

Indigenous Knowledge for Climate Action

*The case of Ekisalhalha kya Kororo sacred site
adjacent to the Rwenzori Mountains National Park*

Kasese District, Uganda



The Cross-Cultural
Foundation of Uganda

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Cover photo

A view of the Ekishalalha Kya Kororo sacred site

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We acknowledge with much gratitude the support from the International Centre for the Study of the Preservation and Restoration of Cultural Property's (ICCROM) Net Zero: Heritage for Climate Action Project which has enabled us to undertake this research and

documentation. The documentation is part of CCFU's pilot project known as *"Using Indigenous Knowledge of to Mitigate the Effects of Climate Change on Ekyisalhalha kya Kororo sacred cultural site on River Kabiri in Kasese, in the Rwenzori region"*. The project aims at contributing to efforts to mitigate the effects of climate change on the site which is at the boundary of the Rwenzori Mountains National Park.

Finally, we extend our gratitude and appreciation to all individuals who directly and indirectly participated in the data collection exercise, including our local coordinators in Kasese, guides at Ekisalhalha kya Kororo, the Uganda Wildlife Authority, Kasese District Local Government and the CCFU staff, especially Fredrick Nsibambi and Aliguma Ahabyona for their dedication and hard work for the compilation of this publication.

Foreword

The Rwenzori region and specifically, the Kasese district has been hit hard by several climatic change catastrophes. Repetitive hydrological floods, mudslides, and long periods of drought among others have had far-reaching negative effects on the livelihoods and cultural heritage of the people in Kasese. Landslides and floods (along rivers Nyamwamba, Mubuku, Kabiri) have been noted to have led to the loss of both human and wildlife and cultural heritage property.

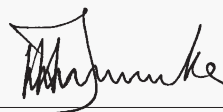
To support the communities in Kasese district to mitigate the effects of climate change or sometimes to adapt to these changes, both state and non-state actors have been implementing several interventions. For instance, tree-planting projects, relief support whenever climate disasters strike and livelihood activities have been supported.

It is important to note, however, that the above interventions are largely

responsive in nature. Kasese is struggling with long-term strategies to mitigate climate change effects. The integration of indigenous knowledge or community-based early warning systems in modern approaches to climate change actions is still limited.

This publication which has been put together by the Cross-Cultural Foundation of Uganda profiles and presents aspects of indigenous knowledge in terms of ceremonies, rituals, norms and customs of community members in Kasese that have the potential to contribute to contemporary and modern approaches to ameliorating climate change challenges.

It is therefore my hope and prayer that relevant stakeholders, both state and non-state actors will find the information in this publication useful to contribute to the existing efforts to mitigate the effects of climate in the Kasese and in the entire Rwenzori region.



Mr. Jovenal Muke

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Member of River Kabiri Valley Climate
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Introduction

The Net Zero: Heritage for Climate Action Project

This work has been conceived by the Cross-Cultural Foundation of Uganda (CCFU), within the framework of the Net Zero: Heritage for Climate Action, a cascading capacity development project by ICCROM's flagship programme, First Aid and Resilience for Cultural Heritage in Times of Crisis (FAR), that seeks to leverage indigenous and traditional knowledge for climate change mitigation and adaptation at 5 climate hotspots – Brazil, Egypt, India, Sudan and Uganda. The Net Zero project is generously supported by the Swedish Postcode Foundation.

The Cross-Cultural Foundation of Uganda (CCFU) has been implementing a project titled *Using Traditional Knowledge to Mitigate the Effects of Climate Change on Ekyisalhalha kya Kororo sacred cultural site on River Kabiri in Kasese, in the Rwenzori region* as part of the Net Zero: Heritage for Climate Action project.

The project aims at contributing to efforts to mitigate the risks of climate change on the Ekyisalhalha kya Kororo sacred cultural site on River Kabiri along the boundary of the Rwenzori Mountains National Park, using the traditional knowledge of selected Indigenous Peoples. Specific objectives of the project include: generating information

on existing oral traditions and knowledge, cultural practices, beliefs and norms that can contribute to mitigating the effects of climate on cultural heritage; strengthening the capacity of the caretakers of the site to apply oral traditions, knowledge and cultural practices to reduce the effects of climate change; and trialing the inclusion of Indigenous cultural practices in the management principles for the sacred cultural heritage site.

To achieve the above objectives, the Foundation has undertaken research to document, publicise and disseminate the indigenous knowledge and other cultural resources of the communities to contribute to reducing the effects of climate change; enhanced the capacity of the site managers to appreciate and mainstream indigenous knowledge in the management of the site and supported the planting of indigenous trees along the site. Young people in selected school cultural heritage clubs were supported to visit the site and participate in the tree-planting activities. Through the project, a climate change village committee called the River Kabiri Valley Climate Change Mitigation Committee was established in Kyondo sub-county where the site is located.

It is expected that the use of indigenous knowledge of indigenous people will result in collaborative and sustainable management strategies

for the cultural heritage site in question and that the capacity of the caretakers (wardens) of the site will appreciate and apply the traditional knowledge, norms and practices in mitigating the effects of climate will be increased.

This Heritage for Climate Change Project was preceded by the 2020/2021 CCFU interventions both in the Rwenzori and West Nile regions that profiled the effects of climate on selected cultural heritage resources. The interventions were implemented in partnership with the International National Trusts Organisation (INTO) with support from the British Council's Cultural Protection Fund¹.

About this publication

This publication profiles and presents aspects of indigenous knowledge in terms of ceremonies, rituals, norms and customs of community members in Kasese that have the potential to contribute to contemporary and modern approaches to ameliorating climate change challenges.

Culture and heritage have a crucial role to play in decarbonising and developing fair and inclusive pathways for climate action.

In African societies, indigenous knowledge has been passed down to different generations orally and in practice. With the increasing disconnect between young people and their cultures and the emergence

of the era of documentation, whatever is not written is considered not to have happened. Therefore, CCFU profiled the important aspects of cultural heritage that can be used to address climate change through a publication that can easily be accessible by different stakeholders, including young people through different platforms such as digital platforms. It is expected that relevant local government authorities in Kasese, cultural leaders, Civil Society Organisations (CSOs) and other agencies involved in climate change-related interventions will find information in this publication relevant to their work.

This publication sheds light on the understanding of Indigenous knowledge from different perspectives. For instance, it highlights UNESCO's definition of the IK and how it is linked to aspects of climate change. It further highlights the understanding of climate change and the mitigation measures from the community's perspective.

Method of Data Collection and Scope

The Foundation employed mainly a qualitative methodology during the data collection exercise, which was also participatory in nature. The data was collected in Kasese district largely from the local government officials, cultural leaders, civil society actors and representatives of indigenous minority communities such as the Basongora.

¹ <https://crossculturalfoundation.or.ug/wp-content/uploads/2021/02/Melting-Snow-and-Rivers-in-Flood-Rwenzori-Case-Study-2021.pdf>

Data was collected from both primary and secondary sources, at the desk and through community interactions to collect various narratives on the indigenous knowledge.

Purposive sampling and snowballing techniques were used to identify individuals with in-depth knowledge of the subject, especially for key informant interviews. Some categories of participants were separately interfaced within Focus Group Discussions (FGD) to allow a free flow of information, where restrictive norms were employed.

In some instances, researchers used observation as a method of data collection, especially where visits were conducted to Kyondo sub-county and to the site.

The data collection exercise was constrained by a few challenges which were: limited documentation of the indigenous knowledge; a limited number of elders with the relevant information and limited literature about climate change that is specific to the Rwenzori region. The challenge of limited documentation of Indigenous knowledge was addressed through interactions with several members of the community, especially the clan leaders and ridge leaders in Kasese. Another challenge that was encountered was the growing expectations community members have, especially when NGOs come to them. Financial gain was sometimes a motivation for participation, yet all that CCFU had available was a modest transport refund and/or lunch.

■ Selected Climate and Indigenous Knowledge Terminologies, and their applicability in the context of this research

Climate change

According to the United Nations, climate change refers to long-term shifts in temperatures and weather patterns². These shifts may be natural, but since the 1800s, human activities have been the main driver of climate change, primarily due to the burning of fossil fuels (such as coal, oil and gas) which produces heat-trapping gases. The reduction of forest cover globally has also been noted as a serious contributor to climate change.

According to World Bank Statistics of August 2023, in Uganda, average temperatures have been observed to be increasing at a rate of 0.28 °C per decade and daily temperature observations show a significant increase in temperatures every year. Kasese district has been hit hard by several climatic change catastrophes. Repetitive hydrological floods, mudslides, and long periods of drought among others. Landslides and floods (along rivers Nyamwamba, Mubuku, Kabiri) have led to the loss of lives and property. The climate crisis represents one of the greatest threats to that heritage in a world with depleting natural resources, growing inequity and social injustice (IIC, ICCROM, ICOM-CC, 2021).

² <https://www.un.org/en/climatechange/what-is-climate-change>

Climate change risks

According to the Climate Change Committee³ of the United Kingdom, climate change risks are effects/challenges with a high possibility of occurring. For instance, more frequent and intense droughts, storms, heat waves, rising sea levels, melting glaciers and warming oceans which can directly harm animals, destroy the places they live in and wreak havoc on people's livelihoods, communities and their cultural assets.

Climate change disasters/hazards/catastrophes.

According to United Nations Disaster Risk Reduction⁴, a disaster is understood as the actual and sudden occurrence of the anticipated risks and their effects. For instance, when various phenomena such as earthquakes, landslides, volcanic eruptions, floods, tsunamis, wildfires, and pandemics strike and property and lives are lost, they are called hazards/disasters.

³ <https://www.theccc.org.uk/what-is-climate-change/what-are-the-risks/#:~:text=extreme%20weather%20events,melt%20over%20Green-land%20and%20>

⁴ <https://www.preventionweb.net/understanding-disaster-risk/component-risk/disaster-risk#:~:text=Disasters%20are%20sometimes%20considered%20external,of%20exposure%2C%20vulnerability%20and%20hazard>

Climate change mitigation and adaptation

According to National Aeronautics and Space Administration (NASA), the Global Climate Change Vital Signs of the Planet⁵, mitigation is about alleviating or lessening the effects of climate change. It refers to changes in processes, practices, and structures to moderate potential damages or to benefit from opportunities associated with climate change. Examples of climate change mitigation include among others, reducing global gas emissions, removing CO₂ from the atmosphere (geo-engineering), blocking sunlight, planning for changes in agriculture, restoring forest covers.

Adaptation refers to adjustments in ecological, social or economic systems in response to actual or expected climatic effects. Climate change. Adaptation protects people and places by making them less vulnerable to the impacts of climate change. For example, to protect against sea level rise, and increased flooding, communities might build seawalls or relocate buildings to higher grounds.

Indigenous knowledge

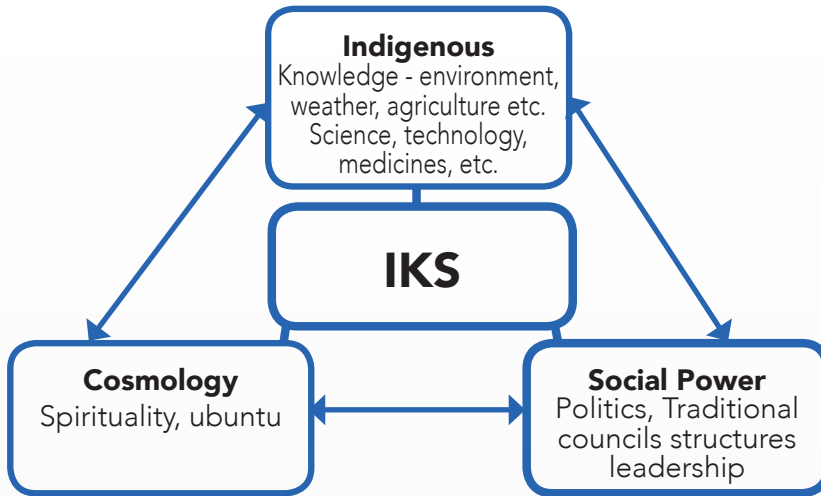
According to UNESCO's programme on Local and Indigenous Knowledge Systems (LINKS)⁶, indigenous knowledge refers to understandings, skills, and philosophies developed by local communities with long histories and experiences of interaction with their natural surroundings. Indigenous Knowledge (IK) has become an accepted term to include the beliefs and understandings of non-Western people acquired through long-term association with nature. IK is a body of valuable knowledge produced and owned by local people in their specific communities. It comprises a complex and often implicit education system that is not easily recognizable.

On the other hand, according to Environmental Science and Policy journal, 136 (2022) 250–260, Indigenous and Local Knowledge (ILK) is a term used to describe the wisdom, techniques, approaches, skills, practices, philosophies, and uniqueness of knowledge within a given culture, which is developed by local communities over years through the accumulation of experiences and informal experiments, and based on an intimate understanding of local contexts.

⁵ <https://climate.nasa.gov/solutions/adaptation-mitigation/>

⁶ <https://en.unesco.org/links>

Examples of Indigenous knowledge



Note: ubuntu also known as humanness is a notion that includes the essential human virtues; compassion and humanity.

Source: UNESCO

It should be noted that indigenous knowledge has for decades provided valuable insights into climate adaptation strategies, including rainwater harvesting and sustainable farming practices. It is accessible, especially in areas where modern science has not reached and it contributes to the decolonisation of climate change discourses related to education as well as mitigation strategies.

The other important aspect to note is that the 2016 United Nations Framework Convention on Climate Change (Paris Climate Change Agreement) recognised indigenous people and their traditional system as part of the solution to climate change, and this insight is valuable to foster adaptation and resilience during calamities.

The Bakonzo have a strong cultural attachment to the snow-capped Rwenzori mountains because they provide a source of cultural identity, and spirituality (as a home of their ancestral spirits), and are a source of traditional medicine, food and building materials⁷. According to Martin Doornbos (2017), the Bakonzo pay allegiance to their king, the Omusinga, as head of their cultural institution, Obusinga Bwa Rwenzururu. Many villages are situated on the ridges of the mountain slopes. Each ridge is traditionally governed by a ridge leader (Mukulu wa Bulhambu), whose responsibilities include resolving conflicts among his people and organising rituals. The ridge leader reports to a chieftain (Isemalhambu) who is responsible for

⁷ <https://crossculturalfoundation.or.ug/wp-content/uploads/2021/02/Melting-Snow-and-Rivers-in-Flood-Rwenzori-Case-Study-2021.pdf>

overseeing several ridges and in turn reports to the king.

The cosmology of the Bakonzo places Nyamuhanga, the creator who made the snow (nzururu) at its apex. Legend has it that Nzururu is the father of the spirits Kithasamba and Nyabibuya who are responsible for human life, well-being and continuity. Kithasamba, who is believed to live in the glaciated mountain peaks, is a giant force controlling the natural environment and the lives of all of the mountain people.

The Bakonzo interpret the snow as *the frozen sperm of Kithasamba*, who carries out the fertilisation of the earth and Bakonzo society through the yearly snowmelt, which sustains the rivers flowing down the mountains (CCFU, 2020). This explains Bakonzo's strong attachment to water bodies. Kithasamba has several spirits and one of them is Ndyoka, the water spirit. It is for this reason that river confluences and waterfalls are treated with reverence as they harbour this spirit. Whenever there are calamities such as floods, drought or famine, the Bakonzo carry out a ritual cleansing of the ridges and rivers, usually ending at a confluence where a ritual broom is thrown into the water.

Traditional weather forecasting

In their article⁸, Nkuba, M, et.al examined the abiotic and biotic environmental indicators used among

⁸ Indigenous Knowledge Systems and Indicators of Rain: Evidence from Rwenzori Region, Western Uganda

pastoralists and arable farmers to predict the onset and cessation of rain as well as to make short-term and seasonal forecasts in the Rwenzori region of Western Uganda. In the communities of Rwenzori, weather forecasting is an important element for predicting climate conditions and determining which agricultural and food-gathering activities to conduct and when. According to Nkuba, et, weather is forecast in three different ways. Observation of the sun's movement either on the morning horizon or in the evening during specific months; observation of the movements of the stars according to their position in the sky during particular months as a way of backing up the sun observation data; and following and counting of months in the traditional calendar which is well-known to the elderly members of the community. Nkuba, et emphasise that such information is verified in these three different ways and then compared with similar data from past years. During the sun observation, elders from the community gather at designated places to discuss and resolve other challenges such as conflicts/insecurity facing their community.

Rain-making rituals

In situations of prolonged droughts, members of the local communities in Kasese perform rain-making rituals at specific shrines. During the rituals, specific types of animals (goats/sheep) are sacrificed and prayers for rain are said. It is believed that after performing the rituals, the rains

fall on that very day, enabling the communities to plough/cultivate their fields. As the case during the sun observation, during the rain-making rituals, members of the community/clan come and drink and eat together and discuss any other issues in their community which promotes peace and social cohesion. It should be noted, however, that due to the influence of foreign religions the traditional rain-makers who would normally be consulted in situations of prolonged droughts together with the ancient spiritual ceremonies and rituals they conduct, are no longer being recognized. Further, the youth

no longer have access or connection to this spiritual wisdom given that they spend most of their time in schools⁹.

Traditional worshipping

According to Daniel. M. Matter (2021), the Bakonzo have a rich religious and cultural background. They culturally worshiped a supreme being called Kitathamba. The name *Kitathamba* literally means "one who does not need to climb." The implication was that this supreme being was already above everything else and already exalted.

⁹ <https://www.seedsofwisdom.earth/grant/performing-weather-modification-ritual-in-kasese-for-climate-change/>



Research Findings

Ekisalhalha Kya Kororo Sacred Waterfall

Ekisalhalha kya Kororo and its associated heritage and indigenous knowledge

Located at the confluence of the Kabiri and Kithangetse rivers in Kyondo sub-county, Kasese district, in the Muyina Chiefdom of the Obusinga Bwa Rwenzururu, Kororo waterfalls are named after an obstinate man who once lived in the area.

Legend has it that Muthangetsa was the ridge leader of the area. He had rules that were governing his ridge that whoever brew local beer, also known as tonto, had to take some of it to Muthangetsa's palace. Some of the other rules that he had were that when slaughtering a chicken or a goat or other animals, one had to seek permission from him. Oral history has it that Kororo brew his beer in the early 1830s and he stubbornly refused to take some of it to his ridge leader, Muthangetsa. So, he was arrested by Muthangetsa's men and he was taken to Muhe (the falls) for trial. Thereafter, Kororo was tried, and he refused to admit his mistake and he was taken to the Muramura site (traditional court) which is adjacent to Kororo site. By then the area/waterfall was called Muhe (because it had the shape of a canoe which is called Muhe in Lukhonzong language). During an FGD with the site managers, it was mentioned that a ritual was performed where Kororo was forced to crossover the falls but he instead drowned. Therefore, whoever died in the river after Kororo had their bodies buried near the river because their lives belonged to Ndyoka, the

water god¹⁰. The site, therefore, was named Kororo because he was the first person to be tried at the site.

According to Mr. Eri Nyakango¹¹, after settling the conflict between Kororo and his ridge leader Muthangetsa, the site became a traditional court where different disputes and conflicts related to land, marriage, witchcraft and other injustices were resolved. Whenever people quarreled or conflicted over land issues or boundaries, they were taken to the falls and they were required to go through an arch made out of the branches of a tree called *omuramura* (the judge). Whoever was right went through the arch without any problem and whoever was in the wrong, would either get an attack or fall down, they would immediately be thrown down the falls¹².

Because of the rituals that were being performed during the court sessions, ridge leaders started planting different types of herbs which are still being collected today by community members including the Bakonzo and other communities such as the Banyabindi. In the 1830s the Banyabindi (an indigenous minority ethnic group) used the water from the river/falls to make local beer (tonto) and take it to the Muthangetsa who was the ridge leader. Whoever refused to make beer for the ridge leader would be punished at the site¹³.

¹⁰ Focus Group Discussion with the Kyondo community conservation and tourism association

¹¹ One of the Bakonzo elders

¹² KII with Mr. Eri Nyakango

¹³ Ibid



Omuramura (*Dracaena*); specie around the Ekisalhalha Kya Kororo site, vital in the traditional court

The site is a residence of the spirit called *Ndyoka* (water god). Urinating or defecating at the site is not allowed. If one did so, they would become barren or miscarry in case one was pregnant. Women in their menstruation period are not allowed at the site because the water god is believed to be interested in blood. Sex-related activities are also prohibited at the site. Spitting in the waters of the river is also not allowed. It is said that if one does so, the spirit will appear in the form of a rainbow and will swallow the victim. Mentioning the name of the spirit at the site is also not allowed. It is said that if one does mention the name of the spirit, it will come for her/him¹⁴.

Ekisalhalha kya Kororo is important among the Bakonzo because it is a place of worship. In the past, several rituals for different reasons used to be performed at the site. The rituals included rain-making/stopping rituals. It is still a respected site because of the strange things that happen there. For instance, radio signals become faint as one approaches the site¹⁵ During an FGD with the leaders of Kyondo sub-county it was mentioned that in 1961 a woman drowned in the river but her spirit directed her relatives to the place where her remains were.

The site has caves which were used as hideouts during the tribal/clan conflicts for instance, between the

¹⁴ Kill with Mr. Nyakango

¹⁵ FGD with Kyondo sub-county leadership

Baswagha and Basukali clans in the 1950s. The caves further served as a hideout for the supporters of the Rwenzururu movement during the conflict with Mutesa II (the first Post-independence president of Uganda) government in the 1960s. During the same period, the site served as a hideout for the Bakonzo during a conflict with the Batooro.

The Bakonzo elders were responsible for protecting sites such as Ekisalhalha kya Kororo but it is difficult for them to do so these days because individuals have bought land around the site and

the elders have limited control over people's private land¹⁶. According to Baluku Mikairi Mwaka (one of the Bakonzo elders), many of the elders who used to perform the rituals have passed on without transmitting the knowledge and skills to young people and this leaves the future safeguarding of the site in jeopardy. In the event that someone disappeared at the river or lost an item, they would not recover them unless the rituals to appease Ndyoka are performed. In this case, the traditional healer plants a shrub called *amaranga* in Lukonzo to appease the water god Ndyoka.



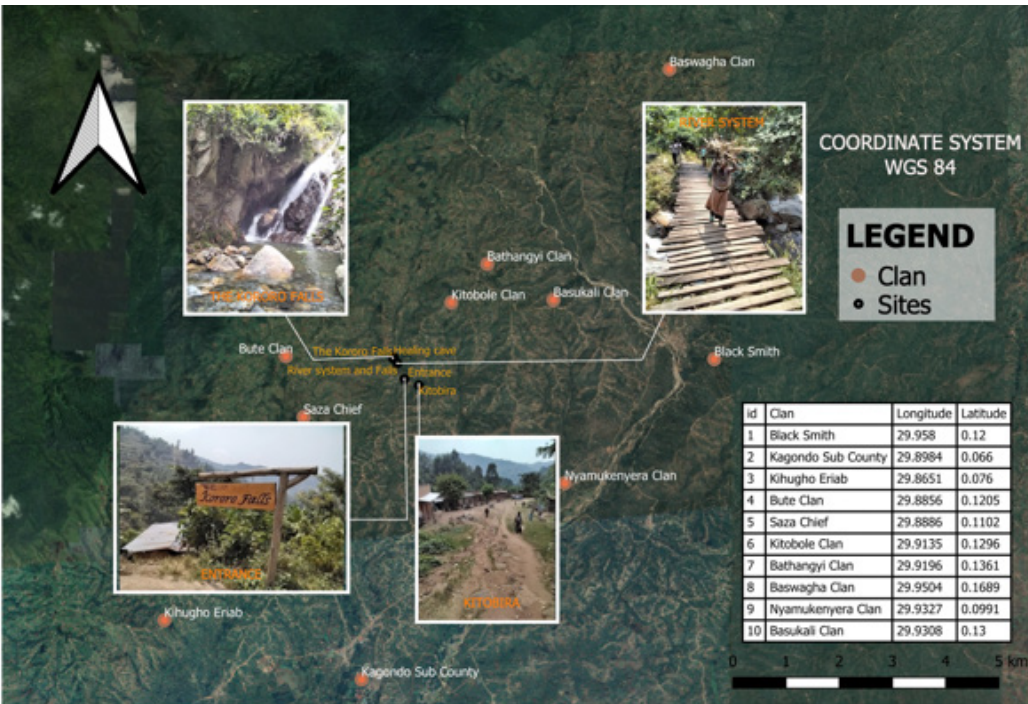
| Red ants announce the start of a wet season



| Ekyipipi bird which announces the onset of the rain season

¹⁶ Ibid

Existing indigenous knowledge and bearers



Map of Ekisalhalha kya Kororo and knowledge bearers

Over the years, the Bakonzo developed knowledge, cultural practices and norms related to the management of the site and forecasting climate changes. During an FGD with ridge leaders and traditional healers, it was mentioned that there was a god called *Nyabingi* or *Omughole* in people's homes. She used to appear in the open and speak and the ridge leaders used to translate her message. She used to predict weather conditions or long droughts and warn people to keep food in granaries. She could also predict wars. People who used to ignore her oracles used to suffer from calamities¹⁷. The ridge leaders said that traditionally, they would

predict the weather in different ways: Whenever there was too much coldness in the morning, it signified too much sunshine and heat throughout the day. Whenever a huge cloud appeared above the water bodies in the morning, it signified rain in the afternoon. Sometimes elders felt general body weakness whenever it was about to rain.

The ridge leaders also mentioned that traditionally there were special people locally known as *abalaghauli* (prophets) or *abakumukali* (prophetesses) who used to inform people about impending disasters especially flooding and droughts. However, these have ceased to appear

¹⁷ FGD with ridge leaders and traditional healers.

due to the influence of Christianity¹⁸. Ridge leaders further mentioned that the presence of mist or fog was a symbol of rain in the afternoon while the presence of red ants signified the onset of a rainy season. They also have a bird called *ekyipipi* which predicts both the onset of a rainy season and the dry season. In case of any impending flooding, the smell of the river waters changes and several birds and snakes start migrating from the areas that are likely to be affected by the floods.

According to the ridge leaders, the Bakonzo pay allegiance to their king, the Omusinga, as the head of their cultural institution, Obusinga Bwa Rwenzururu. Many villages are situated on the ridges of the mountain slopes. Each ridge is traditionally governed by a ridge leader (*Mukulu wa Bulhambu*), whose responsibilities include resolving conflicts among his people and organising cleansing rituals. The ridge leader reports to a chieftain (*Isemalhambu*) who is responsible for overseeing several ridges and in turn reports to the king. Whenever there are calamities such as floods, drought, or famine, the ridge leaders mobilise their people to bring items such as animals (goats, sheep) that are used as sacrifices to the water god. Usually, the items are collected at a site known as the altar (*amahongero*) in Lukonzo and all the meat is eaten from there.

The ridge leaders carry out ritual cleansing of the ridges and rivers, by picking a broom and sweep downstream and at every junction/ river confluence where a chicken is slaughtered and a ritual broom is thrown into the river confluence. All this is done to bless the new planting season, and stop dangerous rains/ chase away disasters. According to the ridge leaders during the rituals, all the Bakonzo must abstain from sex and women in their menstruation period are not allowed to participate in the rituals. It is assumed that rituals cannot be successful if people indulge themselves in sexual activities. After the rituals, it is the ridge leader who had to have sex with his wife first and thereafter he announced that the rituals were successful. The wife of a ridge leader or a traditional leader was always allowed to participate in the rituals and to prepare food for those who participated in the ritual ceremony.

The ridge leaders, however, indicated that in the past 5 years, they have not carried out any cleansing rituals because their King is incarcerated in Kampala as a result of the 2016 political clashes in Kasese¹⁹. The ridge leaders further pointed out that the churches have campaigned against the rituals for cleansing the ridges which affects the traditional importance of the rituals.

¹⁸ FGD with ridge leaders

¹⁹ Ibid





| *Ritual performers at the Ekisalhalha kya Kororo site*

Changes in climate & indigenous knowledge associated with the Ekisalhalha kya Kororo site

A number of changes have happened at the site. Up to 1980 for instance, women were not allowed to go to the site. With the advent of Christianity, certain beliefs have changed and women can access the site which in one way or another affected the performance of certain rituals especially those that were exclusively for men. The effects of climate change and human settlement have also brought changes to the site. The vegetation cover has been washed away, leaving some parts of the site bare. The population pressure has contributed to the reduction of the indigenous trees given that crop production is carried out at about 150 meters near the site, hence increasing soil erosion.

Invasive and exotic tree species have been introduced to the detriment of the indigenous tree species. Birds (locally known as *ebinyambila in Lukhonzo*) which used to make noise in case of any strangers have disappeared. The edible rats that used to provide nutritious meat to malnourished children have become extinct due to the loss of vegetation cover²⁰.

Between 1950 and 1970, the river confluence was treated as a place for spirits. The place was left vacant and covered with thick natural vegetation. With the advent of Christianity in the region, the sacredness of the site

²⁰ FGD with site managers

was raptured. The mindset of people was also changed and they started cultivating around the site. As a result, the Ndyoka spirit rarely appears to people.

Indigenous trees have been replaced by banana plantations for food and in some cases, the land is left bare. As a result, there have been several floods and erosion along the river and the site, which has affected people's lives. The agricultural activities that are being carried out by the Bakonzo in the river's upstream areas are affecting the water flow downstream, by reducing the quantity and quality of the water. This has been observed, starting especially in the 1990s. Because the volume of water has reduced significantly downstream, the Basongora are unable to get high-quality animal breeds because these require a high volume of water for drinking²¹.

In terms of appreciating the effects of climate change from the community's perspective, Mr. Nyakango one of the Bakonzo elders says that climate change is about changes in the natural environment and its conditions and temperatures. For instance, the mountains used to be very cold which is no longer the case²². The rains have also reduced. There used to be a lot of fog, especially in the morning and all this has gone²³. These changes have occurred as a result of deforestation, population pressure and planting of weaker tree species in the mountains.

²¹ KII with Omusiita Kafude Erika Mbogo, a Musongora.

²² KII with Nyakango

²³ Ibid

Furthermore, there were trees such as *emitoho* (figus trees) that would not be cut anyhow because they were resting places for spirits. Due to charcoal burning, all these trees have been cleared. Mumbere Kihughu Baluku concurs with Nyakango when he stresses that climate change is a result of human activities such as tree cutting, leading to bare ground and a lack of rain-forming clouds²⁴. Yet in our culture, there are rain-makers or sun-shine makers who would perform rituals to receive rain or sunshine²⁵.

The lack of respect for taboos and norms at the site has contributed to the cutting of trees which has brought 'punishments' such as floods and landslides from the gods. Therefore, reviving the cultural practice of planting indigenous trees such as, *emithoma*, *mitoho*, *misambya*, *muhangahanga*, *emisombe*, etc. will go a long way in reducing cases of lightning, hailstorms and floods. However, the planting of indigenous trees should not be restricted to the site but along water banks as well. According to one of the key informants, the available trees have only been supplied to the Bakonzo community by WWF and NFA in the high areas, the Basongora in the lowland areas have not received tree seedlings yet they would be willing to plant too.

Ridge leaders should revive the performance of rituals whenever there are weather catastrophies. Initially, the rituals were meant to curb floods and heavy hailstorms. Traditional weather

controllers should be empowered and their roles publicised. The ridge leaders who sometimes doubled as spiritual leaders would communicate to gods directly and would predict catastrophic weather conditions and warn people accordingly²⁶.

Currently, there are no formal or official structures through which the community's knowledge of ritual cleansing, traditional reconciliation practices as well as the planting of indigenous trees for flood management is mainstreamed into the government or local disaster risk management system. However, individual organisations, mainly NGOs have collaborated with the local communities and cultural institutions to undertake activities geared towards addressing the effects of climate change.

Given the challenges such as increased human activities around the site, the advent of Christianity and the lack of respect for the traditional rituals highlighted by the different interviewees, it is very clear that several traditional practices related to ritual cleansing, nature cleansing known as *amaihambo*, as well as the planting of native trees, are threatened. The different respondents, however, believe that with increased awareness creation and engagement of young people, practices such as ritual cleansing and planting of indigenous trees such as bamboo, *mithoma*, *misambya* and *mitoho* among others will still help to mitigate floods along the banks of River Kabiri.

²⁴ KII with Mumbere Kihughu Baluku

²⁵ KII with Mumbere Kihughu Baluku, vice-chairperson, Baswagha clan.

²⁶ KII with Nyakango

Climate change effects in the Rwenzori region

The effects of climate variability are quite diverse and interlinked. Daniel Ndizihiwe, the Manager for Wildlife and Protected Areas at WWF Uganda describes the impact of climate change on people's lives and livelihoods as diverse and dire. According to him, climate change reduces biodiversity (plants and animals) in and outside protected areas such as national parks and forest reserves. Tree species such as bamboo and mahogany have been reduced, forcing people to encroach on protected areas. Inside the park, there is a loss of habitats for animals.

Tourism, which is one of the main sources of income for local communities, has been affected²⁷. Food insecurity is now rampant due to unpredictable weather patterns hence affecting crop productivity which exposes the community to extreme hunger, abject poverty and other risks. Variations in weather conditions also bring certain pests which affect crop production. The African armyworm is an example of such pests. This is a caterpillar of the night-flying moth (*Spodoptera exempta*) which is a major crop pest. It usually munches through cocoa, banana and maize.

Floods, landslides and erosion have displaced people and their properties leading to a disconnection of people from their cultural spaces. It should be noted that the effects of climate change are more pronounced among

the poor with low levels of education and high levels of poverty²⁸.

Daniel further stresses that due to the effects of climate change, every year in Kasese district, floods rip through the valley, destroying and burying people's homes, land and livelihoods. Leaving several communities displaced and in dire need of food, shelter and safety.

In most cases, schools and other public properties such as hospitals and churches are not spared, putting children at risk and leaving them without safe spaces to learn from.

The role of Obusinga Bwa Rwenzururu cultural institution in the transmission of indigenous knowledge for climate action

Obusinga Bwa Rwenzururu (OBR) through the chieftains, ridge leaders, clan leaders and through the ministries responsible for culture and environment mobilises people to plant indigenous trees, protect the site and perform the rituals for rain-making and for averting climate change-related calamities. The institution has Nyineka (family head) who reports to the Basoki (village leader) who also reports to the ridge leader who is supposed to report to the Chieftain who also reports to the King (Omusinga). Traditions and indigenous knowledge of the Bakonzo are still transmitted to young people through these same structures up to today. For instance, instructions

²⁷ KII with Daniel Ndizihiwe

²⁸ Ibid

on issues about culture, traditional ceremonies/rituals and tree planting are still transmitted to the lowest level of the Kingdom (family) through this structure²⁹.

Young people access informal education at home through the *Nyineka* (family head). Although increasingly some transmission mechanisms of indigenous knowledge are facing challenges of urbanisation and the quest for Western education, young people acquire traditional knowledge from their parents when they go to the fields or to the forest to collect firewood or around the fireplace in the evening. They learn about different aspects of life through songs, proverbs and riddles. Every homestead had a designated space called *ekyaghanda* usually under the tree where the *Nyineka* (family head) would hold meetings with workers and children, especially boys. Proverbs were used to transmit important information. Information such as “a man who does not visit *ekyaghanda*, has no information to give” was very important³⁰.

Given that most of the taboos performed during ritual ceremonies were against women, their role in ritual cleansing was quite peripheral. For instance, if a woman was in menstruation period, she was not allowed to participate in the rituals. Mr. Nyakango says that initially, women were not deeply involved in ritual performances. The first woman to participate in ritual performances (Nyabalimu, mother of spirits) was

only supposed to prepare a meal for the spiritual leader during the cleansing ceremonies. *Embandwa* (spirit mediums, mostly women) were responsible for *obubandwa* process during which native healers were enthroned. Women also used to provide information to ridge leaders about particular sites. There has always been limited flexibility in switching roles between men and women, especially during ritual ceremonies.

Different respondents indicated that due to frequent floods, several ridge leaders have moved away from their original places. During an FGD with

ridge leaders, it was mentioned that many ridge leaders who used to reside along riverbanks have been displaced as a result of flooding. This has made the rivers very violent to the extent of killing people. The ridge leaders no longer command respect to mobilise animals and other items for ritual performances given that many people now own land around the site and rarely appreciate the value of the cleansing rituals and other traditional practices.

Other existing efforts to address the climate change risks and hazards in Kasese

Kasese district has state and non-state actors who monitor the use of natural resources. For instance, the District Environmental Officer, National Environmental Management Authority, Uganda Wildlife Authority and the National Forest Authority,

²⁹ FGD with ridge leaders

³⁰ KII with Kyondo sub-county leaders



| *One of the Internally Displaced Persons Camp created in 2020 after floods in Kasese*



among others. These actors address climate risks and hazards in different ways:

Supportive early warning systems for Disaster Risk Reduction. Most of the state and non-state agencies in Kasese rarely predict or anticipate disasters accurately due to the absence of modern early warning systems. Secondly, community-based early warning systems are rarely utilised due to the limited appreciation of culture. In most cases therefore, agencies such as WWF, the office of the Prime Minister and the Ministry of Disaster Preparedness, the Red Cross Society in Uganda, UNHCR, and CARE International among others respond after disasters have occurred.

In terms of early warning systems, UWA has an early warning system for flooding. When the volume of water in the rivers increases, it is an indicator of floods. UWA also uses drones to monitor the rivers³¹. It was, however, mentioned that there is still limited capacity in terms of personnel to utilise and respond to these early warning systems.

Watershed restoration and strengthening river banks. In terms of inter-relations and actions of the different agencies, WWF has championed the restoration of 2,570 hectares of forest landscape which is a climate change mitigation and adaptation measure through tree planting and this is done in conjunction with the National Forest Authority (NFA) and local cultural leaders in the Rwenzori region.

³¹ KII with Daniel Ndihiiziwe



Community members restoring a section of the riverbank using an indigenous tree specie

Strengthening community resilience/capacities. WWF increases the resilience of the local communities through apiary projects, fish farming, and community-based tourism³². WWF has supported the development of management plans for the natural forests within the Rwenzori region and provides financial support or resources to Private Forest Owners (PFOs). The United Nations High Commission for Refugees (UNHCR), UWA, CARE International and Eco Trust have all been involved in the restoration of forests, ecological sustainability and resilience and the promotion of renewable energy³³.

National and local disaster risk management. In terms of national and local disaster risk management systems, Kasese district is variously highlighted in the Uganda Disaster Preparedness Plan (2005-2015). It

is highlighted as a district prone to population displacement, loss of lives and property, food insecurity as a result of poor crop yields, low income from farming and food shortages as a result of flooding and landslides³⁴. Highlighting these challenges enables the government and other care or relief support providers to plan and respond to disasters whenever they strike.

National programmes and policies for climate change. These are centrally coordinated by the Office of the Prime Minister through the Ministry of Disaster Preparedness and that of Water and Environment. A National Climate Change policy which was developed by the Ministry of Water and Environment in 2015 provides for the integration of climate resilience or increasing the ability of communities to adapt to climate change effects

³² Ibid

³³ Ibid

³⁴ Uganda Disaster Preparedness Plan (2005-2015)

into the national development plan and Uganda's Vision 2040 goals. The policy indicates that an integrated climate resilient and low carbon development pathway should underscore the sustainable development, adaptation and mitigation of the climate variation effects. In case disasters strike, the central government, and the agencies listed above collaborate with agencies such as WWF and Red Cross-Society to provide relief services to internally displaced persons.

Uganda is a signatory to several climate change agreements. One of these agreements is the Sendai Framework for Disaster Risk Reduction (DRR). Uganda is also a signatory to the United Nations Framework Convention on Climate Change (UNFCCC) which initiated the development of National Adaptation Programmes of Action (NAPA) at its 7th Conference of the Parties (COP 7) in Marrakech, Morocco³⁵. The NAPA provides a quick process for identifying priority activities that respond to urgent and immediate needs to adapt to climate change and those for which further delay would increase vulnerability and/or costs at a later stage. The Ugandan NAPA was launched in 2007 and important areas for intervention were identified in a participatory, community-based approach and they include a community tree growing project; strengthening meteorological services; indigenous knowledge and natural resources management project; and climate

change and development planning project among others. In November 2022, Uganda as a state part to UNFCCC participated in the COP27 which took place in Sharm El-Sheik in Egypt during which a case for indigenous knowledge for climate change was made.

In case of flooding incidents, the Office of the Prime Minister through the Ministry of Disaster Preparedness coordinates the distribution of relief aid provided by the different agencies. Agencies that have provided support in the past include the EU, Humanity First, and the Red Cross Society among others. Aid has been distributed to internally displaced persons in the form of food, temporary housing facilities, medical facilities and household utensils.

Gaps in existing efforts by other actors to mitigate climate change effects

During the data collection exercise in Kasese, it was discovered that there are several interventions to support the resilience and adaptation of the communities to the effects of climate change. It was further noted that most of the interventions were reactionary in nature – agencies react after a disaster has occurred. It was further noted that few organisations had put in place early warning systems and these did not take into account the community-based early warning systems.

Some agencies have supported communities to plant trees in areas prone to landslides. Indigenous trees

³⁵ <https://enb.iisd.org/negotiations/un-frame-work-convention-climate-change-unfccc>

have, however, not been prioritised. Secondly, young people both in and out of school have not sufficiently been involved in the interventions to mitigate climate effects.

It was further noted that most of the interventions to mitigate climate change effects in the area are externally driven and use top-bottom approaches where clan and ridge leaders are brought on board at the implementation stage rather than during the planning/strategy development stages.

Transferability of Indigenous Knowledge to other similar contexts

The Rwenzori region has been severely affected by the effects of climate change. Cultural heritage sites in the districts of Kabarole, Bundibugyo, Ntoroko and Bunyangabu have not been spared. Amabere ga nyina mwiru³⁶ caves in Kabarole and the Sempaya hot springs, for instance, are exposed to the effects of climate change. In July 2014, East African Business Week reported that those who visited Sempaya 'Female' Hot Springs in the early 1990s witnessed huge volumes of water at a very high velocity springing up. Today, that velocity is steadily decreasing. The other hot springs have also toned down on their speed. This may be as a result of climate change.

³⁶ According to legends, the caves acquired the name after King Bukuku of Bunyoro chopped off the breasts of his daughter Nnyinamwiru and had them thrown inside these caves, following a prophecy that the daughter would one day get married and have a son, Ndahura, who would kill the king and take over his throne.

Communities in Bundibugyo and Ntoroko districts have suffered from a series of floods and landslides. December 2019, will for instance, forever be remembered by the people of Bundibugyo District after heavy rains left many displaced due to flash floods and landslides that swept away their homes, farms, animals, roads, water facilities and buildings. Many communities lost their loved ones.

In September 2019, the rising water levels in Lake Albert submerged several sub-counties including Kamuga, Butungama, and Bweramule sub-counties and Kanara town council forcing over 11,000 people into the internally displaced camps in Kamuga, Rwangara 1 & 2, and Rwenyana among others.

Given that most government interventions during climate change disasters are reactionary in nature, it is important that communities in the areas that are prone to disasters are supported to develop and utilise indigenous and community-based early warning systems to lessen climate change risks and hazards. Planting indigenous trees, and observing the migration trends of certain bird species and reptiles are some of the indigenous early warning systems that could be revitalised in other areas of the Rwenzori region. These will, however, require extensive documentation, mapping of the knowledge bearers and publicity as well as creating spaces for their transmission from elders to young people.

■ Conclusions and Recommendations

This section provides a summary of conclusions and recommendations from the collected data and different interviews.

Conclusions

During and after the documentation exercise, it was clear that the indigenous knowledge that can be used to address the effects of climate change, especially in Kasese still exists. It was also evident that the Bakonzo still value and use cultural ceremonies, rituals and norms to safeguard river banks and other water bodies albeit seldomly. The belief system attached to river confluences was seen be appreciated mostly by elders and ridge leaders.

It was, however, noted that the existence and utilisation of this knowledge are threatened due to a number of factors such as the influence of Christianity, the disconnect between young people and the knowledge bearers, and the tendency to focus on modern scientific approaches rather than indigenous science.

Recommendations

During the data collection exercise, interviewees either individually or as groups made several recommendations:

Implement multi-faceted and collaborative approaches. Whereas it is important to use modern and scientific approaches such as the installation of early warning systems or climate change monitors, these should mainstream cultural approaches in their systems in order to have interventions that are appreciated and understood by both climate change experts and community members. Relatedly, Government agencies such as the Uganda Wildlife Authority and the Office of the Prime Minister as well as other actors such as WWF and Red Cross should work with cultural leaders to develop climate change mitigation measures that include community-based early warning systems rather than waiting to provide relief services when disasters strike.

Support traditional mechanisms that address climate change. The central government through the local government of Kasese district should support ridge leaders to revive the performance of rituals to avert disasters and whenever there are weather catastrophes. The ridge leaders should be empowered to revive “traditional weather controllers” and publicise their roles.

Involve young people at different levels. Education authorities especially in Kasese district should

mainstream the teaching of climate change-related topics in the school curriculum. The content should include the use of indigenous knowledge. This is because young people spend most of their time at school and rarely interact with indigenous knowledge bearers in the communities.

Plant indigenous trees. The National Forest Authority and other stakeholders should emphasize the importance of planting indigenous trees such as *emitoho* as opposed to exotic and easily harvestable trees such as pine and eucalyptus.

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