Perspectives on University-Community Engagement Opportunities to Address Climate Change Issues in African Context. A Case of Ndejje University, Uganda

Nelson Mandela[1], Benjamin Wambua Kyalo[2] & David Ssekamatte[3]

[1]Department of Educational Management and Policy Studies, Moi University
Email: mandelanelson26@yahoo.com
[2]Department of Educational Management and Policy Studies, Moi University
Email: kyalowmb44@gmail.com
[3]Department of Management, Uganda Management Institute, Uganda
Email: dmssekamatte@mail.com

Abstract

Climate change is exacerbating extreme weather across the globe. While university-community engagement has emerged as a top priority at universities to collaborate and facilitate the mutually beneficial exchange of knowledge and resources on climate change action, in some African setups, such practices are not commonly followed and not prioritized but, rather, done as an add-on or afterthought. The main objective on this study was to explore views and perspectives of community leaders, university staff and students regarding the opportunities that universities can engage communities to address issues of climate change (knowledge, mitigation and adaptation practices), particularly in an African context. A qualitative case study design was adopted to generate data from 22 purposively selected community leaders, university staff and students of climate change related programmes at Ndejje University. Data was collected through semi-structured in-depth interviews with the university staff and community leaders and focus group discussion with students. Data was analysed using Braun and Clarke's (2006) thematic analysis with the help of MAXQDA software. Ubuntu theory guided this study. The findings of the study revealed numerous prospects for university climate action. These include: institutionalization of community engagement programs towards climate change mitigation and adaptation; collaborative approach to planning and implementation of engagement programmes and; adopting a community engagement Baraza as an alleyway for sensitization. Others were: incorporation of climate change indigenous knowledge in mainstream academic; extensive capacity building and engagement programmes as well as community empowerment and income diversification strategies. Findings revealed that University-Community engagement towards climate change action remains marginally institutionalized at the case university. It was clear from study participants that university community engagement offers African universities contextualised opportunities that are necessary and can accelerate climate action. The findings may thus be handy in enhancing the integration of climate change measures into national policies, strategies, and planning especially in African higher institutions of learning.

Key words: *University-Community Engagement, Opportunities, Climate change, African Context*

Email of Corresponding Author:
mandelanelson26@yahoo.com
https://journals.mu.ac.ke/index.php/edj/

1.0 Introduction

There is a strong and growing impetus for universities and colleges to ensure that their presence within various communities is productive and transformative. Universities clearly harbour a huge potential regarding engaged scholarship and strong institutional support for engaged research which play a more important role in leveraging scientific and societal knowledge to solve environmental problems. They are powerful generators of social and technological innovation (M'Gonigle and Starke, 2006), with an innate ability to link vast areas of expertise and activities across society ((Bowers, 2017, Arbo & Benneworth, 2007). Universities have to acknowledge that their structure and culture can serve as opportunities to community engagement that would contribute to social transformation (Sathorar, & Geduld, 2021). Such partnerships between institutions of higher education appear on the surface to involve multiple members with a common goal or goals (Salmi, & D'Addio, 2021; Cox, 2000). Community engagement work has grown over the last 30 years (Harkavy, 2016)*,* and literature on the nature and impact of university and community partnerships has grown in turn (Koekkoek et al, 2021; Rubin, 2000).

In African countries, there is a growing body of studies that emphasises the engagement of universities with local communities to address economic, social, and environmental issues. In Africa, the seeds of the community engagement (the university third mission) in higher education were sown in the 1960s (Mugabi, 2014). It has been evident that there has been renewed interest in the third mission of universities in Africa since 2000 (Nabaho et al, 2022). For such reasons, some scholars hold an argument that university collaborations across sectors significantly contribute to the local or regional transition to sustainability (Trencher et al., 2013;). Coupled with this growing consensus, there are mounting calls for universities to tie their research agendas to real-world sustainability issues (Crow, 2010) and direct their various functions to the development needs of different regions.

Thus, university-community partnerships have the potential to respond to society's most pressing needs through engaged scholarship (Pundt, & Heilmann, 2020). This particularly could be through universities moderating between the different actors like NGOs, and community members, due to their independent and science-driven perspective. This collaborative approach in which a university is not only the coordinator, but in particular the moderator, indicates clearly a 3rd mission activity whereby the university outreaches to local communities, organisations, enterprises, and the public to address climate change.

There is currently the presence of complex and wicked sustainability challenges like climate change, environmental degradation, and food security. These sustainability challenges are rooted in multiple areas of the complex social, economic, technological, political, cultural, and environmental fabric of human settlements in Africa and other parts of the world. Thus, Myers and Kent (2008) have opined that it is little wonder that the generation of concrete and effective solutions is beyond the capability of many central and local government institutions. Partnerships and collaboration between academia, industry, government, and civil society are consequently

Email of Corresponding Author:
mandelanelson26@yahoo.com
https://journals.mu.ac.ke/index.php/edj/

increasingly seen as prerequisites for tackling various sustainability challenges (Rodríguez-Zurita et al, 2024; Talwar et al., 2011).

Twecan et al (2022) have indicated that Uganda is ranked 15th on vulnerability and 147th on readiness, meaning the country is very vulnerable, sadly, unprepared to respond to climate change impacts. Uganda's economy and livelihoods of the people are already experiencing the effects of climate change. Particularly, there have been climate variability, floods, droughts, and changes in seasonal rainfall which have had significant socioeconomic impacts on the country in the past. More so, rainfall variability and changing lake levels also have implications for natural resource use: low lake levels since 2005 have led to power shortages, disruption to water supplies tour ban settlements around the lake, transportation, and infrastructure and are thought to have negatively affected the people of Uganda (Antonelli et al, 2021). Climate is likely to contribute to the majority of terrestrial and freshwater range boundaries. This generalization excludes species that are endemic to specific islands, lakes, rivers, and geological outcrops, although these local endemics are not immune from the effects of climate change.

Detrimental impacts of Climate Change have necessitated strong and growing impetus for University-Community Engagement (UCE) to facilitate and sustain carbon reduction strategies and practices by higher education institutions. Taking urgent action to combat climate change is based on the adaptation of the United Nations to the Sustainable Development Goals (SDGs) by 2030. Universities are some of the institutions well-positioned to solve problems related to climate change by virtue of them being generators of knowledge. Many African universities have embedded climate change knowledge and programs in the teaching and research, with a dearth of literature on the third mission (Community engagement). Despite fore fronting community engagement and legislation encouraging the establishment of collaborative and mutually beneficial university-community partnerships, this has remained a contested space. University–community engagement in most African universities continues to be characterised by universities engaging with communities to extract data to further their research agenda and, in the process, not acknowledging community needs and also not contributing to sustainable benefits for the community (Sathorar & Geduld, 2021).

Therefore, little is known about how the third mission is decoded within the African higher education landscape and the activities that universities in Africa engage in to fulfil their role in this regard. From the reviewed literature, a consensus has not emerged regarding the opportunities of universities and communities that may be encapsulated in the third mission, particularly regarding climate change issues. This knowledge gap is compounded by the strategic silence on how the university engagement opportunities can enhance the fight against climate change, an SDG that affects most of the other SDGs. Hence, universities have to ask why and how they engage with their communities, as well as whether their engagement would contribute to social transformation through the achievement of SDGs. It is therefore timely that in a period of increasing public engagement in addressing climate change and the rapidly growing number of networks of activists globally, this research aimed to explore the opportunities for university-community engagements towards the transition to a low-carbon society and future. This is particularly important given that

Email of Corresponding Author:
mandelanelson26@yahoo.com
https://journals.mu.ac.ke/index.php/edj/

the activities and actions of individuals, households and communities are responsible for causing and addressing climate change.

2.0 Methodology and Materials

2.1 Research Design

Based on an interpretivist paradigm, study adopted a qualitative approach and a case study design according to Yin (2012). Drawing on this approach, and as recommended by Creswell and Clark (2018), qualitative research investigates the understanding and interpretation of individuals regarding their social world which leads to the epistemological position of interpretivism (Alharahsheh & Pius, 2020). In line with this case study, the interpretivist paradigm locates this study through recognizing negotiation between the researchers and the researched to produce the account of the insider's perspective, so both the researcher and the researched are "present". The data are accounts, which researchers then code for emergent themes, look for connections, and construct higher-order themes (Hancock, Ockleford, & Windridge, 2001). Notably, Yin (2012) opines that a case study design enhances literal replication which may help to yield theoretical constructions that can be replicated across cases of the same contexts. Using this design, the researcher considered generated data from Ndejje University in Uganda.

Ndejje University being the oldest private university in Uganda, it boosts of the prestige and plays exemplary role to other private universities in Uganda. The university acknowledges knowledge extension and outreach services as their third mission (Community engagement) programmes. Ndejje University pioneered private university education in Uganda. In 1995, "The Christian University of East Africa" (as the university was known back then), with some government involvement was annexed by the Anglican Diocese of Luweero, in the Province of the Church of Uganda. The name of the university was changed to Ndejje University. In 1998, the institution received recognition as a tertiary-level institution of higher learning by the government of Uganda through the Ugandan Ministry of Education and Sports. Ndejje University was issued a University Charter by the government of Uganda in 2009. The University seeks to promote research and innovation, problem-solving, and talent exploitation as the overriding theme of its education. This paper presents findings from a larger study conducted in 2023 to explore views and perspectives of staff and students regarding opportunities that Ndejje University in Uganda can utilize to address issues of climate change. The selection of the case university was therefore purposive.

Data was generated using semi-structured in-depth interviews generating data from 5 university staff and 5 community leaders, and a focus group discussion with 10 students undertaking programmes and courses related to climate change and sustainability at the case university. For both interviews and focus groups, an audio recorder was used during data generation which later enabled the researchers to transcribe the data for analysis.

2.2 Data analysis
Data was analysed using Braun and Clarke (2006)'s six-phase thematic analysis model. These phases included (1) becoming familiar with the data; (2) generating initial codes; (3) searching for themes; (4) reviewing the candidate themes; (5) defining and naming final themes and categories;

Email of Corresponding Author:
mandelanelson26@yahoo.com
https://journals.mu.ac.ke/index.php/edj/

and (6) generating and writing a report. The analysis began with a thorough reading of the transcripts to familiarize with the data. The researcher played all audio recordings for both interview and focus group discussion data for several times to derive textual data. Transcription was done solely by the researcher for both semi-structured interviews and focus group discussion data. The transcripts were re-read to correct any errors in transcription as well as grammar and representation. Transcription supported the researcher to become 'immersed in the data' and therefore generate initial codes from the data. This was with the help of MAXQDA software. The codes were then categorized to help in searching for themes that were later reviewed and a final list of themes that answer the research questions was reached. The final themes were then written up into study.

2.3 Ethical Considerations

The whole process of data collection took off with seeking clearance from the School of Education and Department of Educational Management and Policy Studies, Moi University to conduct this research. Further approval was sought from the Uganda Christian University Research Ethics Committee (Uganda) which recommended me to be granted a research permit from the Uganda National Council for Science and Technology (UNCST). Then, the researcher sought permission from the case university where data was generated. Before participants took part in the study, the researcher asked participants to read, understand and sign a hard copy of the consent form. The researcher then answered any raised questions from the participants while they reviewed the consent form. The researcher audio-taped the interviews and before the researcher concluded the interviews, the researcher responded to the participants' questions that were raised. After the whole process of data collection, the researcher then transcribed the audio-taped qualitative data and then analysed it.

3,0 Key Findings and Discussion

3.1 Institutionalization of CE towards climate change action

This category pertains to ways and strategies that university staff and community leaders suggested to enable the instillation of a collective mindset and structures at higher education institutions, particularly Ndejje University which values community engagement. Participants suggested that institutionalization of community engagement towards climate change action should be a straightforward process in the context of organisational priorities, structure, resources, and culture, and it requires changing routines and ways of thinking toward numerous engagement programs that directly deal with climate change knowledge, mitigation, and adaption. They firmly believed that this can be achieved through numerous strategies like the establishment of a well-laid-out engagement structure, institutional support to adaptation innovations, involvement of community leaders in engagement planning, university administrators picking keen interest in climate change action, and consistency in engagement programs among others.

While commitment to meaningful community engagement is infused at Ndejje University's mission statement participants argued that a lot still needs to be done in terms of increasing access to leadership; restructure organizational networks and funding mechanisms; expanding and supporting opportunities for student involvement; and effectively supporting service-learning in the curriculum among others: The university staff and community leader noted that:

Email of Corresponding Author:
mandelanelson26@yahoo.com
https://journals.mu.ac.ke/index.php/edj/

> *Africans have a spirit of togetherness, working together, brotherhood, and sisterhood, this kind of collaboration should be at the core of every African university mandate. It shouldn't be just a course outline in agriculture, in the Faculty of Agriculture, but it should be the face of the university, taken up by administrators, the managers so that together with the faculties, we can come up with something effective on the ground, not just small papers written.* (NDJ, US3, lines 14-21, Page 7)

> *Let there be formal structures, let it be very, very clear to us in planning and they involve in environmental protection much, much more. We believe they have all the knowledge; they have all the equipment to conduct the research. So, let them come back to us and tell us what we are supposed to do, and let them be consistent.* (NDJ, CL2, line 12-15, Page 10).

With the establishment of an explicit structure for community engagement at the university, participants suggested that this should be given a clear leadership with full university administration support to enable effective implementation of the third mission mandate at the university. participants further emphasised that these structures should work closely with external stakeholders especially community leaders for easy mobilisation and smooth running of engagement programs and increase community resilience by supporting community-based disaster management structures.

It is clear from the participants' views that they long for a well-known structure that plans and implements engagement programs. Considering that fostering engagement and partnership with the community is under the office of the vice-chancellor at Ndejje University, it appears that there is no defined autonomy, stringent mandate and policies, specific budget for engagement programs, and explicit organizational structure which makes the entity appear unstructured, especially the community members. The community members evidently yarn for involvement in the formulated structure and planning of the engagement programs with the community members. They believe that it enables them to put their voices and let the university know what is happening in the communities. This could fill the communication gap that participants indicated earlier between the university and grassroot communities. Indeed, as per Ndejje University's strategic plan for 2017-2027, the university indicates its commitment to facilitating and enhancing the spirit of cooperation within the community and the outside world and also promoting partnerships with the community. This commitment could be actualized if well-laid explicit structures for engagement are in place working closely with the community leaders.

As indicated by the participants, community engagement programs at the university should come up with tailor-made approaches that work to support the most vulnerable people to gain a greater understanding of disaster and climate risks (Murrah-Hanson et al, 2021). Such approaches can entail a redefinition of the university culture, include curricular change, involve and empower faculty and staff, and necessitate new institutional infrastructure and policies regulating community engagement. This could further be through supporting the staff, students, and possibly community leaders with the tools to develop locally appropriate adaptation plans and actions.

Email of Corresponding Author:
mandelanelson26@yahoo.com
https://journals.mu.ac.ke/index.php/edj/

3.2 Adopting a community engagement Baraza as an alleyway for sensitization

Another opportunity that emerged from the analysed data is adapting a traditional conversations space for university-community engagement dialogues and pathways for awareness creation. Baraza *is a Kiswahili word, common in East African contexts, meaning a public meeting(s) that is used as a platform for creating awareness, responding to issues affecting a given community, sharing vital information, providing community members with the opportunity to identify and propose solutions to concerns. It is also an avenue for information dissemination to the community as well as a quick means of getting feedback on the critical issues affecting that community. Given the resource constraints, participants proposed that university management can collaborate with community leaders to establish platforms within communities for effective engagements. Participants believed that this could enable the university to reach out to the final consumers of its knowledge (community members) and also learn from them about climate change action through this cost-effective and potentially with huge benefits. They highlighted that;*

> *we need community platforms to educate the people. This is particularly on what should be done to save the environment, what it means to climate change, and what are the impacts of climate change. For some of our people, they will not see the rainfall and they will just say it is God. Yes, God has the powers of course, but some of the effects are coming from the activities of man. I have told you brickmaking, Charcoal, all of these activities are destroying the environment.* (NDJ, CL3, lines 24-29, Page 10)

> *I think for effective engagement and addressing climate change, spaces should be created by both the universities and communities for needs assessment, sensitisation and awareness creation. These strategies we are talking about, we cannot just take them to the communities, we can engage traditional or community leaders to organise traditional meetings and invite community members for a discussion about climate change. I think that is something that is not happening now. For these community members to provide and implement the solutions to the climate change problem, first of all, they must be sensitised.* (NDJ, US2, lines 1-7, Page 9)

Locally established platforms are very key for connecting the university and community members in contextualised spaces of indigenous communities. This could be valuable in increasing the believability of the knowledge shared by both the university and community leaders to community members. Participants feel that the university management should 'move' the university to the communities to enable constructive dialogues on climate change knowledge, mitigation and adaptation which is currently unavailable. These meetings are conducted in public places like market areas, community halls/centres, places of worship, and open arenas.

In 2009, the Government of Uganda initiated community advocacy forums, also known as barazas, to involve the public in holding the government accountable for its performance in relation to the resources spent and to finally improve public service delivery (Van Campenhout et al, 2021). The baraza program, initiated by the president of Uganda and implemented by the Office of the Prime Minister (OPM) provides a platform for creating awareness, responding to issues affecting a given

Email of Corresponding Author:
mandelanelson26@yahoo.com
https://journals.mu.ac.ke/index.php/edj/

community, sharing vital information, providing citizens with the opportunity to identify and propose solutions to concerns (Chubb et al, 2022). It is also an avenue for information dissemination to the community as well as a quick means of getting feedback on the critical issues affecting that community. Therefore, African universities should endeavour to organize and explore community barazas where community members receive information regarding climate change knowledge, adaptation, and mitigation and get the opportunity to directly engage with them for knowledge co-creation and sharing.

3.3 Incorporation of CC Indigenous knowledge in mainstream academic and engagement programs

Participants expressed their views on the existence of African indigenous knowledge systems and the urgent opportunity for its integration by the university into mainstream academic and community engagement programs. They highlighted that the experimental knowledge based on African culture can significantly contribute to the achievement of Sustainable Development Goal 13 on climate action by observing changing climates, adapting to impacts, and contributing to mitigation efforts. Participants looked back to an African journey marked by vast climate change indigenous knowledge and mitigation practices that could still be relevant and applicable in different African contexts but have since been neglected.

Further taking me down memory lane, some participants recollected different indigenous practices that were instrumental in the old days that could not only be instrumental for university academic programs but also for practice as engagement activities. Participants argued that African indigenous knowledge should not be perceived by universities as alternative knowledge but as one domain of knowledge among others. They encourage the education system to openly recognise Indigenous and traditional knowledge to have a contribution towards environmental management. It was noted that much as times have moved, there could be some knowledge that is still applicable and relevant in current times. This has the potential of widening the knowledge base and increasing options to increase awareness about climate change, and mitigate or even adapt to the existing challenges of climate change.

> *Because for sure, even before what we now call scientific knowledge, before Western education, the traditional people had their science of environmental management and how they managed to control the climate. I am sure there could be some indigenous knowledge on how people use it to protect the environment. Or maybe there could be some specific ethnic, specific cultural norms.* (NDJ, US3, lines 20-24, Page 6)

> *Indigenous knowledge should be exploited and more research carried on to establish its usefulness in environmental protection. The convention environmental protection scientists, when we take it to the community, we tend to think that these people don't know. Yes, they know! for instance, in central Uganda, you get a name according to your totem. Yes. And your totem, you can never kill it, you can never cut it, you can never eat it, it is something highly feared and respected. And remember, most of the totems are animals and plants. That is local environmental protection or biodiversity protection. So, we should*

Email of Corresponding Author:
mandelanelson26@yahoo.com
https://journals.mu.ac.ke/index.php/edj/

> *actually exploit local knowledge as far as climate change and environmental protection are concerned.* (NDJ, US4, lines 15-22, Page 5)

It is distinct from the participants' responses that they commend the remarkable value of indigenous knowledge in Africa for climate change adaptation and its value for supplementing climate services. This is particularly true in most African communities where there is limited or completely no access to modern climate and weather forecasts. A collaboration of universities and communities explores and encourages local communities to develop a sense of ownership and blend the university and indigenous knowledge to actively contribute to the sustainability of their communities. Findings from such participatory studies can provide another basis for local-level decision-making for African communities regarding climate change action. For instance, Tweheyo et al, (2024) opine that integrating indigenous knowledge into broader climate change mitigation strategies is imperative for fostering resilience and sustainability in the face of ongoing environmental challenges. Congruently, a combination of knowledge management and systems thinking can amalgamate into practical approaches for both building new approaches to sustainable development and fostering pertinent projects and programs (Roland et al, 2018). This involves creating a highly involved, engaged, and active community in order to gather and store all the wisdom on how biodiversity has hitherto been conserved and handled.

Integration of indigenous knowledge and academic knowledge could provide potential benefits such as: cutting back soil erosion, increasing the availability of water, improving the seeding process, enhancing cultivation and harvesting, and improving the reciprocity and mutual relationships between the university and community as postulated by the Ubuntu tenets. Therefore, "Learning about biodiversity, about how traditional and indigenous holders of biodiversity-related knowledge cope with biodiversity, how this knowledge is used to effectively manage biodiversity and to maintain ecosystem services at various scales, as well as which are the most appropriate approaches to promote education and raise further awareness on these issues – all of this has been part and parcel of African university missions" (Roland et al, 2018, p13).

3.4 Collaborative approach to planning and implementation of engagement programs
Study participants categorically propose inclusive university-stakeholder engagement regarding the formulation of engagement programs which includes identifying, analysing, planning, and implementing policies on university-community engagement. They noted that it is important to identify, engage with, and understand the requirements and issues affecting the various stakeholders in the communities and how they can be catered for the policies to be formulated. Local community leaders alluded to their long-term desire to have a community leader representative on the university management councils to represent community members and their views. It was not that these synergies could be very important for effective communication between the university and community members regarding the planning and execution of different engagement programs, especially regarding climate change. In their own words, participants revealed that;

Email of Corresponding Author:
mandelanelson26@yahoo.com
https://journals.mu.ac.ke/index.php/edj/

> *different approaches can be used to come up with good and core relevant policies that can guide effective community engagement. You actually find that generalisation is not good. In other words, the university management, together with the community leaders and other external stakeholders need to create local and community-based platforms that are inclusive to engage the community members in matters that affect them and in this case climate change mitigation and adaption.* (NDJ, US1, lines 1-5, Page 6)

> *as the chairperson local council, and one of the leaders of this area, I would appeal to the university to give us an opportunity, at least one slot on the management or whatever council that they have and will be part of the planning, contribute on policies that affects us and they also get to know, issues that affect us. (*NDJ, CL2, lines 23-27, Page 9)

The participants agree that it is important to map the community members and other stakeholders through different engagement events to collaboratively reach a consensus on policy formulation and implementation. Whether the creation of a new policy or the revision of an existing one is a regular event or a one-off project initiative, all team members (university, community members, and civil society among others) should be able to reach a point of commonality within the context of engagement programs on climate change action. Knowing the 'who, what, why, where, and when,' is a fundamental requirement for effective collaborative policy formulation. This is why community leaders feel that they should be in positions on some management structures of the university to contribute to these fundamental requirements.

The findings are in agreement with Mfitumukiza et al, (2024) that the participants' views that in different institutions in African contexts, policies are developed out-of-sync with local realities, leading to a lack of congruence with the local needs of communities; therefore, very difficult to mainstream such policies into local communities' contexts. Eriksen et al (2019) support this postulation by arguing that there is the continued use of top-down approaches to policy formulation and implementation, which promote elite monopoly of custodianship of information and the associated marginalization and vulnerability of communities. Such approaches have been criticized for perpetuating historical power imbalances, brought about by centralised and exclusive decision-making (Kahsay & Bulte, 2021). It also hinders ownership and implementation of policy at the local level, because of the disconnect with the needs and priorities at the local community level (McDougall & Ojha, 2021).

Effective collaboration requires that the individual perspectives of each entity arrive at a common priority that can ably enhance the university's third mission and also advance the efforts towards climate change mitigation and adaptation. Gwali, (2014) agrees that adaptation measures can be more successful when the local population participates in both planning and implementation in government, institutions, and organisations. Therefore, community participation is critical for successful interventions aimed at promoting adaptation and enhancing resilience to climate change at all levels. There should always be involvement of local political, community, and opinion leaders in the introduction of adaptation interventions. This helps to foster the acceptability of the interventions in most African communities where there are many misconceptions and fallacies about the role of the university and the concept of climate change.

Email of Corresponding Author:
mandelanelson26@yahoo.com
https://journals.mu.ac.ke/index.php/edj/

3.5 Extensive Capacity Building
Participants reported the need to enhance and strengthen both the institutional and external stakeholders' skills, abilities, and resources to enable smooth and effective implementation of engagement programs within different communities. Particularly, university staff and some community leaders suggested that both universities and communities should enhance community training on environmental conservation, adopt an African-based crosscutting curriculum, enhance research and training, lobby funding and teach community members about sustainable climate-smart agricultural practices among others. By doing this, participants envisioned skilled graduates, financial capacity, skilled and knowledgeable university staff members, and skilled local farmers that are able to support policy formulation and design localized solutions to problems associated with climate change effects in the communities where they live. In their words, they noted that;

> *Our people need to be sensitized, trained, educated, and given knowledge, especially from the university where they do a lot of research. This will enable community members to be aware that what they're doing against the environment is actually against the law, and against their sources of income. So, most of our people don't know. (NDJ, CL3, lines 1-3, Page 11)*

> *also need campaigns, also tailored information about programs or colleges, because our colleges and our studies vary. if you have somebody in business, let them study climate change related to business, if somebody is in veterinary science, let them study climate change related to veterinary, if someone is in social sciences, let them have climate change knowledge related to social sciences so that everyone will go to the university will get climate change knowledge. (NDJ, US5, lines 8-13, Page 2)*

As expressed in the excerpt, participants strongly believe that African universities need to develop a curriculum based on African contexts, direct to community problems and needs. This calls for crosscutting courses about climate change in all programs that students are undertaking in every faculty. This can adequately prepare learners and the university staff to be equipped with the required knowledge and skills about climate change mitigation and adaptation. Capacity building helps individuals, communities, and institutions to better understand the complexities of climate change, including its causes, impacts, and potential mitigation and adaptation strategies. This understanding is crucial for informed decision-making at all levels in the development and coordination of engagement programs at African universities. Addressing climate change requires collaboration across sectors, disciplines, and geographic boundaries.

Capacity building can foster this collaboration by bringing together diverse stakeholders, including policymakers, scientists, practitioners, and community members, to share knowledge, expertise, and resources towards climate change action (Berman, 2014; Berman et al 2015). Moreover, Ssekamatte, et al (2024) has recommended that African universities could engage in training and capacity building on climate change mitigation and adaptation by offering short courses, academic and research programs, and working with communities and policymakers through outreach interventions. Therefore, African universities have a responsibility to shape knowledge, skills, and attitudes through training and conducting scientific research on aspects of climate change and

Email of Corresponding Author:
mandelanelson26@yahoo.com
https://journals.mu.ac.ke/index.php/edj/

environmental sustainability. One most relevant way can be through reviewing their colonial curriculum and transforming the higher education systems in order to remain relevant and become competitive and responsive to the contemporary challenges and needs of the current African society.

4.0 Conclusions and Recommendations

4.1 Conclusion

Collaboration between African universities and communities can significantly impact the fight against climate change. To achieve this, universities should focus on stronger community engagement through teaching, research, and community outreach programs. Additionally, traditional African knowledge and practices can offer valuable insights for mitigating climate change and adapting to its effects. Integrating this knowledge into the curriculum and research can benefit universities and African communities in their fight against climate change.

While University-Community engagement towards climate change action remains marginally institutionalized at the case university, this form of engagement ought to be fully integrated into their budgets, community engagement programs towards climate change action and research and academic activities. With a rapidly closing window of opportunity to secure a liveable and sustainable future for all, university community engagement offers African universities contextualised opportunities that are necessary and can accelerate climate action. To encourage university-community engagement on climate change, budgets, faculty incentives, and recognition systems need to be adjusted. It is also essential for universities in Africa to design their community engagement programs with consideration for their unique history, culture, and national policies. Ultimately, careful actualisation of these contextualised opportunities can potentially advance impacts of climate change caused by human activities to stop intensifying. Findings suggest that observed widespread and substantial impacts and related losses and damages attributed to climate change can decelerate through synergies between universities and communities.

5.2 Recommendations

To effectively utilize these opportunities, CE at African universities requires each university to pay attention to its institutional context like history, disciplinary focus, location, ownership, mission, culture, values, indigenous knowledge and priorities, and national policy agendas. The conceptualization, implementation and sustainability of CE programs in African contextualized Higher Education Institutions (especially universities) should reflect indigenous epistemologies induced by African philosophies as its core foundations. This can be possible through synergies for policy development and target-setting at university and community levels, particularly in relation to climate change knowledge, mitigation, and adaptation as well as enhanced transparency of engagement programs on climate action and support.

Universities in African contexts should ensure that institutionalizing UCE ought to pertain to the formal and informal factors embedded in this specific mission. These encompass supportive policies and measures, resource mobilisation, strategic plans, formal and informal/cultural recognition, the integration of community engagement in the core knowledge activities and

Email of Corresponding Author:
mandelanelson26@yahoo.com
https://journals.mu.ac.ke/index.php/edj/

services of HEIs, administrative support, and academic staff. In the case of flagship and research-intensive universities, UCE can be considered a peripheral mission concerning the core tasks of teaching and research, although, in more regionally embedded and vocational universities, engagement is often cultivated due to its links within the localities.

References

Alharahsheh, H. H., & Pius, A. (2020). A review of key paradigms: Positivism VS interpretivism. *Global Academic Journal of Humanities and Social Sciences*, *2*(3), 39-43.

Antonelli, C., Coromaldi, M., Dasgupta, S., Emmerling, J., & Shayegh, S. (2021). Climate impacts on nutrition and labor supply disentangled–an analysis for rural areas of Uganda. *Environment and Development Economics*, *26*(5-6), 512-537.

Arbo, P., Benneworth, P. (2007) 'Understanding the regional contribution of higher education institutions: a literature review', *OECD education working paper*, No. 9, OECD: Paris.

Berman, R. J. (2014). *Developing climate change coping capacity into adaptive capacity in Uganda* (Doctoral dissertation, University of Leeds).

Berman, R. J., Quinn, C. H., & Paavola, J. (2015). Identifying drivers of household coping strategies to multiple climatic hazards in Western Uganda: implications for adapting to future climate change. *Climate and development*, *7*(1), 71-84.

Bowers, A. M. (2017). University-community partnership models: Employing organizational management theories of paradox and strategic contradiction. *Journal of Higher Education Outreach and Engagement*, *21*(2), 37-64.

Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology,* 3, 77-101.

Chubb, L. A., Fouché, C. B., & Sadeh Kengah, K. (2022). Baraza as method: Adapting a traditional conversational space for data collection and pathways for change. *Qualitative Social Work*, *21*(5), 914-931.

Cox, D. N. (2000). Developing a framework for understanding university-community partnerships. *Cityscape*, 9-26

Creswell, J. W., & Clark, V. L. P. (2018). *Designing and conducting mixed methods research*. Sage publications.

Crow, M. M. (2010). Organizing teaching and research to address the grand challenges of sustainable development. *BioScience*, *60*(7), 488-489.

Eriksen, S. H., Cramer, L. K., Vetrhus, I., & Thornton, P. (2019). Can climate interventions open up space for transformation? Examining the case of climate-smart agriculture (CSA) in Uganda. *Frontiers in Sustainable Food Systems*, *3*, 111.

Hancock, B., Ockleford, E., & Windridge, K. (2001). *An introduction to qualitative research*: Trent focus group.

Koekkoek, A., Van Ham, M., & Kleinhans, R. (2021). Unraveling university-community   engagement: A literature   review. *Journal of Higher Education Outreach and Engagement*, *25*(1).

Mfitumukiza, D., Mwesigwa, G. Y., Kayendeke, E. J., & Muwanika, V. B. (2024). Local Context Capacity Building Needs for Climate Change Adaptation among Smallholder Farmers in Uganda: Policy and Practice Implications. *Climate*, *12*(1), 10.

M'Gonigle, M., & Starke, J. (2006). Planet U Sustaining the world, reinventing the university. Gabriola Island. *British Columbia. New Society*.

Mkabela, Q. N. (2015). Ubuntu as a foundation for researching African indigenous psychology. *Indilinga African Journal of Indigenous Knowledge Systems*, *14*(2), 284-291.

Mugabi, H. (2014). *Institutionalisation of the "third mission" of the university: The case of Makerere University*. Tampere University Press.

Murrah-Hanson, A. L., & Sandmann, L. R. (2021). Exploration of a pathway from leadership development to institutionalization of community engagement. *Journal of Higher Education Outreach and Engagement*, *25*(4).

Myers, N., Kent, J. (2008) *The citizen is willing, but society won't deliver: The problem of institutional roadblocks*. International Institute for Sustainable Development: Winnipeg.

Email of Corresponding Author:
mandelanelson26@yahoo.com
https://journals.mu.ac.ke/index.php/edj/

Nabaho, L., Turyasingura, W., Twinomuhwezi, I., & Nabukenya, M. (2022). The Third Mission of Universities on the African Continent: Conceptualisation and Operationalisation. *Higher Learning Research Communications*, *12*(1), 4.

Kahsay, G. A., & Bulte, E. (2021). Internal versus top-down monitoring in community resource management: Experimental evidence from Ethiopia. *Journal of Economic Behavior & Organization*, *189*, 111-131.

Pundt, H., & Heilmann, A. (2020). Building collaborative partnerships: an example of a 3rd mission activity in the field of local climate change adaptation. In *Universities as Living Labs for Sustainable Development* (pp. 621-636). Springer, Cham.

Rodríguez-Zurita, D., Jaya-Montalvo, M., Moreira-Arboleda, J., Raya-Diez, E., & Carrión-Mero, P.(2024). Sustainable development through service learning and community engagement in higher education: a systematic literature review. *International Journal of Sustainability in Higher Education*.

Roland, B., Rubens, A., & Azupogo, H. A. (2018). Combining indigenous wisdom and academic knowledge to build sustainable future: An example from rural Africa. *Journal of African Studies and Development*, *10*(2), 8-18.

Rubin, V. (2000). Evaluating university–community partnerships: An examination of the evolution of questions and approaches. *Cityscape: A Journal of Policy Development and Research, 5*(1), 219–230.

Salmi, J., & D'Addio, A. (2021). Policies for achieving inclusion in higher education. *Policy Reviews in Higher Education*, *5*(1), 47-72.

Sathorar, H., & Geduld, D. (2021). A Critical Approach to University-Community Partnerships: Reflecting on the Diverse Realities. *Educational Research for Social Change*, *10*(2), 88-104.

Ssekamatte, D., Speck, K., & Siebenhüner, B. (2024). Exploring faculty and student perspectives regarding training and research interventions on climate change and sustainability at Makerere University in Uganda. *Education Research in African Contexts*, 48.

Talwar, S., Wiek, A., & Robinson, J. (2011). User engagement in sustainability research. *Science and Public Policy*, *38*(5), 379-390.

Theron, L., Liebenberg, L., & Ungar, M. (2015). *Youth resilience and culture*. Springer. [MU].

Trencher, G. P., Yarime, M., & Kharrazi, A. (2013). Co-creating sustainability: cross-sector university collaborations for driving sustainable urban transformations. *Journal of Cleaner Production*, *50*, 40-55.

Twecan, D., Wang, W., Xu, J., & Mohmmed, A. (2022). Climate change vulnerability, adaptation measures, and risk perceptions at households' level in Acholi sub-region, Northern Uganda. *Land Use Policy*, *115*, 106011.

Van Campenhout, B., Kabunga, N., Mogues, T., & Miehe, C. (2021). Community advocacy forums and public service delivery in Uganda: Impact and the role of information, deliberation and administrative placement. *3ie Impact Evaluation Report*, 1-104.

Yin, R. K. (2012). *Application of Case Study Research* (3rd ed.). Los Angeles: Sage Publications Inc.

Conflicts of Interest Statement

The authors declare that they have no financial or personal interests that could influence the results of this paper.

About the Author

Mandela Nelson is a PhD student in Educational Research and Evaluation at the Department of Educational Management and Policy Studies, School of Education, Moi University, Kenya, under The German Academic Exchange Service (DAAD; German: Deutscher Akademischer Austauschdienst) scholarship and the South African-German Centre for Excellence in Education Research Methodologies and Management (CERM-ESA). He holds a Bachelor of Arts in Education at Kyambogo University and a Master of Education in research at Moi University, Kenya. His research interests are climate change education, sustainability, higher education engagement and school-community engagement towards contemporary community challenges.

Prof. Benjamin Wambua Kyalo is an Associate Professor, Specialist and Consultant of educational research, evaluation and policy at the School of Education-Technology Education at the Open University of Kenya. He is also a Senior Lecturer in the Department of Educational Management & Policy Studies, School of Education, Moi

Email of Corresponding Author:
mandelanelson26@yahoo.com
https://journals.mu.ac.ke/index.php/edj/

University, Kenya. He holds a PhD in Educational Research and Evaluation. He is a multi-skilled and versatile leader and an academic with extensive experience and expertise in research, evaluation and education policy.

Dr. David Ssekamatte is a Lecturer in Monitoring and Evaluation at the Department of Management, Uganda Management Institute, Kampala, Uganda. He is also the champion and Coordinator of climate change and Sustainability Management at the Uganda Management Institute. He was a NAFSA (Association of International Educators) fellow (2019-2020) and Senior NAFSA fellow (2021-2022), providing intellectual groundwork and developing resources on climate change sustainability and international higher education. He is a Postdoctoral fellow under the FAR-LeaF Programme at the University of Pretoria, in South Africa, funded by the Carnegie Corporation of New York (CCNY). His research interests are climate change and sustainability education, Higher Education in the African context, Monitoring, Evaluation and Learning. He holds a PhD in Education and Social Sciences from the Carl von Ossietzky University of Oldenburg, Germany, and a Master of Arts in Economics from the University of Lucknow, India.

Email of Corresponding Author:
mandelanelson26@yahoo.com
https://journals.mu.ac.ke/index.php/edj/