserve in Honduras. Similarly, cultural heritage sites are not exempted from the disaster, risk and conflict.

Climate change has been reported as the most prevalent threat to World Heritage Sites, According to the IUCN World Heritage Outlook (Osipoya, 2020) [14], which tracks the conservation of all natural World Heritage sites, climate change as a high or very high threat in 33% (83 out of 252) of natural World Heritage sites – up from 26% in 2017 (62 out of 241), and from 15% in 2014 (35 out of 228 sites listed at the time). The findings is in tandem with the results obtained by Oladeji, et al., 2023 [13] at Osun Osogbo Sacred Grove where the minimum temperature is observed to increase with margins ranging from 19.10C to 220C; similar results were obtained for the maximum temperature as it also increased from 28.50C to 310C over a period of fifty nine years (1963 -2022). The authors observed that change in climate has affected the health of the people living around the grove and also working within grove premises, especially due to change in rainfall pattern and temperature while the archeological and monuments in the grove are at the risk of perennial flooding.

Venice is a UNESCO World Heritage Site that epitomizes cultural richness and architectural splendour (UNESCO, 2017) [15]. However, the city has faced multifaceted threats, including recurrent flooding or aqua Alta, its densely packed urban layouts and historic buildings made it susceptible to fires, numerous military sieges, including attacks by the Ottoman Empire and conflicts with rival city-states, resulting in periods of political instability and economic decline; damaging earthquakes, overtourism and urbanization, jeopardizing its cultural legacy and societal fabric (UNESCO, 2019) [16].

The Roles of Multinational Organisations in Disaster and Risk Management

The theme of the year 2024 World Monument Day as declared by UNESCO “Disaster and Risk through the lens of Venice Charter” is a clear indications of the efforts of International organisations such as UNESCO, ICCROM and ICOMOS in ensuring integration of Cultural Heritage into wider Disaster Risk Management Strategies. In addition to this, these international organisations reinforce the regulatory framework with a lattice of interacting documents, frameworks, conventions, and guidelines that inform the conservation of the world’s Cultural Heritage. For example, The World Heritage Convention’s guiding document ‘Convention concerning the protection of the world cultural and natural

heritage' serves as a centralised text outlining the duties of state parties to protect their CH (UNESCO, 2012) [10]. Likewise, UNESCO has attempted to develop a framework (UNESCO, 2017) [17] in line with the Paris Agreement, Agenda 2030 (UNCC, 2018) [18] and the Sendai Framework for Disaster Risk Reduction (SFDRR) with a view to engage climate-related scientists within their Strategy for Action on Climate Change (SACC) (UNDRR, 2015) [19]

The United Nations Office for Disaster Risk Reduction (UNDRR) has a big ambition: to help decision makers across the globe better understand and act on risk. Every 6 November, the UN celebrates the International Day for Preventing the Exploitation of the Environment in War and Armed Conflict. Disasters Passed': Resilient Caribbean Futures Via Shared Knowledge of Recent Disasters is aimed at bringing together and celebrate different forms of knowledge on two Eastern Caribbean Islands. UNESCO has designed the process in a dynamic manner that underpinned collaboration between scientific bodies, governmental organizations and, critically, the wider community. The African, Caribbean and Pacific-European Union Natural Disaster Risk Reduction (ACP-EU NDRR) Program was launched in 2011 as an initiative of the ACP Group of States, funded by the European Union and managed by the Global Facility for Disaster Reduction and Recovery (GFDRR) (Jerez Columbia, 2022) [20].

A Friends of Ecosystem-based Adaptation (EbA) multimedia story on EbA and green recovery explored how communities around the world are more resilient to, and building back better from, the COVID-19 pandemic thanks to EbA initiatives such as the revival of traditional agroecological practices, conservation of local crop diversity including heirloom varieties, and reestablishment of traditional infrastructure such as water infiltration. The discussion of the Venice Charter aligns seamlessly with the overarching theme of the ICOMOS Triennial Scientific Plan, "Disaster and Conflict Resilient Heritage: Preparedness, Response, and Recovery" that highlights the imperative to address contemporary challenges facing heritage, particularly in the context of disasters and conflicts. Venice Charter provides detailed information on the basic principles of preserving and restoring ancient monuments. It can be accessed at the website of the International Council on Monuments and Sites (ICOMOS). This charter was approved at the 'Second International Congress of Architects and Technicians of Historic Monuments,' in 1964. It was adopted by ICOMOS in 1965. This document provides details on the scope of principles guiding preservation, restoration, and excavations of historic sites. Besides this, it defines guidelines for publishing reports of these processes in the public domain for future research. Some of the areas defined in the charter include restoration, excavations and publications

Disaster Risk and Conflict Management Strategies

The impacts of disasters on the physical, environmental, economic, cultural and social impacts, including the loss of lives and livelihoods could be significant and detrimental on buildings and infrastructure, and sometimes result in the displacement of communities, as well as the destruction, damage, and fragmentation of both tangible and intangible heritage resources (Giliberto, 2022) [21]. Although perhaps not all disasters can be prevented,

significant reductions in the probability of their occurrence can be achieved. With appropriate risk data, potential impacts of events can be determined and attempts made to minimize negative impacts and ensure much better preparedness to handle critical situations should they occur. Societies well-informed and prepared to respond to disasters and, especially, to mitigate them, are more resilient and more likely to rise from poverty. In light of the social, environmental and historic causes of underdevelopment and the inequalities shaping differential vulnerability to climate change, it has been argued that disasters are not so natural and there is need to develop risk reduction, sustainable development, climate action and climate justice based on human factors (Chmutina & Meding, 2019) [22]. Risk management strategy should be developed in such a way that it minimize harm, and monitoring measures' effectiveness (Gibson, 2023) [23]. Risk management and mitigation strategies can help reduce the impact of hazards and prevent them from turning into disasters.

It is on this note that this article provide useful information as strategy that could be adopted by natural and cultural heritage resources planner, managers and policy makers in addressing the issues of disaster and conflict that are threatening sustainable management of these resources.

Adequate recording and transfer of memories through arts and culture will ensure protection of heritage from disasters and, where this proves impossible, mitigate heritage loss and damage in disaster recovery and reconstruction processes. This assertion revolve round the four major pillars of UN World Conference on Disaster Risk Reduction held in Kobe, Japan (January 2005), which adopted the Hyogo Framework for Action 2005 – 2015, and one in Sendai, Japan (March 2015), that adopted the Sendai Framework for Action 2015 - 2030 emphasising the need to understand disaster risk; strengthening disaster risk governance to manage disaster risk; investing in disaster risk reduction for resilience and enhancing disaster preparedness for effective response and to Build Back Better' in recovery , rehabilitation and reconstruction.

There is also a need to support preparedness to reduce loss from disasters through comprehensive assessments that explore projected risks and vulnerabilities of heritage sites and the definition of appropriate prevention and mitigation measures. Tyubee, 2020 [24] opined that Disaster Preparedness (DP) will assist heritage resources managers to predict, and where possible prevent disasters, mitigate their impact on vulnerable populations, and effectively response to and cope with their consequences at local, national, regional, and international levels.

Development of overarching risk management plans equipped to address multiple challenges, gender sensitivity, inclusiveness and build bridges between disaster risk reduction, climate change adaptation, heritage conservation and tourism management should equally be taken into consideration. In the quest to mitigate the impacts of disasters on different individuals and groups based on age, disability, nationality and other social, cultural and ethnic differences. The International Federation of Red Cross and Red Crescent Societies (IFRC, 2020) [25] has emphasized that disaster assessments, activities and programs should incorporate a gender

and diversity analysis and should be designed and implemented in a culturally sensitive, participatory, inclusive and accessible ways that respects and protects dignity and human rights.

The efficacy of the use of heritage knowledge, including traditional practices, techniques and materials, together with innovative technological solutions, to ensure more sustainable responses in reconstruction and recovery processes and foster resilience to future disasters have been emphasized by authors in literature. For instance Oladeji et al, 2018 [26] observed that traditional knowledge or indigenous knowledge system have been explored by rural farmers in Akure North Local Government of Ondo State, in developing climate change and adaptation strategies. IUCN has developed holistic approach to cope with disaster and climate-induced hazards, by developing integrated management plans for both cultural and natural heritage, preferably using a landscape approach which pays full regard to contribution of tangible and intangible heritage such as in the form of traditional and local knowledge ancestral practices (Gilberto, 2022) [21]

Holtorf, 2018 [27] opined that cultural heritage needs to be conserved as an important resource for fostering cultural resilience, reducing disaster risk, and supporting peace and reconciliation in the future especially in post-disaster recovery. This can be achieved through in-depth review of case studies, lessons learnt and saleable examples that depicts effectiveness of disaster response in fostering mutual understanding between people through an increased ability to accept loss and transformation in post-disaster and post-conflict environment.

The relevant of ethnography as a veritable research method involving systematic study of human cultures and societies through observation and participation to gain a deep understanding of their culture for an extended period of time to gain understanding of the norms, values, beliefs and practices of the people has been observed (Cassar, 2023) [28]. Data generated and information obtained through conduct of ethnographic research enables people to understand local values and the cultural dimensions that underpin disaster responses and the results of the analysis could lead to informed decision on disaster planning and management.

Correspondingly, multidisciplinary approach, cutting edge and transdisciplinary research facilitates collaboration through the integration of diverse forms of knowledge and methodologies to address multifactorial problems. This is in tandem with the view of Adler, 2018 [29] that the outcome from this research support joint efforts in management and planning and generate practice-oriented solutions that transcend disciplinary boundaries and including the perspectives and needs of diverse stakeholders in the research process. Benzie and Persson, 2019 [30] proposed a theoretical framework that integrate participatory, transdisciplinary and translocal approach of the Small Islands Development States to transgress epistemic, political and physical borders in the face of increasing 'borderless climate risks'.

The lesson learned from the impacts of adaptation initiatives led by Caribbean SIDS through triangulation with international organisations and the European Union, within the African, Caribbean and Pacific-European Union Natural Disaster Risk

Reduction (ACP-EU NDRR) Program justified the basis for working with the local authorities and communities to provide training, guidance and advice to assist in building their capacity to conduct post-disaster needs assessments and mainstreaming disaster risk reduction in recovery planning (ACP-EU NDRRP, 2019) [31]. This could also provide opportunity preparation and mitigating against disasters needed to promote local long-term custodianship and commitment to heritage conservation and management.

Conclusion

Heritage resources including cultural and natural, tangible and intangible are invaluable resource for emergency preparedness and recovery. Through effective management and collaboration with relevant stakeholders including the local communities, assessment of probable losses to which these resources are exposed could be conducted. The data obtained will assist in planning appropriately and taking informed decisions necessary to reduce existing risks and prevent the generation of new. There are indications that Sustainable development and the 2030 Agenda cannot be achieved without working towards that goal of building resilience. The effective management of conflict between stakeholders can significantly reduce factors relating to project on sustainable heritages resources conservation. This assertion hinges on the premise that Heritage plays crucial role in fostering resilience by reducing vulnerabilities, and also by providing precious assets for the sustainable social and economic development of an affected region during its recovery phase, by attracting investment, creating employment, or providing renewable natural resources. This explains the reason for the protection of heritage in the event of disaster is of paramount importance. Effective management of issues related to disaster and conflicts in heritage resources required inclusive, multidisciplinary and collective approaches in view of the fact that the issues concerned are very complex and multifaceted. It is expected that responsibilities and roles do not fall unfairly on particular actors to avoid overburdened. Equity, fairness, inclusiveness the gender, ethnicity, religion, disability and demographic status of the people should be taken into considerations in decision-making processes or outcomes Traditional knowledge system should be harnessed in disaster risk and conflict management. The need to embrace technology in disaster and conflict management should also be embraced.

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