

Implementing Environmental Education in Unplanned Settlements: A Case of Misisi and Kuku of Zambia's Lusaka City

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DOI: <https://dx.doi.org/10.47772/IJRISS.2023.7710>

Received: 25 May 2023; Revised: 09 June 2023; Accepted: 19 June 2023; Published: 16 July 2023

ABSTRACT

The study aimed at finding prospects for the implementation of Environmental Education (EE) in Misisi and Kuku unplanned settlements of the city of Lusaka in Zambia. The main objective was to assess how existing environmental challenges in the selected settlements could be seen as prospects for the implementation of EE. The study further sought to investigate ways by which EE would be made more accessible to the inhabitants of these settlements. The research design was the descriptive survey. In selecting respondents, purposive sampling was used. The focus was on residents of Misisi and Kuku. To collect primary data, semi-structured interviews were used. This was supplemented by observations and focus group discussions on selected issues that needed clarifications. Data collected from the field was analysed using thematic analysis method and descriptive statistics. The study established that unplanned settlements experience a lot of environmental challenges which could help in the implementation of EE. Although residents of Misisi and Kuku carried out environmental interventions to address some of the challenges experienced, it was established that residents were less aware of Environmental Education. The study recommended that environmental challenges found in unplanned settlements were prospects for implementation of Environmental Education.

Key words: Environmental education, implementation, challenges, prospects, unplanned settlements

BACKGROUND

Zambian towns were initially intended to be homes for small population but this is not the case today. Lusaka Central Business District (CBD) and its adjacent suburban areas were designed to accommodate only about 3500 people, and the legal tenure and the provision of housing and amenities for informal residents were not priorities (Phiri, 2016). However, Zambia's capital city has in the past few years seen the mushrooming of unplanned urban settlements which currently resonates with increases in environmental problems. According to UN-Habitat (2015) and Brown (2015), unplanned settlements are considered illegal residential areas, therefore the local authorities are not obliged to provide them with socio-economic services such as clean and safe drinking water, waste management services, water borne toilets, recreational facilities, roads, electricity, health and educational facilities among others. As such these unplanned settlements are faced with environmental challenges which pose serious health effects to their inhabitants. EE can be the only way to help these unplanned settlements.

Unplanned settlements contribute to deplorable and dehumanizing living conditions. Environmental challenges in unplanned settlements should be considered as phenomenon that need to be addressed (Cobbinah, Erdiaw-Kwasie, and Amoateng, 2015). It should be considered as fertile ground for implementation of more lasting solutions than those already in existence. Environmental challenges experienced in Misisi and Kuku compounds calls for implementation of Environmental Education. Therefore, this research set out to explore the prospects for implementation of Environmental Education due to existing environmental challenges in Misisi and Kuku compounds.

METHODOLOGY

This study was carried out among the residents of Misisi and Kuku unplanned settlements and officials in-charge of the settlements. The sample size was 118 respondents comprising 112 residents from Kuku and Misisi settlements and one official from National Housing Authority (NHA), two officials from Ministry Local Government and Housing (MLGH), two officials from Lusaka City Council (LCC), one official from the Ward, Ward Councilor (WC). Two sampling techniques were used. Simple random sampling for the residents and purposive sampling for the officials as they were the ones in-charge of the settlements. The study employed a descriptive survey approach to facilitate succinct interpretations of on-site responses from various respondents premised on their different lived experiences. The research involved collecting information about people’s attitudes, opinions and practices that had implications on environmental management (Damianus and, Alfie, 2017). Data was collected using face to face interviews and focus group discussions. The collected data was analysed using Thematic Analysis by classifying or categorising responses into topics or major subjects which emerged in the interview discussions (Vaismoradi, Jones, Turunen, and Snelgrove, 2016). The researcher perused through the data collected and identified information that was relevant to the research questions and objectives. After the summary of the findings from the interview questions, main emerging themes and ideas were coded, synthesized and quantified into percentages and presented in form of tables of frequencies and percentages. The final overall portraits of the crude data from different areas were qualitatively interpreted and discussed. There after, conclusions were drawn.

RESULTS AND DISCUSSION

Table 1 shows frequency and percentage ratings of the many challenges experienced by residents of Misisi and Kuku unplanned settlements. Five environmental challenges were identified from table 2. Among them four had the highest frequency (percentage) as follows 100(30%), 80(24%), 50(15%) and 30(9%) while one had frequency(percentage) 10(3).

Table 1: Challenges experienced by residents in Misisi and Kuku unplanned settlements

Challenges	Frequency of responses	Percentage (%)
Increased flooding due to poor drainage.	100	30
Poor accessibility to water and sanitation	80	24
Poor waste management	50	15
Increased prevalence of diseases (i.e cholera)	30	9
Lack of local economic development	30	9
Lack of social amenities	20	6
Over crowding	10	3
Increased crime rates	6	2
Poor roads infrastructure	2	1
Lack of legal framework for the settlement	2	1
Total	330	100

Source: field data

The study as shown in table 1 above, revealed that inhabitants of Misisi and Kuku unplanned settlements experience the following environmental challenges: increased flooding due to poor drainage (30%), poor accessibility to water and sanitation (24%), poor waste management (15%), increased prevalence of diseases (9%) and overcrowding (3%).

This finding was also supported by Okaka and Odhiambo. (2019), who noted that people living in unplanned settlements experience the most deplorable living and environmental conditions which make them vulnerable to serious health risks.

Evidence from targeted respondents concurred with the finding from the residents. Table 2 shows common emerging themes from officials as aforementioned.

Table 2: Emerging themes from interviews with institutional officials on environmental challenges

Challenge	Respondent			
	NHA	LCC	MHLG	WC
Poor water and sanitation	√	√	√	√
Over crowding	√	√	√	√
Water borne diseases	√	√	–	√
Poor waste management	√	√	√	√
Poor drainage and flooding	–	√	√	√

Source: Field source

NHA – National Housing Authority, **LCC** – Lusaka City Council, **MHLG** – Ministry of Housing and Local Government, **WC**-Ward Counsellor

Environmental Interventions

The study revealed that there were environmental interventions carried out in Misisi and Kuku unplanned settlements although not effective, as they were more of just mere intervention without environmental education, awareness and campaign. In line with these findings (Vogel, Scott, Culwick and Sutherland, 2016) reported that residents and governments of different countries responded to environmental challenges of unplanned settlements in different perspectives because they were complex, contextual and contested. Figure1 shows awareness of existence of environmental intervention carried out in these settlements.

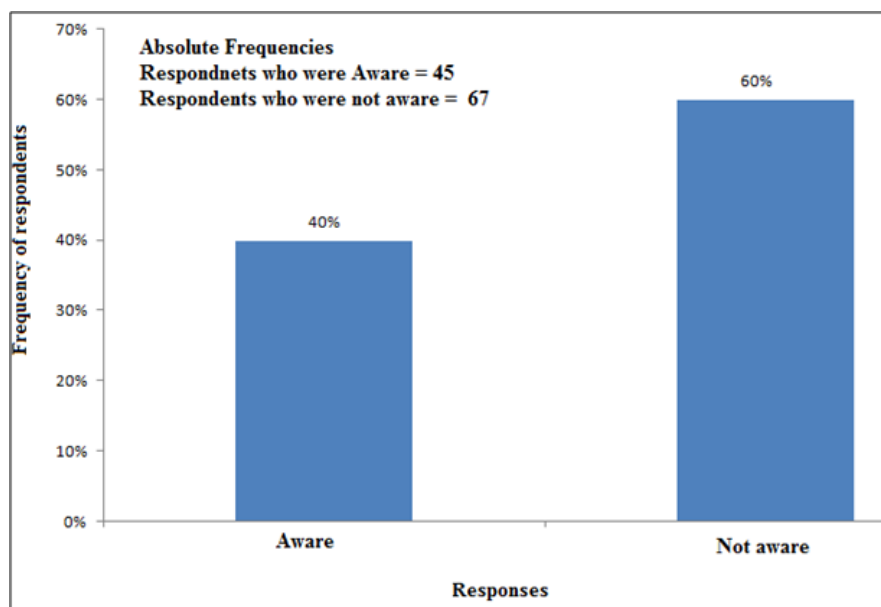


Figure 1: Awareness of existing environmental interventions in Misisi and Kuku.

Source: Field Data

The study shows that there were various environmental interventions carried out in these unplanned settlements in response to environmental challenges experienced. The existing environmental interventions were waste collection, digging of drainages by residents, occasional sensitisation by some NGOs, building houses with very raised foundations and erection of communal taps. Table 3 shows environmental intervention carried out in the settlements.

Table 3: Existing environmental interventions in Misisi and Kuku Compounds

Challenges	Frequency of responses	Percentage (%)
Waste collection	60	60
Digging of drainages by residents	30	30
Occasional sensitization by some NGOs	5	5
Building houses with very raised foundations	3	3
Erection of communal taps	2	2
Total	100	100

Source: Field Data

The study also revealed that environmental interventions were being done through sensitization programmes on media, in environmental community meetings, in national programme of keep Zambia clean campaigns, in lectures at clinics and neighborhood gatherings on environmental education, in public addresses of the community and in the distribution of flyers containing environmental messages as a means of providing environmental awareness on how to handle challenges experienced by the settlements. Even though results indicate general consensus that environmental intervention in the two settlements were educational, they were more of awareness campaign than education. The challenge with awareness based interventions is that, they only make people aware of something but do not inspire behavioural change and social change as well as subsequent action as EE would do (Donnelly, 2019). Consequently, it is important to engage EE Model than Awareness Model. Environmental education focuses not only on making people aware of environmental issues, but promotes an understanding of the relationship between humans and their surrounding environment through collective action to address such challenges (Mravcova, 2019). As people gain a greater understanding of environmental issues through EE, it is hoped that concern for these issues will follow.

Environmental challenges prospects for implementation of Environmental Education in Misisi and Kuku Compounds

The research has shown that although undesirable environmental challenges may seem, they were prospects for implementation of environmental education. In line with the latter, results in figure two shows an overwhelming (100 per cent) positive response that environmental challenges experienced in Misisi and Kuku Compound were a prospects for implementation of Environmental Education.

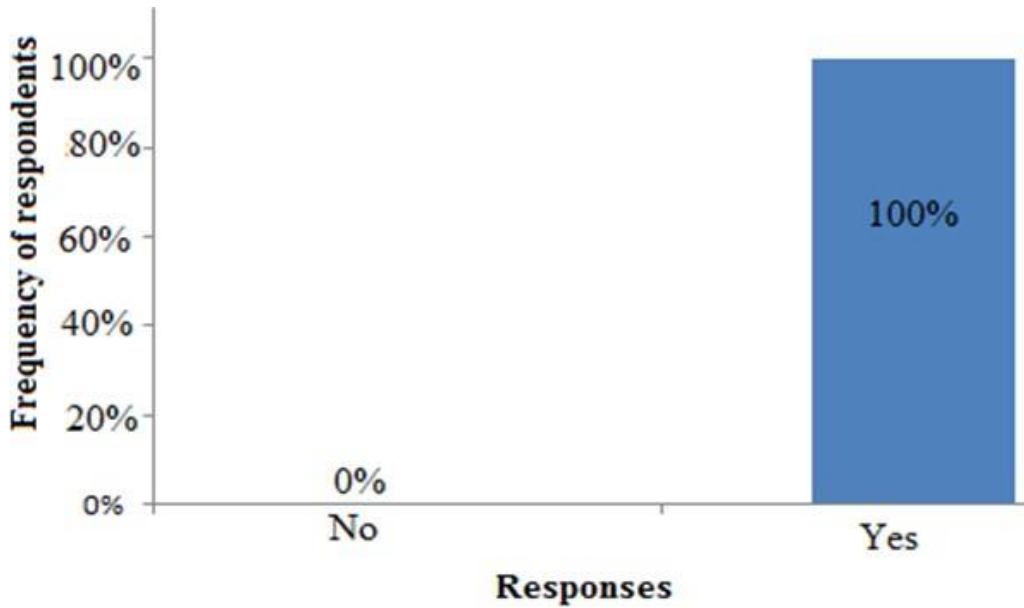


Figure 2: Perception on whether local environmental challenges were prospects for Environmental Education

The study reveals that environmental challenges in Misisi and Kuku unplanned settlements could offer diverse ways as prospects for implementation of Environmental Education. Table: 4 shows suggested ways in which challenges would be prospects for implementation of EE in Misisi and Kuku’s unplanned settlements.

Table 4: Prospects for implementation of Environmental Education in Misisi and Kuku compounds

Suggested strategies	Frequency of responses	Percentage (%) of responses
Floods and waste management education	76	28
Incentives to ensure community participation in environmental issues	48	18
Mobile public lectures on environmental issues	33	12.2
Health and sanitation education	30	11
Regular environmental sensitization education	25	9.3
Environmental committees education	20	7
Promote innovative thinking in waste recycling and re-use	16	6
Leaders who were not initially interested in EE may become interested in EE implementation.	9	3
Funding for environmental action	9	4
Environmental litigation	4	1.5
Total	270	100

Source: Field data

The findings of the study further, reveal that through service delivery such as engaging local leaders in EE service delivery sustainably, the NGOs being engaged in helping residents in using EE to solve their environmental challenges, providing affordable waste collection services, training of ward development committee in sustainable environmental activities, training neighbourhoods in health and water education, engagement of residents in erection of good water and sanitation and teaching of residents sustainable practices is in line with EE. Service delivery inspires innovative ideas such as intercepted rain water and surface runoff harvesting which would subsequently lead to water security and acceptable standards of sanitation (Rohilla, Matto, Jainer, Kumar and Sharda,2017).

The study reveals that EE could be made accessible to residents through use of media, production of very easy to understand environmental learning tool kits, community informal learning such as drama, Introduction of environmental education in local community schools, engagement of educational institutions in community service for increased environmental education awareness, strengthening partnership between residents and EE implementers, engagement of residents in planning for environmental activities to be launched in the settlements, use of local leadership and community members as custodian of EE information to ensure a solidified cooperation and establishment of resource centres in settlements. In support of the foregoing, Environmental Education is an issue of major concern worldwide because its focus is to provide basic facts, understanding the processes that lead to environmental problems and bring about a positive change in attitudes and behaviour of inhabitants whether found in planned or unplanned settlements (Weber, Strobel, Dyehouse, Harris, David, Fang and Hua, 2014). It is therefore important that EE is made more accessible to residents of unplanned settlements to ensure awareness, acquisition of knowledge, change of attitudes, values and acquisition of skills for citizenry participation.

CONCLUSION

Based on the findings, the study concludes that confronting existing environmental challenges may not be a solution, but implementation of Environmental Education through existing environmental challenges in the settlements. In view of the fact that challenges offer diverse opportunities for environmental education awareness, provision of incentives through funding of environmental education projects, encourage participation of community members in environmental initiatives which bring forth change and promotion of innovative actions. Accessibility would be necessitated through production of environmental learning toolkits that can be easily understood by residents, making residents custodians of local environmental information, sensitization against unsustainable practices, educational awareness campaign in the settlements, Schools, colleges and universities participation in community service to ensure environmental education awareness is intensified and rooted. Through EE, inhabitants of Misisi and Kuku can acquire the knowledge, skills, values and change attitudes to approach the environment and existing challenges in responsible and sustainable ways.

RECOMMENDATIONS

Based on the findings, it is recommended that;

- The inhabitants of Misisi and Kuku settlements, the government and other environmental stakeholders should establish projects and programmes aimed at providing sustainable social and economic services which use local environmental challenges in the settlement for implementation of EE.
- There is need to enhance public private partnership with Government institutions, NGOs, and other stakeholders in the implementation of EE activities in these unplanned settlements.
- There be establishment of community environmental resource centres in the settlements to provide Environmental Education awareness.

- Government should work hand in hand with residents to disseminate information about EE in all unplanned settlements.
- There is need to regularise these unplanned settlements in order to ensure enhanced EE dissemination.
- Further research could be conducted to ascertain the extent to which community levels of education could help in the implementation of EE in unplanned settlements of Zambia.

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