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Reem Bou-Nacklie

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# **SARD Review of Tripartite Partnership Between Vermont and Kenya**

Reem Bou-Nacklie, MS  
Farryl Bertmann, Research Mentor, PhD, RDN  
Department of Nutrition and Food Sciences  
College of Agriculture and Life Sciences  
University of Vermont

## **Abstract**

### **Background**

In 2017, a tripartite partnership was formed between a non-profit organization, a University in New England, and a primary school located in a rural region of Kenya. From 2018 to 2020, university students, along with the non-profit organization, traveled to Kenya and conducted several projects with Kenyan stakeholders at a primary school and its related secondary school. These projects were based on a ground-up design in response to the needs of the community, and were adjusted to fit these needs as necessary. These projects came to fruition with discussion and planning amongst the tripartite partners. However, several of these projects have not met their goals over the past five years and/or have been discontinued. Other projects still remain strong, demonstrating self-efficacy and resilience amongst the community of the Kenyan primary school. The Co-Investigator (Co-I) will assess the efficacy and sustainability of this partnership utilizing five stakeholder interviews and the Sustainable Agriculture and Rural Development (SARD) project toolkit.

### **Methods**

This study investigated the sustainability and efficacy of the partnership between a non-profit organization, a University in New England, U.S.A. and a primary school located a rural region of Kenya. Utilizing the SARD project toolkit and the auto-evaluation method, qualitative data was collected through the five key stakeholder interviews. The Co-I drew on principles of the framework to approach this qualitative analysis and develop a codebook, which served as the basis for the Co-I's objective interpretation and categorization of the data using NVivo.

### **Results**

A template analysis was used based on the SARD project toolkit. Through the process of coding using NVivo, new emergent themes of: *Sustainability of the Partnership* and *Goals Not Met Over the Past Five Years* were created. Furthermore, after the coding was completed, categories from the codebook were condensed due to high amounts of similarities. The codes *Goals Not Met Over the Past 5 years* and *Discontinued* were condensed to one category, and the codes of *Planned* and *Implemented* were integrated into the category of *Partnership Planning*. The results of this study indicated several prevalent themes in the transcripts. Such themes included: *Communication, Sustainability, Grain Mill, Portion Meal, Gender Equality and Business Entrepreneurship* and *COVID-Related Impacts*.

### **Conclusion:**

Certain projects appeared to be more sustainable than others. The projects of portion meals, the grain mill, community-based education, gender equality all continued to be in use today by the community. However, other projects that involved new technology were either no longer in use, or had been completely discontinued. This can be due to a lack of time spent in the partnership, a gap in technology for community settings, or the sheer uprootedness of the projects due to the impacts of the COVID-19 pandemic.

A lack of communication can be attributed either to the effects of the pandemic or because there is little interest in the continuation of the partnership. Some level of decision must be discussed in unison between the partners in the near future regarding the fate of this partnership. Increasing communication could help not only help the partnership continue into the future, but could also help plan and implement projects that are better-suited for the community.

## **Background**

International projects for development have been conducted by a variety of groups, ranging from large corporations, to mission trips, to projects conducted by universities. This project at hand was developed in 2017 as a partnership, focusing on reciprocity and sustainable change between a Kenyan religious leader, the staff of a secondary education boarding school, a University in New England, U.S.A., a University in southern Kenya, and a non-profit organization. In order to protect privacy the partners will be named: Community partners (to refer to primary school partners in Kenya), NGO partner (to refer to partners of the non-profit organization and University partners (to refer to partners of the University in New England). This partnership has continued for between 2017-2022 and has resulted in the development of several projects at the Kenyan primary school. The partners worked together each year, throughout the summer prior to the annual trip in January, to establish community needs and projects for the upcoming year. University students attended a 16-week fall course, where university partners emailed and met via Zoom with the Community and NGO partners. Based on these meetings, three-to-four groups of students selected a project and developed a logic model for it. This model was then reviewed by the University faculty, the Community and NGO partners. Of these projects includes: female entrepreneurship, water storage, a grain mill, exchange of recipes and culture, bike-powered electricity, exchange of educational ideas, water sanitation and food storage and security. These projects were discussed and implemented with the advising of community partners so as to format a sustainable model, rather than a charitable model. With the Food and Agriculture Organization (FAO) framework-SARD project toolkit, along with interviews with key stakeholders of the partnership, and using a template analysis, we assessed the progress on reaching the United Nations (UN) sustainable development goals and how crises, such as the COVID-19 pandemic and the current drought, have impacted such goals. Furthermore, we evaluated the effect and sustainability of these projects in the Kenyan primary school community and identified gaps in the framework that we can build upon and improve for future projects, conducted both within this community and on a broader scale as well.

COVID-19 has caused the single worst recession, since World War II, and has significantly impacted the most vulnerable sectors of society, including the food system (8). Furthermore, those living in low-income, or particularly vulnerable sectors of the world, are most at risk to the social, political, and economic effects of the crisis (8). According to Xu et al. "COVID-19 is not the only threat to FSCs (Food Supply Chains). Restrictions of production and distribution in the global food system have affected people on a local and international level,

disrupting the flow of fresh products and also restricting farmers from conducting business. The authors report that in Liberia, 47% of farmers surveyed reported that they were unable to cultivate their farmland due to the virus (8). In addition, several countries in South-East Africa, including Ethiopia, Somalia, and Kenya are currently experiencing a devastating drought that has affected the livelihoods of many. Lake Victoria, which is shared by Kenya, Uganda and Tanzania serves as a water source for irrigation, transport and livestock, is currently under threat from pollution and receding water levels (10). “Food insecurity...in this region could lead to catastrophe, since many of the local communities living near Lake Victoria are among the...most food insecure in the region, due to high population densities, widespread poverty, recurrent droughts, crop failures, high mortality rates...and environmental degradation...” (10). In a previous drought, that occurred between 1999-2001, at its peak, nearly 4.5 million people in Kenya lost their livelihoods and were then dependent on food relief provisions via the government and other donors. With the recent impacts of these crises, it is now crucial to assess for the sustainability and efficacy of these projects on the community and see where gaps can be addressed towards the improvement of the partnership in the future.

The Sustainable Agriculture and Rural Development (SARD) project toolkit has been used for multiple agricultural and rural developments in past research studies. Key characteristics of the SARD toolkit include that agriculture and rural development be sustainable, ecologically and economically viable, and socially and culturally appropriate. The SARD toolkit holds a key role in the FAOs Strategic Framework and the UN’s Commitment to the Millennium Development Goals (1). The SARD toolkit also emphasizes the examination of processes and institutions that are involved in the formation, implementation and evaluation of the project, such as the civil society, the government and the international community. Furthermore, the analyses conducted are qualitative and have a multi-participatory approach; utilizing literature reviews, surveys and interviews conducted with stakeholders of the implemented project (1).

In this study, the auto-evaluation method of the SARD toolkit will be used to help assess the impacts of this partnership. This evaluation method specifically focuses on the improvement of project effectiveness, efficacy and relevance and facilitates project improvement and lesson learning. Furthermore, it evaluates project performance and impacts, provided a basis for accountability for project impacts and identifies lessons to form the future-related projects. In addition, it focuses on sustainability, innovation replication of project results, and impacts on gender equality and women’s empowerment, thus making it the ideal method to evaluate the partnership and its subsequent projects at large (1).

As the SARD toolkit focuses on community empowerment through the exchange of dialogue and knowledge between locals and those abroad, it also focuses on the sustainable development and outcomes of such projects as well. Such outcomes have been shown to demonstrate project effectiveness on a much larger scale, rather than a simple performance of the charitable model. In the article “Sustainable Empowerment Models for Rural Pastoral Communities in Kenya”, Hishiyama states that the sustainable model acts as a bridge between communities and the operations of international organizations, not only improving the socioeconomic situation but also providing education and support to community members. Hishiyama states that, in successful projects, the efficiency of local resources is maximized and the process of community training is a critical key in maintaining the sustainable empowerment system, which will hopefully develop into a self-independent model, in which these communities will no longer be dependent on “outside” resources (2).

The SARD initiative focuses on a cycle of food practices, sustainable management of natural resources, fair conditions of employment, access to rural services, access to resources and community empowerment (1). Further, the authors cite several achievements that have resulted from the use of the SARD initiative in helping those in rural locations secure access to resources. Such achievements include the Support to the International Conference on Agrarian Reform and Rural Development, in which the Conference Final Declaration agreed on the practice for inclusive dialogue, and ethical-participatory policies and programs that empowered communities at a local level. Thus, this agreement aided in increasing capacity-building efforts and accessible mechanisms to implement people-centered development policies that supported local knowledge and increased local and global partnerships (1).

Ghiron et al. also state that, if the intent of the project is to scale-up in the future, then this intention must be made clear in the initial processes of the project, in order to develop and test for the scalable model. Recommendations from ExpandNet/WHO for this mode of thought include: engaging in a participatory process involving key stakeholders, ensuring the relevance and feasibility of the proposed project, tailoring the project to the sociocultural and institutional settings, keeping the project as simple as possible, developing plans to assess the process of implementation, and being cautious with future endeavors of scaling up the project (3). The implementation, therefore, requires tailoring the interventions to the sociocultural and institutional environments, and testing them to see where and when they can be scaled up with regular operating conditions and a constrain of resources. The evidence must be credible and the capacity of the organizations and the constraints of the environment must all be assessed to see where gaps may fall and thus be strengthened for the future (4). Further emphasizing the need for partnerships and capacity-building, Warinda et al. state in their article “Sustainable development in East Africa: impact evaluation of regional agricultural development projects in Burundi, Kenya, Rwanda, Tanzania, and Uganda” that investments in agricultural technologies, along with capacity building and policy harmonization are all needed to maintain sustainable development across the continent (5). The authors concluded from these studies that beneficiaries of these projects were more confident, overall, in undertaking similar projects by themselves and not rely so heavily on external support in the future. Therefore, this demonstrates that with adequate communication across all sectors of the project implementation process, community-level self-efficacy can be achieved and maintained, extinguishing the need for external support.

This study draws on original data to assess the tripartite partnership between the non-profit organization, the University in New England and the Kenyan primary school, utilizing a qualitative approach, highlighting insights from stakeholder interviews on past, present and future expectations of the partnership and their projects. A review of the literature therefore states that the sustainable model of project implementation, and the use of the SARD Project Toolkit, along with incorporation of community members in project development to project application, along with monitoring and evaluation, will lead to higher levels of efficacy, sustainability and success.

## **Methods**

### **Study design**

This study was conducted between the months of January and February, 2022, during the COVID-19 pandemic. Utilizing the SARD project framework and the auto-evaluation

method, the qualitative approach aimed to assess the partnership and projects with their intended goals and outcomes. This paper reports on the structured interviews, qualitative observations and subsequent coding.

### **Study setting**

This study was conducted entirely via Zoom with the participants from each area of the original tripartite partnership: a non-profit organization, a University in New England, and the Kenyan primary school.

### **Participants**

This study enrolled five key stakeholders of a non-profit organization, a University in New England and a Kenyan primary school. Eligibility to participate in interviews was limited to those who were leaders in the community, spoke English, and had relevant information about the partnership and the projects conducted at the Kenyan primary school. Participants could have been any gender or ethnicity, or any economic status and with any level of education.

### **Data collection**

The Co-I used the method of structured interviews to gather qualitative data from the stakeholders. This was then coincided with a literature review of the SARD framework, sustainable development in East African countries, the impacts of COVID-19 on rural communities and the effects of drought on East African communities. Participants were provided documentation as to the structure of the interviews beforehand, as per IRB-approved protocol (STUDY00000674). At the beginning of the interview, the information sheet was reviewed and participants were asked for verbal consent to be recorded. Participants were given the option to decline participation or to be recorded at any time. Applying the SARD project toolkit, the Co-I created a list of interview questions (refer to appendix: interview guide) which were then utilized during the interview process. Previous documentation on the partnership and projects conducted were taken into consideration and utilized during the creation of the interview guide as well. Additional questions were asked to clarify or expand upon as necessary. Physical notes were taken when needed. Interviews covered a wide range of topics including key themes in the partnership, the members and operation of the tripartite partnership, projects and project processes and the impacts of COVID-19 on the partnership and projects.

### **Analysis**

Utilizing the template approach for the qualitative analysis, the Co-I developed a coding template that drew on the initial key themes identified in the interviews (refer to appendix: coding template), which were strongly expected to be relevant towards the overall analysis. Hierarchical coding was emphasized, with child codes provided when needed. Hierarchical codes included “Key Themes in Partnership”, “Tripartite Partnership Members”, “Operation of Tripartite Partnership”, “Projects”, “Project Processes”, and “COVID-Related Impacts”. Interview data was transcribed and coded utilizing NVivo (release 1.6.1). Original a priori codes were modified or eliminated if they did not prove to be helpful or could have been combined with other codes due to similarity. The coding template and coded transcripts served as the basis for the Co-I’s organization of data and write-up of the subsequent findings.

## Results

### **Key Themes of Partnership**

The following four sub-themes were created as these were the larger, original goals that were decided upon when the tripartite partnership was founded in 2017.

#### ***Community-Based Education***

*Community-based education* was coded using quotes that discussed the projects of education (i.e. early childhood education) in the school.

Community partners in Kenya stated the following:

“Surely, because they have been positive impact. Because it really helped the community and also helped the community in terms of education to the vulnerable families and vulnerable children, they have been able to get education, compared to the time before the projects came”

“It has been successful...the students have been working on projects together. Especially on the SDG projects, the Sustainable Development Goals. I think this one was a good idea because these goals are global goals and they are affecting the [University], it’s affecting everywhere, and the students have the knowledge on the SDG and the project and what they need to do for their community to bring change. We believe it has been a success”

The stakeholder from University expressed similar comments regarding *community-based education*. Discussion surrounding this topic was not mentioned at length with the stakeholder from the NGO.

#### ***Food Systems/Food Security***

*Food systems/food security* was coded with discussion relating to themes of food system projects (i.e. food preservation, food storage, grain mill, permaculture, smoothie bike, portion meals, etc.).

A Community partner stated:

“Yeah, the grinding machine has been sustainable project and has been, I think, has brought a lot of impact to the school and also in the community. So yeah, I think that is the project that I can say has been really, really impacted the community”

“and the project that the [University] has been doing together with the [NGO] has really seen into it that kids’ nutrition has really improved”

Furthermore, a partner of University stated in response to an interview question:

“And regarding the food and agriculture programs, do you believe these have contributed to the food security of the school?” “If you count the grain mill as a food and agriculture program, absolutely”

The stakeholder from the NGO expressed similar attitudes regarding the projects of *food systems/food security* as well.

### ***Public Health***

*Public health* was coded with discussion related to themes of public health projects (i.e. soap-making, water storage, etc.). While the NGO and the Community stakeholders expressed similar thoughts, a University partner expressed a difference in opinion.

A Community stakeholder stated:

“There is positive impacts in the livelihood of the community members, in the hygiene and the nutrition program of the kids”

However, a stakeholder from the University stated:

“...there’s a couple things with public health that totally surprised me and that was, the soap issue was one thing, it didn’t really work. The toothpaste issue was another thing. It didn’t really, it didn’t really work”

The stakeholder from the NGO expressed attitudes similar to that of the Community stakeholders, stating that these projects did have beneficial impacts on the community at large.

### ***Business Generation/Entrepreneurship***

*Business generation/entrepreneurship* was coded with discussion surrounding projects of gender equality, women’s business workshops, income generation etc. Many of the stakeholders agreed that these projects have been beneficial and sustainable for the community.

A Community partner stated:

“To the kids and to the women because for the project, we also have the project for the women. For the women have been able to go and also have been able to understand, in terms of business, in terms of savings, they’ve been able to save, do business and do other things, and also maintain their family through the projects and also through the guidelines of the [University] and the [NGO]”

In addition, entrepreneurial projects, such as the portion meals and the grain mill were mentioned by community partners as well:

“Portion meal project is still very, very strong, and bringing some income, which we are using also to sustain these children as well”

And in response to this clarifying question

“Do the community members use the [grain mill]? Is it free for them to use?”

this Community stakeholder responded by stating

“No a small fee is kept of ten shillings. This is to ensure the maintenance of the portion meal and the fuel”

The stakeholder from the NGO and the University expressed similar opinions, stating that the business generation and entrepreneurship projects did have beneficial impacts on the community.

### **Tripartite Partnership Members**

The following sub-themes were created as these were the original members of the tripartite partnership, and includes other members who were meant to be members, but are no longer in communication.

#### ***Kenyan Primary School/Community/Kenyan Secondary School (Community)***

*Community* was coded using discussion surrounding aspects of the partnership from the Kenyan primary school, the surrounding community and the Kenyan secondary school. These Community partners mainly focused on their roles in the implementation of the projects.

Community partners stated:

“My role mostly is to implement and to follow the projects that are going on and to make sure that the projects benefit the kids, the way it’s supposed to benefit...and also projects that are there benefiting the kids and also the community involved”

“My role is to see that they’re implemented and I listen to what the kids say and implementing the projects that we do. I look into their interests, whether they fill of the interests of the kids and the interests of the school and the interests of the community. And if that fits all the participants then we roll it out and the community and we see that it works but it has to involve all the stakeholders’ opinion”

In regards to this theme, a stakeholder from the University discussed the semester-long course they taught to students. Furthermore, they agreed with opinions expressed by the NGO stakeholder that they do not take the approach of being the “decision-makers” of the projects.

#### ***Non-Profit Organization (NGO)***

*NGO* was coded using discussion surrounding aspects with the non-profit organization, including its past and present actions and roles in the partnership. The NGO partner expressed that there is a gap of communication between their partnership roles and those of the Community.

An NGO stakeholder stated:

“We are, [the NGO], is merely a partner who agrees with the [Community] as to how this partnership will be carried out when we travel there. We have no influence, whatsoever, in terms of how they [Community partners] use or carry or any of the information we’ve shared or anything that we’ve brought to them”

“I say costs, for all of us, as we were trying to establish this partnership and to establish the capacity building and entrepreneurial and to improve the well-being, and so it was definitely...it was our side of being able to give”

Stakeholders from the Community expressed opinions that their partnership with the NGO has slowed down tremendously and that there is a lack of communication between them. Stakeholders from the University mentioned that they are in partnership with the NGO.

### ***University in New England (University)***

*University* was coded using discussion surrounding aspects with the University, including its past and present actions and roles in the partnership. The University more so focused on the fact that they do not take the role of the “decision-makers” of the partnership, and also touched upon the required semester-long, student-based course for the University students to take prior to going to Kenya.

In regards to the theme of the *University*, a Community stakeholder stated:

“[The University]... was much involved, in terms of projects of saying which project will be done, which one will fit the community. Was much in the community than any other partners we have around”

Furthermore, a community partner stated in regards to the University and the NGO:

“Without the [University] and the [NGO]. Not sustain the projects”

Stakeholders from the NGO and the University expressed that they were closely involved in partnership with one another.

### ***Other(s)***

*Other(s)* was listed as a category as well, to be inclusive of the other original partners (such as the University in Southern Kenya and the University in Western Kenya) who would have been included in the partnership, but did not continue and lost communication.

The NGO partner stated:

“Well, the relationship with the university in western Kenya never went beyond the original contact. They withdrew from the partnership...I’m not sure there was a true commitment in our partnership with the university in southern Kenya, as much as we hoped that would develop”

And a Community partner stated:

“In terms of the university in southern Kenya, I think no, because they have not been having any visitors from the university in southern Kenya and information from them...”

The stakeholder from the University expressed similar thoughts to those of the NGO and the Community.

### ***Sustainability of Partnership***

The *Sustainability of the Partnership* was coded surrounding discussion asking stakeholders what has and has not been working, and if they could envision the partnership going into the future. A severe lack in communication was brought forth in the conversation several times in the interviews with most of the stakeholders.

A Community partner stated:

“Well the gaps right now are that, we are not actively involved with them. And if without having psychical contact and being able to be there for the last two years, we have...lost touch with them”

Furthermore, when asked:

“Due to the past events that have occurred, including the COVID-19 pandemic, has this partnership lasted and been maintainable for the community?”

one Community stakeholder stated:

“Yeah, I think I can say they have been, been able to maintain and they have also been able to sustain the kids...”

However, a stakeholder in the University mentioned the impacts of COVID, stating:

“But at this point I don’t see COVID going away and I don’t see us going back any time soon to either rekindle that relationship or to start something new”

The NGO partner expressed similar concerns to those of the University.

### ***Operation of Tripartite Partnership***

The following sub-themes were organized under this parent node as these categories surrounded discussion regarding how the partnership was planned and operated between the different stakeholders.

#### ***Partnership Planning and Implementation***

*Partnership Planning and Implementation* was coded utilizing discussion regarding how projects were planned and implemented between the tripartite partner members. Many stakeholders focused on the importance of discussion between all partners prior to project implementation.

A stakeholder in the NGO stated:

“I think we learned that, the careful planning and working with the [Community] or some representatives of the [Community], through Zoom, was really important, and to establish that we need to be patient because there’s such a distance of time and culture”

A Community stakeholder also stated:

“I think it should be three, a discussion, before any project are designed so that we design it together. Basically, when we all come from different backgrounds and the way we look a things, yeah. I think it should be...the designing of projects should be, we all get to involve”

The stakeholder from the University discussed the student-based approach to the course curriculum taught during the semester and how this, along with discussion with stakeholders from the NGO and the Community, would help plan projects to be implemented.

### ***Communication***

*Communication* was coded regarding previous communication between partners, how the projects were to be done, and current communication status. All of the stakeholders expressed a gap of communication in the partnership, especially due to COVID-19.

A Community partner stated:

“Very little communication...in the last six months...so, when we were unable to provide the direct contact and to maintain that relationship, it’s drifted apart”

“...we lost, we are not really in touch with the non-profit organization, because our engagement was three years, which I think is already ending...though our engagement with the [University] is not yet clear whether it will go on or not. There has not been a communication”

Furthermore, a University stakeholder stated:

“...but in the end, I don’t we were all on the same, the same page”

A stakeholder from the NGO expressed similar opinions to those of the University.

### ***Stakeholder Involvement***

*Stakeholder involvement* was coded with the questions regarding general stakeholder involvement and if stakeholders believed they had roles in deciding which projects could be implemented and if their roles were equal in the process of doing so. Many stakeholders stated that, to some degree, they were able to play a role in the planning and implementation processes of the projects.

A Community stakeholder stated:

“Maybe...we try to maybe to be balanced, in terms of all the partners, maybe in terms of contributions, maybe contributions to be shared in all the partners”

“[the University] did, was much involved, in terms of projects of saying which project will be done, which will fit the community”

And when asked:

“Were you able to be involved, when the original projects were being done?”

one Community stakeholder stated:

“Yes, all of us”

A stakeholder from the NGO and the University expressed similar opinions to those of the Community, in that they were all able to be involved in project processes.

## **Projects**

The larger theme of *Projects* was discussed at length and was further broken down into sub-themes discussing the projects that had been planned and implemented in the Kenyan Primary school.

### ***Portion Meals***

The theme of *portion meals* was coded using discussion surrounding this project, how it came to be and how it is still in use. Many partners agreed that this project has been sustainable for the community.

A partner from the NGO stated:

“And, essentially, one of the goals was to create a more balanced diet through the foods that [the Community] was able to grow...And we know that initially, your work as the food science majors, in terms of having the conversations about spreading the meals out and smaller meals was something [the cook] took to heart”

Stakeholders from the Community expressed that the portion meal was doing very well in the community. The stakeholder from the University did not discuss this category at length.

### ***Food Storage***

The theme of *food storage* was coded using discussion surrounding this project and how it has or has not worked over the past few years. There were some differences in opinions between the stakeholders of the partnership.

A Community stakeholder stated:

“Our kids worked well with the [University] in portioning and cold storage project that I can really say worked for us”

However, another Community stakeholder stated that:

“The cold storage was not very sustainable because it was something new and the time was short, so it was not actualized by the community”

In addition, a University stakeholder reported:

“So you know, with self-sufficiency with regards to seeds and saving seeds and being able to store food instead of having to go to the market every week to do that, and that’s where the cold storage unit, which also didn’t work by the way, was supposed to help them get at, so that they have some storage so that you weren’t living day to day”

The stakeholder from the NGO briefly mentioned the construction of the cold storage bin, but did not go into this category at length.

### ***Grain Mill***

The theme of *grain mill* was coded using discussion surrounding this project and how it has or has not worked over the past few years. Many stakeholders agreed that this project has been sustainable for the community.

A Community stakeholder stated:

“Yeah, the grinding machine has been sustainable project and has been I think, had brought a lot of impact to the school and also in the community So yeah, I think that is the project that I can say has been really, really impacted the community”

The stakeholders from the NGO and the University expressed similar opinions to those of the Community stakeholders.

### ***Water Storage***

The theme of *water storage* was coded using discussion surrounding this project and how it has or has not worked over the past few years. Many stakeholders that although the project did work, it was simply not enough water for the community, especially during the dry season and current drought.

Community stakeholders stated:

“The [University] donated the tank, one water tank maybe in 2017 or...’

‘Is it still functional?’

‘The water tank... yeah...the water tank is in fact, the water that...has tapped, though it may not be enough, the water tank is used to store the water for the school”

“Water we have...but because it’s the dry season...the future solution there is a borehole. So when there’s a borehole the school can use it and the community as well”

And when asked:

“... you said the water storage at the...[Community], with the big water tank it’s no longer in use quite so much?”

one Community stakeholder responded:

“It’s not enough, it doesn’t sustain here. It’s there, but it doesn’t sustain. It kept one week because kids are many drink, drinking it, using it for their laundry and cooking, so it doesn’t last, but it is helping them”

Stakeholders from the NGO briefly discussed the construction of the water storage facilities, but did not discuss its current impacts on the community. Stakeholders from the University stated that this project did not work and that there were a multitude of errors surrounding it.

### ***Technology***

The sub-theme of *technology* was coded utilizing quotes from stakeholders stating whether or not projects had been adopted by the community. This sub-theme focused more so on the overall projects including new technology, or technology that was not adopted or sustained by the community.

A Community stakeholder stated:

“Where the initiated the soap, the making of the soap, which was good, and I think some people are still carrying on, though in their own consumption. The bike was there charging the battery. But you see, it was a new technology, which needed a bit of more time. So it worked out during that time, but it’s not something continuing”

Stakeholders from the University discussed ideas regarding how implemented technology must be appropriate for the community in order for it to be sustainable. Stakeholders from the NGO did not mention this topic.

### ***Gender Equality***

The sub-theme of *gender equality* was discussed as well and was coded using discussion surrounding the overarching project of gender equality and how it has progressed or regressed over the past few years. Many stakeholders stated that this project has been beneficial for the community.

An NGO stakeholder stated:

“We saw evidence, over the four years, that we were actively involved with them, that that became more cohesive unit, and that they worked together to move the, their small entrepreneurship forward, and that they had pride in what they were doing”

“We did a lot of football, soccer, work in the community last year, and the women had a sense of empowerment and pride in their collective actions”

Stakeholders from the Community and the University shared similar opinions to those of the NGO.

### ***Others***

Finally, sub-theme of *others* was coded using statements of projects that had been implemented but were less prominent in the community.

For example, one project, such as bicycle-charging stations was mentioned by a Community stakeholder, who stated:

“...such projects were good and concepts were good but the integration into the community and to the people may have taken slow, slow absorption into the people since not all of them can afford the motors to fix bicycles...not all of them have access to that”

Another project, food preservation, was also brought up by a Community stakeholder, stating:

“Preservation needs more time...because it was a new thing to the village, one of its kind so it needs the proper training of the community to know how to use it...but remember we were doing it at the last minute...so poor sustainability...”

And finally, when asked about the project of building a heritage center in the community, a Community stakeholder responded stating:

“It’s working well, though with the COVID-19 restrictions, much of the activities have been on slow...”

The stakeholder from the University expressed similar thoughts to those of the Community. The stakeholders from the NGO did not discuss this topic.

## **Project Processes**

The following sub-themes were organized under this parent node as they surrounded discussion of how the projects of the partnership were created and implemented and whether or not they proved to be sustainable or of benefit to the community.

### ***Emerged Throughout Partnership***

The sub-theme of *Emerged Throughout the Partnership* was coded utilizing statements that discussed projects that emerged throughout the years, rather than being initially planned at the beginning of the partnership.

Stakeholders from the NGO and the University discussed the soccer project, and in similar thoughts to the Community partners, mentioned the portion meal project conducted in the community.

### ***Still in Use/Working***

The sub-theme *Still in Use/Working* was coded using quotes of projects that stakeholders stated were still in use, and have proven to be sustainable, in the Kenyan school and nearby community. This can be due to proper training and time spent in the planning and implementation process and/or appropriate technology for the community to implement and continue on with into the future.

A Community stakeholder stated:

“And, with the [NGO], women’s empowerment, we’ve met it, though it still needs some improvement on that”

The stakeholder from the NGO expressed similar thoughts to those of the Community. Stakeholders from the University mentioned the grain mill project.

### ***Goals Not Met Over The Past Five Years/Discontinued***

In addition the sub-theme of *Goals Not Met Over Past Five Years and/or Discontinued* was coded utilizing quotes stating that certain projects had not met their goals over time and/or have been discontinued by the community.

When asked:

“What about the cold storage and the water facilities?”

The stakeholder in the University stated:

“That was more our idea. But they were really game to do it. It was a comedy or error... Just it was just a comedy or error”

The stakeholders from the Community discussed the issues of technology and discontinuation of projects due to lack of training and/or the effects of COVID-19. The stakeholders from the NGO did not discuss this topic.

### ***Sustainability/Future Expectations***

The final sub-theme of this category *Sustainability/Future Expectations* was coded utilizing quotes that described the current sustainability of certain projects and future expectations of the projects of the partnership, as a whole.

A stakeholder in the University stated:

“I think that the cultural heritage projects, the grain mill project, I think the goals of our projects actually were met because those could be carried on into perpetuity, one with more resources, one with fewer resources”

“...finding the right fit for, for the projects, to be longer lived, would take a whole lot longer. So I think this is a ten, ten-year project”

Finally, when asked:

“Where would you like to see more contributions being made?”

A Community stakeholder responded:

“Being made contributions I think in terms of sustainable projects”

Stakeholders from the NGO mentioned the lack of communication and also stated it was crucial for students to take a travel-course and to re-evaluate the partnership goals into the future.

### **COVID-Related Impacts**

The final broad theme discussed in the interview was *COVID-Related Impacts* and was coded utilizing quotes of regarding the impacts COVID has had on projects and the partnership at large. All of the stakeholders stated that COVID-19 has impacted the projects and partnerships to a great extent and has also severely weakened communication between the partners.

The stakeholder of the NGO stated:

“It’s interesting that we have this hiatus, this...COVID hiatus, that has, that has given pause to some of the work that we were doing, and...what we [found] that it’s been very difficult to maintain that relationship without the face-to-face interaction”

A Community stakeholder stated:

“COVID-19 has affected...the community, affected us a lot economically, financially, psychologically to the kids and the family members and the community members, it has really a negative role on the project, it has really affected us in everything”

The stakeholder from the University discussed similar thoughts to those of the NGO.

### **Limitations**

There are several considerations that must be taken account when reading this analysis. One limitation was the communication through each participant, one-time, via Zoom. Therefore, clarifying questions thought of at a future point in time could not be asked and the interviewer needed to remain within the one-hour time limit, due to IRB protocol. At certain points, the Co-I could not see nor clearly hear the participant due to internet disruptions. In addition, the interviewer is from the U.S.A, which may have impacted answers received for their interview

questions with international stakeholders. Another limitation was the difference in accents, at times making it difficult for the Co-I to understand the participants. Furthermore, there was a chance of calculated interview responses as these interviews were carried over the course of two months, and participants may have had the chance to speak with one another prior to being interviewed. It must be noted, however, that each of the interviewees are guaranteed anonymity and their data will remain confidential until it is destroyed.

### **Implications and Recommendations**

Key themes appeared throughout the process of interviewing, transcription and coding. Certain projects appeared to be more sustainable than others. The projects of portion meals, the grain mill, community-based education, gender equality all continue to be in use today by the community. For example, the grain mill and portion meal projects were proven to be sustainable as they are not only used as a source of food for the students, but they are also being used as methods of business for the school, and the revenue helps to maintain the mill, thus demonstrating the community's adaptability, efficacy and sustainability, even during COVID.

However, other projects that involved new technology, such as the bicycle-charging station, food preservation, soap-making, and the food and water storage facilities were either no longer in use, or had been completely discontinued. This can be due to a lack of time spent in the partnership, a gap in technology for community settings, or the sheer uprootedness of the projects due to the impacts of the COVID-19 pandemic. Furthermore, as noted in the interviews conducted, the partners, as a whole, would benefit in increasing communication. There has been little to no communication between the partners in the U.S and those in Kenya, which has led to an uncertainty of the partnership and a lack of plans for the future. This lack of communication can be attributed either to the effects of the COVID-pandemic or because there is little interest in the continuation of the partnership. Some level of decision must be discussed in unison between the partners in the near future regarding the fate of this partnership.

An increase in communication can also help to address issues such as the gap of appropriate technology between partners and the community. Furthermore, it can aid with the equitability of the partnership between members, especially in terms of addressing ideas and identifying roles in project implementation. As it is noted that stakeholders would like to continue this partnership into the future, more investment should therefore be made in improving communication between all partners. This could help not only the sustainability of the partnership into the future, but could also help plan and implement better-suited projects for the community. As the goal of the partnership was to help build a self-sustainable model, communication between the partners beforehand, discussing course curriculum for university students, meeting via Zoom with stakeholders and students in the primary school of Kenya, and addressing key cultural and economic factors in such projects, would greatly benefit the overall operation of the partnership. Finally, it should be noted that the SARD project toolkit did prove to be effective for the analysis of this project and I would recommend its use for similar reviews for projects and partnerships in the future.

### **Abbreviations**

**PI:** Principal Investigator

**Co-I:** Co-Investigator

**SARD:** Sustainable Agriculture and Rural Development

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## Appendix

### IRB-Approved Interview Guide

- Introduction:
  - Thank you for joining me today. My name is Reem Bou-Nacklie and I will be conducting the interview. This interview is for research purposes that are backed by the University in New England.
  - Before we get started, I would like to reiterate a few things:
    - Your participation is voluntary.
    - This interview is for a graduate research project.
    - There are no wrong answers.
    - I will take every precaution to ensure your anonymity and safety.
    - I will be audio recording this discussion and taking notes, these recordings and physical notes will be destroyed after 3 years, following the completion of the research project.
    - Your name and personal information will not be used in any reports.
    - The aggregated information from all interviews conducted may be presented in a report that will be shared with the University in New England Graduate College and the Department of Nutrition and Food Sciences, as well as the Kenyan primary school.
    - Give the interviewee the consent form to sign.
    - Any questions? Anything you would like to be further clarified?
    - If not, I am now going to turn on the recording device.
- Background
  - Please state your first name and tell us a little bit about yourself. How long have you lived in this rural region of Kenya? What is your standing in the community? Where are you employed and what do you do there? How long have you held this position/job?
  - What is your role regarding decisions made project implementation practices at the Kenyan primary school?
- History
  - In the original plan, we set up a tripartite between the University of southern Kenya, the University of western Kenya, and the University in New England, the Brothers (boots on the ground), and the non-profit organization, how has this worked, over time, for you?
  - How have these partnerships impacted the community? In general, how would you describe these impacts?
  - What goals of the partnership (capacity building, business entrepreneurship, and improve well-being using a tripartite community approach) have been met and what has not been met?
  - Are there any gaps in the partnership, and if so, where and what would you say these gaps are?
  - If you were to make changes to this tripartite plan, what changes would you like to be seen in the future?

- Can you talk more about if the projects in the original community sectors of: Community-based education, food systems, and public health have or have not been met over the past five years?
- Do you think they have been successful or unsuccessful? Have they been sustainable throughout the current COVID-19 pandemic?
- Project ideas before implementation
  - Did you have an input as to which projects you would like to see conducted between the University in New England, the non-profit organization, and the Kenyan primary school, and if so, how were you able to express this?
- Project assessment after implementation
  - What do past University in New England projects look like today? Can you reflect and tell me about their applicability and use today, and how they might have changed over time?
  - Has this partnership, as a whole, lasted and been maintainable for the community? Can you describe how it has or has not?
  - Which projects have been proven to last longer in comparison to others? Have these been positive outcomes? Can you talk more about if you could or could not maintain these projects without the assistance of the government, the University in New England or the non-profit organization?
  - Are there adequate resources allocated to deliver the outcomes of these projects, and if so, who is allocating these resources and how are they being distributed?
  - What do you think could have been more helpful for the community in the future? What are some shortcomings of the programs we have done in collaboration so far?
- With keeping COVID-19, locusts, and the drought in mind, please answer the following questions...
  - How has COVID-19 impacted the partnership?
  - Has COVID-19 played a role on the effectiveness of certain projects, and if so, how has it impacted them? Which, if any, programs have regressed? And if so, how?
  - Which aspects of the plan/projects do you think helped you the most during this time? How did it help you or hurt you?
  - Regarding the food and agriculture programs, have these contributed to the food security of the community and to the school, and if so, how have they contributed?
  - Are there any problems with locusts or other insect pests in the community? If there are, what are these problems and how have they impacted the community?
  - Is there adequate, potable water for the school? Can you talk more on where this water comes from and how it is used and stored? Has our water storage project been sustainable and maintainable, and has it impacted the school and students at all, and if so, how?
  - Has the exchange of ideas and knowledge of nutrition, cooking, preservation of traditional recipes and the preservation of food made any impacts on the community? And if so, what are these impacts?
  - Are you selling food/milling grain? If so, who do you sell it to/where do you sell it? Can you talk more on the time and resources it takes to do this?

- Is there anything else?
- Conclusion
  - o This concludes the interview. Thank you for your participation. I will stop the recording now.
  - o Tell them they have the right to access the final report later, if they would like, to see that their confidentiality has been maintained and to observe what other stakeholders/employees have had to say

## Qualitative Template

### List of codes

| Code  | Definition   |
|---|--|
| <b>1. Key Themes in Partnership</b>                                     |  |
| <b>1.1 Community-Based Education</b>                                    | Discussion relating to the themes of education (i.e. early childhood education) projects of the partnership.   |
| <b>1.2 Food Systems/Food Security</b>                                   | Discussion relating to the themes of food system projects (i.e. food preservation, food storage, grain mill, permaculture, smoothie bike, portion meals) of the partnership.                 |
| <b>1.3 Public Health</b>  | Discussion relating to the themes of public health (i.e. soap-making, water storage) projects of the partnership.  |
| <b>1.4 Business Generation/Entrepreneurship</b>                         | Discussion relating to the themes of business entrepreneurship (i.e. gender equality, women's business workshops, income generation for the community partners) projects of the partnership. |
| <b>2. Tripartite Partnership Members</b>                                |  |
| <b>2.1 Non-Profit Organization</b>                                      | Discussion surrounding partnership aspects with the non-profit organization  |
| <b>2.2 University in New England</b>                                    | Discussion surrounding partnership aspects with the University in New England.   |
| <b>2.3 Kenyan Primary School/Community/<br/>Kenyan Secondary School</b> | Discussion surrounding partnership aspects with the Kenyan primary school, the surrounding community near the primary school and the Kenyan secondary school.                                |

|  |  |
|--|--|
| <b>2.4 Other(s)</b>                                | Discussion surrounding partnership aspects with other original members of the partnership (i.e. the University in western Kenya and the University in southern Kenya).   |
| <b>2.5 Sustainability of Partnership</b>           | Discussion regarding the previous, current and future sustainability of the partnership between the tripartite members; how the partnership is been maintained before COVID, during COVID, and if it would want to be continued into the future. |
| <b>3. Operation of Tripartite Partnership</b>      |  |
| <b>3.1 Partnership Planning and Implementation</b> | Discussion regarding how the projects were planned and implemented between the tripartite partner members before implementation on the ground.   |
| <b>3.2 Communication</b>                           | Discussion regarding communication between the tripartite partners over the partnership as a whole, how the projects were to be done, and current communication status.  |
| <b>3.3 Stakeholder Involvement</b>                 | Discussion of adequate and equal stakeholder involvement in the tripartite partnership; if stakeholder's ideas were heard and valued.  |
| <b>4. Projects</b>                                 |  |
| <b>4.1 Portion Meals</b>                           | Discussion involving portion meal projects in the Kenyan primary school and in community.  |
| <b>4.2 Food Storage</b>                            | Discussion involving food storage facilities projects in the Kenyan primary school and in community.   |
| <b>4.3 Grain Mill</b>                              | Discussion involving the grain mill project in the Kenyan primary school and in community.   |
| <b>4.4 Water Storage</b>                           | Discussion involving water storage projects in the Kenyan primary school and in community.   |

|  |  |
|--|--|
| <b>4.5 Technology</b>  | Discussion involving technological projects (i.e. smoothie/charging bikes) in the Kenyan primary school and in community.  |
| <b>4.6 Gender Equality</b>                                     | Discussion involving gender equality projects in the Kenyan primary school and in community.   |
| <b>4.7 Others</b>  | Discussion involving other projects mentioned in the Kenyan primary school and in community.   |
| <b>5. Project Processes</b>                                    |  |
| <b>5.1 Emerged Throughout Partnership</b>                      | Discussion regarding which projects were not part of the original plan, but emerged throughout the years of the partnership.   |
| <b>5.2 Still in Use/Working</b>                                | Discussion regarding which projects are currently still in use in the Kenyan primary school and the community.   |
| <b>5.3 Goals not met over past 5 years and/or Discontinued</b> | Discussion regarding which of the project goals (agreed upon by the partners) have not been met over the past five years of the partnership and/or were unsustainable to the community and have been discontinued as a result. |
| <b>5.4 Sustainable/Future Expectations</b>                     | Discussion regarding the future sustainability of the projects and what stakeholders would like to see in the future.  |
| <b>6. COVID-Related Impacts</b>                                | Impacts on community and community projects resulting from the COVID-19 pandemic.  |