THE EFFECTIVENESS OF CULTURAL HERITAGE IMPACT ASSESSMENT AS PART OF ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT IN TANZANIA

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Abstract
It is generally accepted that for any country to develop socio-economically, there must be various types of investment. It should also be understood that the planning and implementation of such investment projects generate negative and positive impact to *mother* environment. Once the environment, both natural and cultural, is impacted upon, it affects people including other living things in return both in the short- and long-run. Because of this fact, under normal circumstances, development projects impact the environment. Therefore, environmental experts conduct systematic examination to determine whether or not such projects would have adverse impact on the environment in its totality to include the physical, biological, cultural and socio-economical aspects. To double-check the effectiveness of Environmental and Social Impact Assessment, a few scholars have assessed its efficiency. Unfortunately, such assessment on developmental projects has virtually excluded the evaluation of the efficacy of Cultural Heritage Impact Assessment as part of Environmental and Social Impact Assessment. The exclusion is inappropriate because cultural heritage resources are part of the environment, and the planning and implementation of developmental projects similarly affect cultural heritage resources. This article examines the effectiveness of Cultural Heritage Impact Assessment as part of Environmental and Social Impact Assessment particularly on the qualifications of those who do it, the frequency of Cultural Heritage Impact Assessment inclusion in Environmental and Social Impact Assessment, and whether or not Cultural Heritage Impact Assessment mitigation measures are implemented. The results indicate that unregistered experts never carry out Cultural Heritage Impact Assessment, Environmental and Social Impact Assessment reports do not reach cultural heritage authorities for review, and in most cases, the prepared Environmental and Social Impact Assessment statements do not include Cultural Heritage Impact Assessment impact mitigation measures and when included they are not implemented by developers. In this regard, we argue that the situation is a result of weak legislation to make Cultural Heritage Impact Assessment a mandatory exercise, absence of will by both government and environmental agencies dealing with ESIA, and negligence of developers and Environmental and Social Impact Assessment experts. Subsequently, this study recommends measures to be taken to make Cultural Heritage Impact Assessment a useful part of Environmental and Social Impact Assessment – to make it rescue and manage cultural heritage from threats resulting from developmental projects.

Key words: Cultural heritage, impact assessment, environment, development, mitigation measures, Tanzania

Introduction

According to Fleming (2011), Environmantal Social Impact Assessment (ESIA) was introduced first in the United States of America (USA) in 1969 when the first National

Environmental Policy Act (NEPA) was enacted and became the primary legislation to demand ESIA. Section 101 (c) of NEPA has a stipulation for the preservation of significant historical, cultural, and natural aspects of national heritage, and maintain, wherever possible, an environment which supports diversity and variety of individual choice. Additionally, Section 102 (a), (b) and (c) requires the preparation of the ESIA report before the inception of any project (NEPA, 1969). Concurrently, the World Bank adopted a *Physical, Cultural Resource Safeguard Policy* in 1986 and revised it in 2006 (Operational Policy Note No. 11.04) to facilitate and ensure that consideration of "cultural property" is fully integrated into ESIA World Bank-financed projects (World-Bank, 1999). Such projects, for example, included the Gilgel-Gibe hydroelectric project in Ethiopia (1998), Cunene hydropower scheme in Namibia (1998) and the proposed Rusumo hydroelectric project covering Tanzania, Burundi, and Rwanda (2016). Additionally, the European Union (EU) Article 3 of the Council Directive 97/11/EC of 1997 amended as Directive 85/337/EEC on the assessment of the effects of specific public and private projects on the environment, calls for consideration of the impact on all elements of the environment including material assets and cultural heritage (World-Bank, 2009). ESIA has become the most widely used technique of environmental management and planning, worldwide (Campbell, 2000; Mwalyosi, Hughes, & Howlett, 1999). It is primarily concerned with identifying, predicting and evaluating the probable impact, both beneficial and adverse, of a proposed undertaking and alternatives. It intends to eliminate or minimise adverse effects and optimise positive ones through mitigation and enhancement measures (Mwalyosi, *et al*., 1999). Moreover, ESIA is regarded as an essential tool to bring harmonious linkage between development and environment (Glasson, Therivel, & Chadwick, 2005; Mwalyosi, *et al*., 1999). As such, the linkage involves serious interventions that are likely to protect the environment from destruction. It is well known that Cultural Heritage Impact Assessment (CHIA) was recently added to complement ESIA's sustainability (Fleming, 2011). During the preparation of an ESIA report, cultural and archaeological heritage is either evaluated along with other elements of the environment such as physical, ecological and social concerns or as a separate report regarded as CHIA report (Jones, 2010; Pinelo, 2008). In some countries such as Namibia, Botswana, and South Africa, a separate and specific CHIA report has to be prepared (Arazi, 2011).

It is vital to note that construction and infrastructure-related projects have significant contribution to the discovery of archaeological sites because a substantial number of sites known today were discovered by accident during the implementation of developmental projects (Eboreime, 2008; Renfrew & Bahn, 2008). For example, *Templo Mayor* or the Great Temple of the Aztecs in Mexico City, the 700-year-old mummy (China), the paleontological site of Lo Hueco site (Spain), and Chemapato Island (Zimbabwe) were discovered by chance during the implementation of construction projects. Similarly, it is also vital to note that due to the nature of archaeological remains, some archaeological sites have been destroyed in the process of implementing development projects. Indeed, the number of sites that have been damaged due to such development projects surpasses the number of those that have been assessed and mitigated through rescue or contract archaeology (Arazi, 2009, 2011). Even though the consideration of CHIA is often explicit within the legislation for ESIA (Langstaff & Bond, 2002; Rogers, 2011), there is vast disparity in the way CHIA is accounted for when it comes to a practical level. There is considerable variation in how effectively critical cultural heritage issues are addressed and dealt with in the legislation (Pinelo, 2008). This relates to issues such as: (i) the narrow scope of cultural heritage definition (Partal, 2013), (ii) lack of provision for most frameworks on how to implement CHIA (Rogers, 2011), (iii) poor engagement of affected people in the process of CHIA, (iv) inappropriate mitigation

measures (King, 2011), (v) the extent of baseline fieldwork, (vi) how well the significant impacts are identified and assessed, (vii) the influence of national designations, (viii) the role of consultation and the attitude of developers and lead consultants (Lambrick, Hind, Hey, & Spandl, 2005), (ix) lack of holistic and multidisciplinary approach (Flemming, 2011), and (x) ineffective or lack of standardised procedures for integrating CHIA into ESIA (Pinelo, 2008). This situation needs rectification.

Gradually, African countries are experiencing infrastructural boom which if not properly coordinated may magnify the extent of destruction of cultural heritage resources (Ndoro & Kiriama, 2019). Such projects include road and dam construction, mining and quarrying activities, agricultural expansion, urban, rural and resettlement, housing and industrial development (Pikirayi, 2000:328). These developments inevitably lead to modifications of both natural and cultural environments. To avoid or reduce such impact, African countries have enacted laws for conserving their heritage assets and the majority of such laws were gazetted before the active link between heritage protection and environmental stewardship were forged in the 1960s and 1970s (Chirikure, 2013; Ndoro, 2009). For instance, the Antiquities Act No. 10 of 1964, with its Amendment Act No. 22 of 1979 (Tanzania) and the Historical Monuments Act of 1967 and the Amendment Decree No. 6 of 1977 (Uganda) both have no provisions whatsoever for mandatory pre-development CHIA assessment (Kamamba, 2009; Nyiracyiza & Chadia, 2010). There are however a few exceptions which include countries such as Botswana (2001), Namibia (2004), Kenya (2006) and South Africa (1999) that overhauled their heritage legislation to make CHIA obligatory as part of environmental laws which provide guidelines for all development that may alter the social, cultural and natural environment (Arazi, 2011; Hall, 2009; Kamamba, 2009; Ndoro & Kiriama, 2009). As such, there remain considerable challenges for CHIA execution in Africa, mainly due to lack of appreciation of the value of cultural heritage resources to society, shortage of published data on cultural heritage apart from a few famous sites, the scarcity of techniques designed to deal with CHIA in ESIA, lack of qualified personnel to address the cultural heritage sub-component of ESIA as well as the problem of focusing on single-subject studies rather than using a multi-disciplinary approach (Arazi, 2009; Chirikure, 2013).

In Tanzania, the Antiquities Act No. 10 of 1964 and its (Amendment) Act No. 22 of 1979, provide for the preservation and protection of sites of paleontological, archaeological, historical, or natural interest and related matters. Section 2 (1) of the Antiquities Act, 1964 protects all relics that were made, shaped, carved, inscribed, produced, or modified by humans before 1863. It also protects all monuments (buildings, structures, paintings, carvings, and earthworks) made by humans before 1886. Moreover, the Act protects all objects such as wooden doors or door frames that were carved before 1940. Also, Section 10 (1) of the Antiquities Act, 1964 regulates and guides all archaeological research activities both on surface and sub-surface. Section 11 (1) (a) of the Antiquities Act, 1964, implicitly requires the Director to ensure that no person except the Director or a person acting on his/her behalf shall, whether on his/her land or elsewhere: (i) excavate, dig, or probe for monument or relic, or (ii) remove or collect any relic or any object from the site of its discovery except for the purpose of protecting it and reporting the invention for the purpose of delivering it to the authorities if required to do so under that Section. Respectively, Section 13 (3) of the Act states that the Director may ensure that no excavation or collection shall be carried out without a license. These Sections demonstrate that the Director of Antiquities (DoA) is supposed to be the administrator and accountable person for ensuring that any pre-development CHIA assessment is relevant and professionally conducted.

Moving onto the environmental legislation, it can be argued that the process of integrating cultural heritage in ESIA started in 2004 when the Environmental Management Act (EMA) No. 20 of 2004 was enacted. Part 1, Section (3) of the Act considers the environment to include the physical factors of the surroundings of human beings, including air, land, water, climate, sound, light, odor, taste, micro-organisms, the biological factors of animals and plants, *cultural resources* and the social-economic factors of aesthetic and include both the natural and built environment and the way they interact. Unequivocally, EMA (2004) considers cultural resources – archaeological, historical and cultural heritage sites – part of environmental resources. It should therefore follow that all ESIA reports have to be prepared and reviewed by multi-disciplinary specialists. According to EMA (2004), Section 81, ESIA should be conducted before any land development to make sure that activities do not affect the environment. As soon as the ESIA report is prepared, Section 89 Part (a) of EMA Act requires experts to distribute the ESIA report to relevant government institutions for written remarks. In the due attempt; stakeholders such as DoA could be consulted for comments on CHIA.

Despite the legal linkage between CHIA and ESIA, it remains unclear as to what extent CHIA is useful in Tanzania. Studies on the effectiveness of ESIA, for reasons beyond the scope of this article, appeared to focus more on the biophysical environment (Mwakaje, 2013; Sosovele, 2013). Such studies for a long time tended to overlook the cultural heritage component. This has created a loophole and allowed for the daily destruction of the cultural heritage because large parts of Tanzania are archaeologically unknown due to various reasons such as lack of national cultural research, policy, funding, research interests, and thus mounting the rate of destruction (see Mapunda, 1999; Mabulla, 1996). On the other hand, scholars of heritage and archaeology in Tanzania have concentrated their studies on different themes such as community awareness of heritage assets (Bushozi, 2014; Lwoga, Anderson, Mapunda, & Mossberg, 2015; Mapunda, 2002; Masele, 2007). Others have focused on heritage management and conservation (Bigambo, 2013; Ichumbaki, 2012; Lwoga & Mabulla, 2013; Mabulla, 1996; Mabulla & Bower, 2010). Also, some researchers have recently focused on the role of export permits on preserving and conserving cultural objects, tourist satisfaction with cultural heritage destinations in Tanzania and cultural tourism for poverty alleviation on the eastern coast of the Indian Ocean (Samwel, 2015; Chami & Lyaya, 2015; Mapunda & Lwoga, 2012). It is against this background that this article focuses on the effectiveness of CHIA as part of ESIA in Tanzania as it has received no due weight from previous studies.

Previous Understanding of the Effectiveness of CHIA as part of ESIA

Earlier studies on the effectiveness of ESIA exist all around the world, but there are few studies that categorically include CHIA (Arazi, 2011; Edward, 2005; Jones & Slinn, 2008; Lindblom, 2012). Such CHIA studies have focused on examination of the qualifications of people who have conducted CHIA (Arazi, 2011; Coles, 2007; Chirikure, 2013; Dale, Chapman & Macdonald, 1997; Jones & Slinn, 2008), frequency of inclusion of CHIA components in the ESIA reports (Boyle, 1998; Lazzarotto, 2009; Teller & Bond, 2002; Tinoco, 2007), and the implementation of proposed CHIA mitigation measures (Bond, Langstaff, & Ruelle, 2002; Mokhehle & Diab, 2001; Wong, 2015). Regarding the qualifications of people who have conducted CHIA for example, Arazi (2011) revealed that having qualified experts with relevant background always enhances the effectiveness of CHIA. Ironically, in the African context, ESIA experts with a non-cultural heritage background carry out CHIA. Coles (2007) writes along the same lines that both experience and quality of an expert undertaking ESIA including CHIA are key ingredients of the

effectiveness of ESIA. Also, Chirikure (2013) argues that the absence of reliable measures to regulate qualifications of experts for CHIA may result in an ineffective assessment process. To elucidate this, Dale, Chapman and Macdonald (1997) reveal that in Queensland, CHIA is routinely conducted by staff with an engineering and environmental science background. Secondly, regarding the inclusion of CHIA components in the ESIA reports, all referred scholars admitted inconsistency regarding CHIA inclusion. Lindblom (2012) warns that considerable variance of CHIA into ESIA report is a result of methodological gaps. Tinoco (2007) felt that CHIA inclusion into ESIA reports is hampered by the absence of proper guidelines along with relevant experts to carry out CHIA. Similarly, investigation in North-West Europe showed a significant gap regarding incorporating CH into ESIA. The observed weak consideration of CH into ESIA is due to the absence of an integrated ESIA process that includes a CHIA component (Jones & Slinn, 2008). In the same vein, lack of guidance is the reason for inadequate attention to CHIA by many English ESIA systems (Edward, 2005). In South-East Asia, particularly areas of Thailand, Indonesia, and Malaysia, ESIA reports appeared to lack a CHIA component due to lack of coordination with other agencies such as those related with cultural heritage and archaeology, whose inputs would be vital if involved. Also, the widening of communication as well as the operational gap between the cultural and environmental authorities seem to impact on the inclusion of CH in the ESIA (Fleming, 2008). In Pakistan, many ESIA reports did not address CH and historical resources due to inadequate capacity of relevant agencies and departments to review and analyse ESIA reports (Magsi & Torre, 2012). In the African context, the inclusion of CHIA in ESIA reports has been least addressed when compared to other environmental aspects. As claimed, this was caused by lack of coordination among departments, shortage of skilled personnel, legal weaknesses and negligence by the project proponent and consultants to consider CHIA during the ESIA process (Ali, 2010; Arazi, 2011; Kamamba, 2009; Mwakaje, 2013; Musindo, 2010). On the implementation of proposed CHIA mitigation measures, the inclusion of a framework for CHIA mitigation measures could significantly improve the effectiveness of ESIA (Mwalyosi, Hughes, & Howlett, 1999). There have been a few studies or literature reporting the implementation of mitigation measures on the impact of development projects on CH (see Bond, Langstaff, & Ruelle, 2002; Edward, 2005; Jones & Slinn, 2008; Tinker, Cobb, Bond, & Cashmore, 2005). In Hong Kong, an examination of the outcome of projects that went through a CHIA process with the purpose of evaluating the level of implementation of mitigation measures as advised was carried out. However, it was also evident that mitigation measures were neglected before and during the execution of construction works due to lack of a monitoring policy. Other studies reveal that the implementation of CHIA mitigation measures has not always been addressed seriously (Wong, 2015).

Methods

The research design for this study was both qualitative and quantitative. The qualitative research approach aimed at generating deep understanding of the situation related to the effectiveness of CHIA in Tanzania, while the quantitative method was used to create statistics or somewhat quantitative data on the efficacy of CHIA in Tanzania. Regarding data collection, primary and secondary data was gathered. Primary data was collected through in-depth face-to-face interviews with unstructured questions from selected key informants sampled from the National Environmental Management Council (NEMC), Institute of Resource Assessment (IRA), Department of Archaeology and Heritage (DoAH) and from registered ESIA and CHIA experts. The interview questions aimed at assessing informant feelings, opinion, experience and views on the effectiveness of CHIA as part of ESIA in Tanzania. The focus was mainly on the qualifications of experts who do CHIA and on the

implementation of CHIA mitigation measures. All the interview sessions were preceded by appointment and were conducted at the interviewee's working place.
Secondary data was gathered from ESIA, and Environmental Audit (EA) reports deposited in NEMC repository. Given the organisation of the repository, it was necessary to search for the relevant reports. Note that only reports from 2010 to 2016 were readily available in the repository. The pre-2010 reports were missing probably due to poor storage and because NEMC headquarters were moved from the Old Postal Office area to Mikocheni. This movement also necessitated discarding some documents to reduce bulkiness. The review checklist examined the contents of the ESIA reports from the table of contents, team of experts involved, the methodology used, baseline information, consultation with relevant stakeholders, impact assessment and mitigation measures. The primary concern was to review and determine whether or not the information on CH had been considered and the level of its depth.

Concerning sampling, a non-probability purposive procedure was employed to select informants from NEMC, DoAH, and IRA of the University of Dar es Salaam. The selected experts were those with experience in CHIA. A total of 42 key informants were sampled for this work. The purposive sampling procedure was also used for selecting ESIA and EA reports lodged in the NEMC repository where a total of 122 reports were sorted and collected for review. Out of 122 reports, 34 ESIA reports included CHIA, while seven EA reports included CHIA. These 41 ESIA and EA reports were considered for further assessment.

Qualitative data was analysed through content and thematic analysis methods, while quantitative data was analysed through quantitative or rather statistical techniques. In order to ensure the validity of the data for this work, data collection tools were carefully crafted in relation to the objectives. As noted above, data was also collected using both interview and report review checklist methods that contribute to data reliability

Professionalism of CHIA in Tanzania
The assessment of the qualifications was done on five areas: (i) educational background, (ii) professional CHIA training, (iii) experts registration status, (iv) number of CHIA projects undertaken, and (v) awareness of CHIA guidelines. Out of 34 respondents, 14(41.2 %) had experience in environmental studies, 14(41.2%) respondents had an archaeology and heritage background, 4(11.8%) had a sociology background, and 2(5.9%) had tourism and anthropology backgrounds (Table 1). This denotes that the majority of people (nearly 20(58%) who have been evaluating the impact of proposed projects on cultural and archaeological resources) have had a background not related to cultural heritage and archaeology, but rather to environmental science. Regarding professional CHIA training, 19(55.9%) respondents had not attended any discipline associated with CHIA, while 15(44.1%) respondents had at least attended training on how to undertake assessment of other types - not specific to cultural heritage and archaeology. These findings show that none of the studied experts had any formal training on how to evaluate the impact of development projects on archaeological and cultural heritage resources in Tanzania. In terms of registration, the results showed that all 14(41.2%) respondents with a background in environmental studies were registered by NEMC as environment experts. Whereas 9(26.5%) of the respondents with some education in archaeology and cultural heritage were not registered, the remaining 5(14.7%) respondents with archaeology and cultural heritage background were registered by NEMC, as experts. Moreover, all 4(11.8%) respondents with a background in sociology as well as 2(5.8%) respondents with a background in tourism and anthropology were legally registered as experts. These results suggest that the majority of

relevant experts (nearly 26.5% of people with a background in archaeology and cultural heritage) are not registered and therefore not recognised as ESIA/CHIA experts.

Table 1: Background and registration status of experts

Background	Frequency	Registered expert	Percentage (%)	Not registered expert	Percentage (%)
Archaeology and Heritage	14	5	14.7	9	26.5
Environmental studies	14	14	41.2	-	-
Sociology	4	4	11.8	-	-
Tourism and Anthropology	2	2	5.8	-	-
Total	34	25	73.5	9	26.5

Source: Field Survey, 2017

In terms of expert experience of conducting CHIA, only 28(82.4%) respondents were considered; NEMC officials were excluded for conflict of interest reasons. In this, 23(82.1%) respondents had the experience of being involved in less than five CHIA projects, while 2(7.1%) other respondents had done between six and ten CHIA projects. Additionally, 1 (3.6%) respondent had conducted between eleven and fifteen CHIA projects. Also, another 1 (3.6%) respondent had done between sixteen and twenty projects. Lastly, 1(3.6%) respondent had experience of more than twenty CHIA projects. It appears that the majority of experts conducting CHIA in Tanzania have inadequate experience as they have been involved in less than five projects. On the question of awareness to guidelines for conducting CHIA, 30(85.7%) respondents felt that there were no guidelines on how to undertake CHIA, while 3(8.6%) respondents revealed that EMA No. 20 of 2004 were the only guidelines available for conducting ESIA including CHIA. The rest, 2(5.7%) of the respondents reported that CHIA was being done following UNESCO and World Bank guidelines. These results imply that the majority of the respondents (91%) were not aware of EMA No. 20 of 2004 and ESIA and EA Regulations of 2005 as the majority claimed that there were no specific guidelines on how to conduct CHIA.

Frequency of Inclusion of the CHIA Component in ESIA Reports

Out of 122 reviewed ESIA and EA reports, only 34(28%) reports were on cultural heritage. In terms of sectors based on the 34 reports, 10(29.4%) reports were on the energy sector, 9(26.5%) in the mining sector, 8(23.5%) reports on the tourism sector, 4(11.8%) reports on water and irrigation sectors as well as 3(8.8%) reports on infrastructure sector. These results further indicate that the majority of CHIA reports are from the energy-based sector and mining sectors that are largely implemented and funded by both international companies and bilateral and multilateral organisations that demand CHIA reports. There are funding organisations that cannot fund any development project with a CHIA report in the main ESIA report or as an independent appended report. Further examination of the CHIA reports has shown that the following parts were considered in the reports: (i) table of contents, (ii) experts involved, (iii) methodology applied, (iv) baseline information, (v) consultation with relevant bodies, (vi) impact assessment, and (v) mitigation measures proposed.

Out of the 34 reports with a CHIA component, only 30(88.2%) reports had information on cultural heritage visible in the table of contents of the ESIA report. There was however significant variation in the way CHIA appeared in the table of contents, which implies that there are no guidelines on preparing CHIA reports in Tanzania. There were many instances of

a CHIA component in the section of baseline information. Regarding CHIA expert identities, out of the 34 reports, there were 18(52.9%) ESIA reports and none had a name of any person possessing archaeology or cultural heritage skills. This observation suggests that the majority of people who wrote the CHIA parts of ESIA were not specialists in archaeological or heritage studies. Experts with an archaeology and heritage background wrote the remaining 16(47.1%) reports.

In terms of methodology, 25(74%) of the 34 ESIA reports relied on interviews, questionnaires, site visits, and literature review methods. It appears that most of the reports did not use mainstream archaeological methods to gather and write the CHIA parts of the ESIA. There were 9(26.5%) reports that essentially applied archaeological survey methods such as surface walkover, shovel test pit (STP), excavations, information from previous researches and consultation with the local people. On baseline information, 11(32.4%) reports had CHIA information reduced to a single line indicating that the assessment did not find any cultural or archaeological site. Also, 6(17.6%) reports presented information about graves, cemeteries, tombs, graveyards, caves and burial sites. Moreover, baseline information on the other 6(17.6%) reports covered sacred sites, while 2(5.9%) reports conveyed information on historic buildings. Beside this, other 3(8.8%) reports revealed information on archaeological resources that included stone tools, metallurgy, paleontological sites, potsherds, and architectural remains. Likewise, there were 3(8.8%) reports that presented information about previous studies without indicating their source of information, while 3(8.8%) other reports included policies related to cultural heritage alone. They mentioned some sites found in the whole region and not specific to the project area. These results indicate that 17(50%) of the reports did not provide the expected professional archaeological and heritage information related to the projects.

Regarding consultation with relevant stakeholders, 29(85%) reports show that local people were consulted in the respective project areas to get CHIA information; however, these people revealed nothing of cultural significance. Also, 4(11.8%) reports consulted relevant authorities such as the DA officials (the director, principal conservator, and conservators), village officials and elders. There was 1(2.9%) report that asked international organisations such as UNESCO and IUCN for CHIA information. Regarding the identification and assessment of the impact on CH, only 15(44.1%) reports had information about the effects of developmental projects on archaeological and other cultural heritage resources. Another, 9(26.5%) reports identified the presence of heritage resources in the project areas, but impact on CH was neither identified nor assessed. Also, other 6(17.6%) reports did not contain any information on cultural heritage and archaeology. Lastly, 4(11.8%) reports showed that no impact on cultural heritage resources had been predicted. These results indicate that the majority of the reviewed reports identified and assessed impact on archaeological and cultural heritage resources.

CHIA Mitigation Measures Implementation in Tanzania

Out of the seven reviewed environmental auditing reports, only 1(14.3%) report showed that the recommended CHIA mitigation measures were implemented accordingly. The mitigation measures that were implemented involved the relocation of historical graveyards and diversion of electrical transmission lines from areas thought to be ritual sites. This indicates that recommendations made for CHIA mitigation measures are often not implemented - a situation that indirectly points to the destruction of CH in the project areas.

Discussion

This article aimed at assessing the effectiveness of CHIA in Tanzania by addressing three specific objectives: qualifications of people conducting CHIA in Tanzania, frequency and quality of inclusion of CHIA component in ESIA reports, and the implementation of proposed CHIA mitigation measures by clients. This section revisits these objectives in relation to the presented data above coupled with data from literature. The displayed data shows that only 14(40%) of experts who wrote CHIA components in the ESIA reports have a background in archaeology and heritage studies. Other reports were written by non-specialists in archaeology and cultural heritage including 20(60%) of the experts with an educational background of environmental related studies, sociology, and tourism. It is evident that about 20(60%) people who conducted CHIA in Tanzania were from other sciences that neither possessed relevant qualification nor training in CHIA. This situation of CHIA in Tanzania related to this particular aspect is congruent to some countries elsewhere.

In many East African countries, cultural heritage aspects of the environment had always been evaluated by non-experts, due to either lack of awareness among project managers or absence of CH guidelines (Campbell, 2000). This is a problem because this group of experts lacks understanding of cultural heritage. Allowing hard science graduates to conduct CHIA creates disciplinary bias and production of substandard reports (Dale, Chapman, & McDonald, 1997; Nyiracyiza & Chadia, 2010). Besides, Ndoro and Kiriama (2009) have rightly argued that unqualified people do CHIA as a way to cut down cost while taking advantage of weak legislation and monitoring. In some cases, cultural heritage experts are usually considered only in the review process or in cases where the developer stumbles on heritage resources (Oloo & Namunaba, 2010). As a result, the development process destroys many archaeological resources without being recognised and documented. On the aspect of registration status, it is only 5(14.7%) people who have a background in heritage and archaeology that are registered as CHIA or rather environment experts. This means the majority 9(26%) of the people with a heritage and archaeology background are not registered. Another problem is that those few who are registered and qualified have limited experience, with the majority having been involved in less than five CHIA projects. Because they are not registered, it means they cannot sign ESIA final reports and perhaps cannot be included in the technical advisory committee for the reviews of the ESIA reports. During the period between 2009 and 2016, NEMC certified and registered 688 environmental experts, but only 8 were registered experts with a background in archaeology and cultural heritage. One possible explanation for this is lack of awareness of the registration process and the requirements, as well as the absence of a body responsible for regulating and organising CHIA experts. Another factor could be weak heritage legislation that does not make the CHIA process a mandatory exercise and that there is no provision in the Antiquities Act, No. 10 of 1964 and its amendments Act No. 22 of 1979 that talks about CHIA.

Frequency of Inclusion of the CHIA Component into ESIA Reports

The data presented above has shown that only 34(28%) of the ESIA reports included CHIA aspects. It is difficult to understand why there is such massive exclusion of CHIA components in the ESIA process. One can argue that the elimination of CHIA aspects makes ESIA reports incomprehensive. According to Article 3 of EMA Act No. 20 of 2004, cultural resources and built environment are part of the legal definition of the environment. If the aim of ESIA is to protect or rather rescue the environment from destruction caused by developmental projects, it follows that keeping CHIA out of the ESIA exposes the cultural environment to massive destruction associated with such projects (whether by ignorance or on purpose). These findings are largely congruent with a study carried out at Santa Catarina, Brazil, which indicated that out of 13 evaluated ESIA reports none covered cultural heritage

(Lazzarotto, 2009). Elsewhere in Norway, out of 28 ESIA reports reviewed between 1991 and 1995, only two included the cultural environment (Lindblom, 2012). Poor presentation of baseline data regarding CH is attributed to weak institutions with lack of qualified experts for reviewing the segment of CHIA. Also, inadequate consideration of CHIA baseline information is due to limited capacity of the country to develop its own cultural resources database and research that would help to guide developers and decision makers on areas to invest (Mwakaje, 2013).

However, some of the ESIA reports contain a CHIA component and this can be attributed to the awareness of the consultants and clients involved, and the requirements of some funders of such development projects. The World Bank, JICA and UNESCO, for example, cannot fund projects that show no inclusion of CHIA aspects in the main ESIA reports. The level and details of the inclusion are also problematic in many cases. About 88% of the ESIA reports have CHIA information noticeable on the table of contents; in the other reports, one has to search for sporadic information on CHIA aspects. The latter means CH was not given due weight in the ESIA reports. Over 50% of the ESIA reports are not done or rather endorsed by CHIA specialists. About 75% of the methods used are not mainstream archaeological methods. It is possible that non-CHIA specialists do most of these reports. If one uses irrelevant methods it means they will get irrelevant information on CHIA aspects and hence the potential destructions of CH. The use of non-mainstream archaeological methods can be related to the 85% of the reports focused on consultation with local people. It is difficult to obtain archaeological data based on oral information alone. For instance, the nature of archaeology such as buried relics cannot constantly be detected except if there is a commitment to methods such as trial trenching or rather STPs (Jones & Slinn, 2008). It is noteworthy that 15% of the reports did not do consultations. Elsewhere, there is an increasing trend of conducting very slight stakeholder consultation. Also, in the UK, a study on the coverage and quality of CHIA was conducted and out of 30 sampled ESIA reports, over one-third did not involve any form of consultation (Edward, 2005). Some of these observations also concur with Teller & Bond's (2002) in Planarch, that ESIA reports did not include fully any form of consultations with the relevant authorities (see also Jones & Slinn, 2008). There is a need for proper consultation with cultural heritage stakeholders to rescue heritage from destruction. According to the findings, 11(32%) of the reports had a single line on CH saying "*the study did not find any cultural or archaeological sites*" or "*the project will have no impact on both tangible and intangible heritage resources"* and that 6 (18%) of the reports focused on desk review; they wrote on CH policies and reviewed previous studies on CH studies alone. It can be suggested, based on intuition, that those who wrote one line on CH and those who reviewed literature alone did not perhaps conduct any fieldwork on CHIA aspects. These findings match almost perfectly with those reported elsewhere in the UK, where out of 30 ESIA reports, 37% employed a desk-based assessment, 59% of the sample applied both desk-based survey and field studies and only 3% used consultation. Inadequate consideration of the applicable heritage and archaeological survey methods was perhaps caused by limited awareness and guidance among experts doing ESIA or reviewing it. It has been argued that the application of irrelevant or rather weak methodology and the absence of guidelines lead to weak presentation of CHIA information, thus affecting the final decision (Jerpasen & Larsen, 2011). In some occasions, studies have uncovered that in doing CHIA, most consultants rely mainly on archival data (Nyiracyiza & Chadia, 2010). The observed methodological vacuum among practitioners seems to persist due to lack of guidance (Teller & Bond, 2002). Lack of relevant methodology may frequently result in failure to investigate CH impact and propose appropriate mitigation measures.

Assessment of the impact in only 15(44%) reports showed that the impact on CH resources was low or moderate. In 9(26.5%) reports, identification of heritage resources was considered, but there was no articulation of impact assessment on CH resources. These findings concur with ESIA studies conducted in Pakistan in the case of the Chotiari reservoir construction project because the study neither covered the impact on historical nor cultural heritage resources of the area (Magsi & Torre, 2012). Similarly, in the UK, the practice of assessing impact of development proposals on CH was poorly covered with only 37% of sampled ESIA reports (Edward, 2005). Along the same lines, Lazzarotto (2009) revealed that out of thirteen reports prepared by Santa Catarina-Brazil, none had included their impact on CH or archaeological resources, despite the area being rich in such. It is surprising that even though there was information of archaeological remains in the baseline conditions, nothing was done to assess the impact on such CH resources. Possible reasons for the poor consideration lie in the methodology applied during the identification and evaluation of the CHIA baseline data of the proposed area. Most of the experts involved in the study of CHIA had no relevant qualification and understanding of CH and, in many cases, applied methods were not useful or effective for the detection of sub-surface material. Another reason could be the bias of experts doing CHIA in favour of other environmental aspects. Inadequate CH impact assessment in most ESIA reports is partly a result of failure to evaluate the significance of the recognised effects, let alone using criteria such as poor, low, inadequate value alongside baseless statements on significant increases of the complexity (Braithwaite, Hopkins, & Grover, 2001). Also, poor CHIA impact assessment is due to the absence of universally agreed criteria to use in such judgments (Teller & Bond, 2002). As a result, it frequently falls to the experts involved to decide the basis on which to make decisions.

Concerning mitigation measures, about 97% of the ESIA reports had no mitigation measures proposed; it was claimed that the proposed area had no trace of any significant CH resources. This evidence contradicts the findings of Edward (2005) who showed that in the UK, 81% of ESIA reports included CH mitigation measures and only 19% developed no mitigation measures. Based on the context of archaeological resources and time required for doing CHIA, it is possible that no thorough investigation was conducted. Lack of intensive research and proposal of mitigation measures for developmental projects all lead to the destruction and loss of the priceless, non-renewable and fragile CH resources. It is difficult to understand why in some of the ESIA reports cultural heritage resources were identified in the baseline information, and the impacts predicted, but in the end, no mitigation measures were proposed. Similar observations indicate that in the UK some of the ESIA reports only mentioned mitigation measures in passing. In Zimbabwe, studies found out that there was complete absence of CHIA mitigation measures in ESIA due to lack of monitoring, enforcement, and absence of qualified human resources in the field of cultural heritage and archaeology doing CHIA (Musindo, 2010).

Implementation of CHIA Mitigation Measures

One way to examine whether mitigation measures were implemented or not, is through reviewing the EA reports. The review of EA reports showed that out of seven EA reports with a CHIA component, only one (14.3%) had CHIA mitigation measures implemented. Interviews with NEMC officials showed that clients do not implement proposed CHIA mitigation measures. In most cases, consultants fulfil their duty by ensuring that mitigation measures are introduced and ensure that implementation of such measures lies in the hands of the regulatory agency. The powers to oversee if mitigation measures have been implemented are in the hands of NEMC in collaboration with DA. However, this study has revealed that the difficulty of implementing CHIA mitigation measures is due to the existing gap between

the institution responsible for CH (DA) and that responsible for the environment (NEMC). Similarly, NEMC does not have experts trained in the field of archaeology and CH, and neither forwards ESIA reports with a CHIA component to DA for review nor invites DA experts on the Technical Advisory Committee (TAC). In many cases, monitoring of many developmental projects commences later in the project lifecycle which allows impact on CH to go unnoticed. In line with this, Wong (2015) argued that CHIA mitigation measures are sometimes not implemented due to lack of a monitoring policy for early incorporation of CHIA mitigation measures. Another reason is slack or lack of connectedness between the regulatory agency and the clients implementing the development projects. Such shortcomings may lead to little consideration of mitigation measures regarding impacts on CH. This explains why there are instances where experts have indicated some mitigation measures about CH, but due to lack of awareness, enforcement, and compliance, the measures have not been implemented.

Conclusion and Recommendations

While the number of CHIA studies has been going up over time, the overall outcome is that CHIA is not an effective aspect of the ESIA process in Tanzania. This situation continues to exert pressure on the archaeological and other non-archaeological cultural heritage resources. This is dangerous because a large part of the Tanzanian landscape is archaeologically *terra incognita*. To rescue the destruction of such materials, the study recommends that there is a need to ensure that people doing CHIA have the relevant qualifications. Also, there is a need to establish guidelines for people with the required skills to undertake CHIA studies. Moreover, there is a need to periodically train people doing CHIA to help keep them in line with modern and changing technology for assessing the impact of proposed projects on CH and archaeological resources. Because the existing antiquities and environmental laws do not contain CHIA as a mandatory part of ESIA, there is a call to review and amend the laws to explicitly include it. Lastly, due to the poor inclusion of CHIA in ESIA reports, this study recommends that the DA should be more proactive and undertake close follow-up on any proposed development project and should demand the vetting of all ESIA reports to review and determine if the aspect of CHIA is adequately covered. To have effective CHIA practice in Tanzania, this study recommends for the consideration of a separate CHIA report that would effectively address issues regarding cultural heritage and archaeology.

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