

# Final Report:

## Her Farm Radio in Ethiopia, Malawi, Tanzania and Uganda

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**Submitted by:**

Farm Radio International  
1404 Scott Street  
Ottawa, Ontario, K1Y 4M8

**Project coordinator:**

Karen Hampson  
Regional Program Manager, East  
and Southern Africa  
[khampson@farmradio.org](mailto:khampson@farmradio.org)



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## TABLE OF CONTENTS

Executive summary .....	4
Introduction .....	5
Project goal and approach .....	6
Achievements by Objective .....	1
Results and benefits derived from the project .....	15
Success Stories of Her Farm Radio.....	21
Mapping radio station coverage .....	28
Conclusion and next steps/recommendations .....	31
Annex 1: Questionnaire used in Uliza and GeoPoll assessment (English version) .....	33



## EXECUTIVE SUMMARY

In partnership with 13 radio stations in Ethiopia, Malawi, Tanzania and Uganda, the Her Farm Radio project worked toward the inclusion of women in rural radio programs about agriculture. Farm Radio International's 'Her Voice on Air' approach, designed and developed specifically for this project, involves training for both radio broadcasters, and women in rural communities where those radio stations air. Broadcasters were trained to incorporate a gender-sensitive approach in their programming to address the information needs of women through interactive radio programming. This includes practical information on farming practices that are tailored for the crops grown in each area, but also the facilitation of discussions around topics such as gender based violence and family planning. Women, forming community listening groups, were also given training on how to contribute to and use the available radio programs to their benefit. They learned and practiced how to call in to radio shows live and how to use their mobile phones to record and contribute content for inclusion in rural radio programs. Her Farm Radio successfully aided radio stations in addressing the information needs of women, soliciting and sharing women's perspectives and experiences as content in radio programs, and fostering a sense of empowerment and self-confidence in the women involved. With the confidence to discuss and explain their farming practices, and by being the main channel of information regarding the new practices they learned from the radio shows, women noticed an increased respect for their ability to educate others on farming practices. In some communities, women and men noticed that Her Farm Radio had the effect of influencing gender roles in agricultural practices.

Overall highlights, detailed in Table 1 below, are as follows:

- We partnered with 13 radio stations whose broadcasts reach over **8.1 million** listeners
- **49** days of training for the rural radio production teams at 13 radio stations
- Facilitated the formation of **134** community listening groups with a total of **2,314** members and equipped them with smartphones and wind-up radios
- Provided **4,113** person days of training on the use of radios and smartphones to listening group member
- Facilitated the production and broadcast of **262** episodes of farm radio programs containing content directly generated by women in community listening groups

Quantitative survey data collected in partnership with GeoPoll uncovered significant connections between number of episodes of Her Voice of Air programming listened to and the listeners' agreement on gender equality issues. Full results from this assessment are available in the section "*Results and benefits derived from the project*" below.

The initiative has been very successful, with positive effects on self-efficacy and self-confidence among women than anticipated. Noting this impressive impact, Farm Radio International has been experimenting with using this approach in other projects where gender equality is an emphasis. We propose to take the use of the training modules, weekly questions, and group training to the next level by incorporating these elements into a "gender package" that can be used as part of a networked set of resources by any stations signed up to a national, FRI-led Interactive Rural Advisory Platform (IRAP). A



fledgling Interactive Rural Advisory Platform (IRAP) will soon be ready for testing and development in Ethiopia.

## INTRODUCTION

Farm Radio International developed the Her Farm Radio (HFR) project with funding from IFAD, in response to recognized barriers facing rural women in accessing relevant agricultural information and in having their needs, experiences and questions shared on a wide-reaching communication platform. Women's lesser access to radio sets and mobile phones, the paucity of rural women's voices within rural radio programs, and the lack of on-air discussion of gender-related issues of importance to women all conspired to reduce the relevance of rural radio to female farmers. The project began in January 2015 and concluded at the end of June 2017.

Women carry out a substantial and growing part of the work on family farms and represent 43 per cent of the global agricultural workforce. In many parts of the world, women are more likely to work in agriculture than in any other sector. Much of this work is unrecorded, undervalued and unpaid. In addition, the challenges that are common to all family farmers are often exacerbated for rural women, impeding their ability to improve their own livelihoods and those of their families.

For women to have more meaningful contributions to farm management and decision-making, they must have consistent access to relevant and reliable agricultural information provided through easily available means that suit their daily lives and schedules. Further, women need to have opportunities to participate equitably in the conversations, sharing their own experiences, perspectives and needs. In many rural areas in East and Southern Africa, this is a major gap, yet the infrastructure exists to make this happen, in the form of radio and mobile phones. FRI has long worked with local radio stations and has evidence to show that programs which respect and include women farmers can give them confidence to ask questions, make decisions and support new practices within their family farm.

The innovative approach adopted in this grant was to build the capacity of female farmers to express their voices and advocate for their needs and rights through radio and mobile phones. Through greater awareness of gender issues, and targeted segments within radio programs, the project aimed to provide women with increased access to information critical to improving their livelihoods and helping them to be more resilient as a group or community.

Over the course of the project, Farm Radio designed and developed "Her Voice on Air" - a new and innovative tool built on Uliza (our interactive voice response system and dashboard) for facilitating, harvesting and incorporating rural women's voices, perspectives and questions into rural radio programs about agricultural topics of particular interest to female farmers. We worked with **13 radio** stations in four countries. The rural radio production teams were trained to use women's recorded content as integral features of rural radio programs, and all stations have done this successfully. A total of **134 listeners groups** were formed (about 10 per station), furnished with smartphones and wind-up radios, and trained on how to use these devices to send their messages to the broadcasters. These listening groups had a total of more than 2300 members, about 80% of them women.



The listening groups were invited to listen to and contribute content to one or two series of Farm Radio International supported radio programs on varied topics. For example in Ethiopia, as programs about enset came to an end, FRI worked with the same radio stations to broadcast programs about Quality Protein Maize.

Both women and men have been responsive to this project. Women in Tanzania and Ethiopia said that they feel more valued in their community because they have heard their messages on the radio. They felt empowered because they are able to discuss agriculture and gender issues as a group and then discuss the same issues at home with their husbands. In some cases, these discussions have led to husbands taking a greater role in helping the women on the farm, and actively encouraging the women to listen to the radio, for example by buying batteries.

## PROJECT GOAL AND APPROACH

Farm Radio International has been working with various partners in Tanzania, Uganda, Malawi and Ethiopia, enabling rural radio stations to produce and broadcast programs that help small-scale farmers, particularly women, learn about and adopt climate smart, nutrition sensitive agricultural practices. All FRI projects include training for radio station producers and presenters, participatory research activities to identify issues/topics of particular interest to women farmers, support for the design and production of interactive radio programs, and the formation and mobilization of radio listener groups.

Working in tandem with ongoing projects in Ethiopia, Malawi, Tanzania and Uganda, Farm Radio International developed a gender focused training and support initiative that enabled women farmers to identify and capture their own agricultural issues and share them with a wide audience through the farm radio programs being produced by partner radio stations through other donor funds including Irish Aid, IUCN and Global Affairs Canada.

The project aimed to work with at least 1000 female farmers belonging to at least 120 community listening groups in four countries, and ensure that their needs, perspectives and issues are shared with the vast audiences of 12 rural radio stations in those countries. The resulting farm radio programs of these stations would reflect the issues and priorities of women farmers and would provide them with increased access to information that is critical to improving their livelihoods. All of these objectives were met or exceeded.

The Her Voice on Air approach that was pioneered through this project has, through this grant, gained a lot of attention, is becoming widely used through FRI, and is our “go-to” approach for empowering or targeting women.

Specifically, the project goal, objective and outputs as defined in the project documents were:

### PROJECT GOAL

To increase the extent to which farm radio programs broadcast by 12 stations in Tanzania, Uganda, Malawi and Ethiopia feature the voices, perspectives and concerns of female farmers and provide them with increased access to information that is critical to improving their livelihoods.



## PLANNED OBJECTIVES

1. To build the skills of women members of 120 radio listening groups (thirty groups each in each project country) to contribute content to farm radio programs.
2. To use a “beep to vote” system to enable women farmers to express their views on a variety of agricultural issues and topics.
3. To build the skills of radio station production teams in incorporating the voices, stories, perspectives and concerns of women farmers, and meeting the information needs of women farmers in their rural radio programs.
4. To ensure that weekly episodes of farm radio programs of 12 rural radio stations regularly feature the voices, perspectives, stories and concerns of women farmers through weekly program monitoring.
5. To ensure that the weekly farm radio programs address the priority information needs of women farmers

## PLANNED OUTPUTS

- One-day training event serving at least 1,000 female members of 120 radio listening groups in four countries on media, PR, identifying, recording and sharing their stories related to agriculture.
- 120 radio listening groups receive recording MP3 radios and tablets to record and submit women farmers’ stories.
- “Beep 2 vote” system established to gather the views of female and male on a variety of questions related to gender and agriculture.
- Training module on how to give voice and provide information services to women farmers delivered to farm radio production teams at 12 radio stations
- At least 180 weekly episodes of radio programs reaching at least 2 million farmers feature voices of women farmers who have received training through the IFAD-funded grant.
- At least 120 weekly episodes of radio programs reaching at least 2 million farmers address information priorities identified by women farmers through a formative research exercise and through listening group consultations.



## ACHIEVEMENTS BY OBJECTIVE

The following key outputs were complete according to each objective:

**Table 1: Key achievements of the project**

	Radio station	# of training days for station	Estimated # of potential listeners <sup>1</sup>	Estimated # of potential rural listeners	# of Community Listener Groups (CLGs)	# of members of CLGs	# of person days of training for CLG members	# of episodes with Her Voice on Air segment
	Dmitse Woyane	5	4,284,564	2,015,891	10	100	20	16
	Kembata	5	2,092,156	356,857	9	90	18	16
	Legedadi	5			15	150	30	16
	SUB TOTAL	15	6,376,720	2,372,748	34	340	68	48
	Dzimwe CR	5	1,604,393	1,237,084	10	208	20	16
	Nkhotakota	5	283,510	210,342	10	182	20	62
	Maziko	5	2,324,833	1,118,860	10	238	20	16
	SUB TOTAL	15	3,929,226	2,355,944	30	628	60	94
	Radio Maria	5	13,430,000	3,737,000	10	150	750	23
	Faraja FM	5	564,931	333,353	13	180	900	16
	Radio 5	5	2,744,928	788,702	7	90	450	9
	SUB TOTAL	15	16,739,859	4,859,055	30	420	2100	48
	BFM	1	1,279,027	450,558	11	220	165	24
	UBC Buruuli	1	149,491	105,728	10	152	100	24
	KKCR	1	883,754	554,657	9	250	100	24
	Voice of Lango	1	1,598,206	1,096,680	10	304	1520	24
	SUB TOTAL	4	3,910,478	2,207,623	40	926	1885	72
<b>TOTAL</b>	<b>13</b>	<b>49</b>			<b>134</b>	<b>2314</b>	<b>4113</b>	<b>262</b>

**Note:** Due to overlap in the mapping of radio broadcast coverage, it is not possible to calculate the exact number of people that were exposed to one or more radio programs. To provide an estimate of the total number of possible rural listeners, we can sum the reach of the station with the largest reach in each country. Doing this, we can confidently say that the project reached a minimum of **8.1 million** potential rural listeners.

<sup>1</sup> The estimated potential listeners to each station (also known as coverage) was calculated using FRI's custom FM contour mapping solution. FRI combines data including: power of transmitter, height of transmitter, gain of transmitter and topographical terrain information to estimate physical coverage of each station. This data is then overlaid over geo-referenced population data obtained from each country's most recent census to give a sense of the population covered by each station's broadcast. Only Legedadi Radio (which uses an AM frequency) was unable to be mapped.



**Objective 1:** *To build the skills of women members of 120 radio listening groups (thirty groups in each project country) to contribute content to regular, interactive farm radio programs.*

The project as a whole has succeeded in working with a total of 134 listening groups (exceeding the objective by 14). Over 2300 people, at least 80% of them women, belonged to these groups, significantly exceeding the target of 1000. We aimed to work with ten groups per station, and this varied according to interest and whether there are already existing groups that could add “community radio listening” as a regular activity. The summary of numbers can be seen in Table 1 above. Women were trained specifically on the use of smartphones, how to record their voices and send the recording to the radio station, how to conduct good interviews and the use of MP3 radio to listen and record the program.

### **Uganda**

In Uganda we worked with a total of 40 listening groups: Bushenyi FM with eleven groups, UBC Buruuli has ten groups, KKCR has nine active groups and Voice of Lango has ten. All the groups were trained and are active. Each week two groups were selected to have their messages played, to ensure that every group gets a turn.

Women have been contributing to the broadcasts since late 2015. As noted above, over the course of a 16 week series, BFM received 164 messages, UBC Buruuli has received 104, KKCR has received 88 and Voice of Lango had 211.

### **Ethiopia**

In Tigray, ten listening groups were trained, who sent in 96 messages over the 16 week series. In Kembata, nine women’s groups have been sending the station messages, in some cases almost too many for the station to handle, for a total of approximately 349 recordings. The broadcaster was worried about choosing which one to play because there was so much demand from the listeners to hear their message. In Oromia, 15 groups of women are active. There were some challenges with civil unrest in recent months, and participation in these particular programs was somewhat low due to this, with approximately 80 messages sent over the course of 16 programs.

The Oromia and Kembata groups shifted to listening to programs on quality protein maize (QPM) this year, as the onset project closed in April, but programs on different topics continue on the same stations. The QPM show focuses on nutrition and gender. Her Voice on Air questions were developed at the design stage of these programs.

### **Tanzania**

In Tanzania, 30 listeners groups were formed and trained. In the 30 groups, we find a total of 420 members: 150 members in Singida (10 groups listening to Radio Maria), 180 in Shinyanga (13 groups listening to Radio Faraja FM) and 90 in Arusha (7 groups listening to Radio 5). In Singida and Shinyanga more than 80% of groups were active, while in Arusha only 3 groups were active. In Arusha (Meru district), there was a challenge that most farmers in the targeted villages engage more in business (farm product business-such as selling banana) other than farming. Also there were some challenges with Radio 5 signals in some villages. In addition, Her Voice on Air approaches have been used with Kings FM and Radio Maria in Njombe and Ruvuma regions, on a CRS funded project promoting soybean, Soya ni Pesa.



## **Malawi**

In Malawi, Farm Radio Trust trained and engaged with at least 250 female farmers belonging to at least 30 listening groups. In the three areas where the projects are being implemented, one-day workshops were held to train representatives from each listening group on the use of mobile phones. Farm Radio Trust found that a main highlight of their workshops was the presence of extension workers from each of the areas, who joined the workshop to help train the women.

In all countries, a series of formative research activities preceded and informed the radio station selection, and the content of the radio programs, no matter the topic. Radio programs start with listeners, and through focus group discussions we gained a good understanding of the information needs and communication interests of women farmers. In Tanzania, for example, women in farmer groups were interested in learning about strategies to manage new pests that were attacking their tomato crops. In general, women farmers were interested in speaking to experts in the field and working more closely with local extension staff to address specific issues.



## A CLOSER LOOK, ENGAGING WOMEN WITH WHATSAPP IN MALAWI

In Malawi, our national affiliate Farm Radio Trust, experimented with the use of WhatsApp Messenger as the main platform of engaging with women groups and capturing their voices as content in radio programs. This was originally chosen as a pragmatic solution for Malawi as it did not (then) have the interactive voice response infrastructure available to support Uliza. However, this provided an opportunity to explore a smartphone-based approach for closing the same feedback loop as the “feature phone” based solution in Ethiopia, Tanzania and Uganda.

A working document was published by the team at Farm Radio Trust and Farm Radio International on the experience in using WhatsApp in the Her Voice on Air approach in the RUForum working paper series. These findings were also presented at RUForum. Here is a small excerpt from the paper:

### Creating channels, connections, and communities: Experimenting with virtual rural agricultural learning communities in Nkhosakota district, Malawi<sup>2</sup>

By: Mloza-Banda, C.Chapota, R.Chinkhokwe, P.Kisebe, J. M.



*In order to create a system for interactivity between the clubs and the radio station, each of the 30 community listening clubs were equipped with one basic android mobile phone which would allow them to respond to and comment on the topic or question being discussed that week. The broadcasters were supported to install WhatsApp onto the mobile phones and created group chats for women. They were trained on basic technical issues of android phones to provide technical backstopping to women whenever need arises. They were also oriented on their role of moderating group chats to achieve the objectives of the innovation. [...]*

*One community listening club called Chigumukile, indicated that women and other villagers touched a smart phone for the first time when they received one from the project. Three months later, three other members of the village bought their own low cost smart phones just to have WhatsApp on them and be able to join fellow farmers on the group chat moderated by the radio station broadcasters. According to the farmers, they have found it interesting to interact with other farmers and sharing information about farming and other development issues of common interest on daily basis. While extension workers were confined to man their sections only, the WhatsApp group chat broke the boundaries allowing extension workers to share tips and respond to farmers from other sections. The group chat has become a community network for solutions to farming needs.*

<sup>2</sup> The full article is available online at: <http://repository.ruforum.org/fr/documents/creating-channels-connections-and-communities-experimenting-virtual-rural-agricultural>



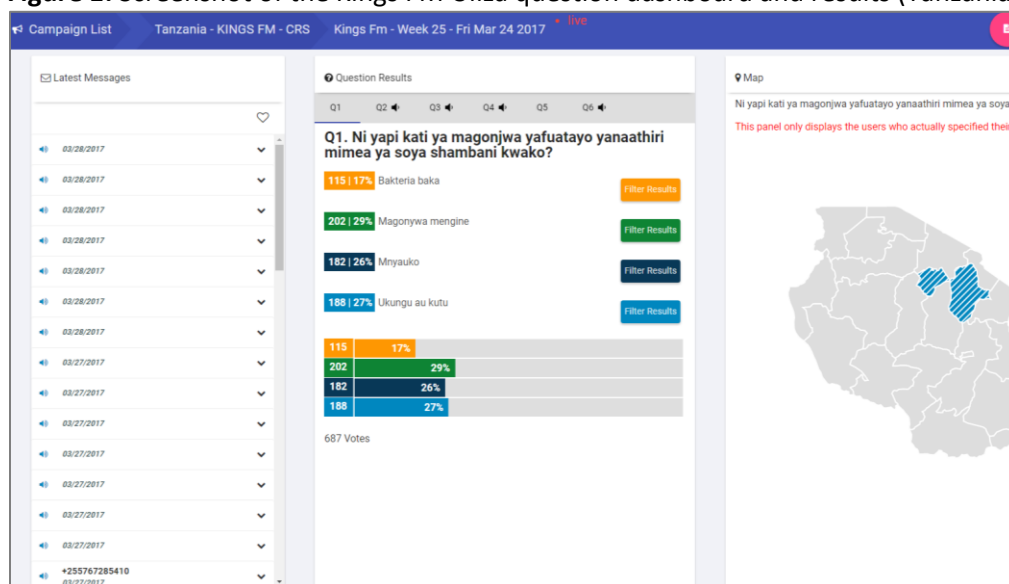
***Objective 2: To use a “Beep-to-Vote” system to enable women farmers to express their views on a variety of agricultural issues and topics***

During the formative research conducted prior to the design of each radio series, most women farmers confirmed a preference for mobile telephones over tablets as a secondary communication device to complement the use of radio. Based on this feedback, FRI decided that a combination of mobile phones and voice-based systems were the most suitable in all participating countries. This approach was further supported, existing technical capacity of farmer groups, availability of maintenance services, charging options for the devices, availability of adequate storage facilities for equipment, and recent experiences with using tablets in other FRI projects. We bought and distributed one basic smartphone and one wind-up/solar power radio set per group. The phones and radio sets were managed internally by the group - they chose a leader or trusted person who would look after the phone, record the programs, and organize group meetings, taking notes on discussions. FRI staff gave short trainings to the women’s groups on how to use the phone and the radio set, and signed them over to the group officially. We then monitored interactions and how often the groups sent messages, providing encouragement and technical assistance as needed.

In the voice system developed and run on Uliza, Farm Radio’s purpose-built dashboard for managing interactions such as “beep to vote” with listeners, the women’s groups were trained to dial a number and place a missed call. The missed call triggered an automated call back by an interactive voice response (IVR) system. The group could then listen to that week’s thought-provoking question. After listening to the question, discussing it with the group and deciding on a response the caller can signal that she is “ready to record” and then leaves a voice message that reflects the group’s. Groups alternated which member would record the response to the weekly question. The IVR system can handle a number of questions per call and can be automated to be activated/sent to registered phones at specific times (for example to collect feedback from listening groups each week), or on request by listeners who want to participate. There is no cost to the respondent, as there is no charge for a missed call, and received calls are free to the recipient. Content is thus gathered widely from remote, hard-to-reach communities with no travel, no cost to the caller, and high quality audio for inclusion in radio programs. FRI’s Uliza system was installed in all stations, together with a short training on how to use it in programs, and trouble shoot this tool.



**Figure 1:** Screenshot of the Kings FM Uliza question dashboard and results (Tanzania)



**Figure 2.a:** A transcribed recording of a community listening group's response to the weekly question from episode 11 of the program on Voice of Lango in Uganda

<p><b>Question sent to CLGs:</b> What are the activities that threaten fragile eco-systems?</p> <p><b>Response of community listening group:</b></p> <p><i>"My name is Scovia Omara and I am from Telela. I am a member of Alolololo East. My answer to the question is cultivating in wetlands. This is because this dries up the wetland and in the end of it this affects rainfall formation and leads to drought. Poor waste management is also another way in which the environment is destroyed. When one throws polythene bags carelessly this means that it will be hard to cultivate. The crops yield will be less because the bags prevents water from penetrating the soil. I therefore take this opportunity to thank this program for enlightening us."</i></p>
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**Figure 2.b:** A transcribed recording of a community listening group's response to the weekly question from episode 10 of the program on Faraja FM in Tanzania. Radio station production teams were trained to gather (from the Uliza dashboard) and integrate these responses into their weekly rural radio programs.

**Question sent to CLGs:** Do you have any freedom to use any part of the family land for vegetable garden?

**Responses of Neema community listening group in Negezi Village, Kishapu**

*"My name is Sophia Andrea from Neema group in Negezi village. I have no freedom because the man has all authority when it comes to land. All the time I request an area for gardening he becomes so mad. We women should become advocates for this, we should talk more to men to make them understand the importance of giving us freedom to own land."*

Sophia Andrea from Neema Group in Kishapu Village, Shinyanga

*"My name is Mary Nkongi from Neema Group in Negezi village. Women have no freedom to use family land for garden farming and this is because our cultures do not allow women to have ownership of land. If a woman needs a land, she has to request it from a man and only he can decide whether to give her or not. My opinion is, men should be educated more so that they can give women the freedom to own land."*

Mary Nkongi from Neema Group in Kishapu Village, Shinyanga

*"My name is Chausiku Gama from Neema Negezi. I have freedom to use land for gardens because having a family garden reduces the cost for buying vegetables and other family needs. So I use this to ask my husband for land to use. He allows me to use the land because he knows that it is for the benefit of whole family. My opinion is, women should advise men and make them see that gardens is beneficial for the whole family."*

Chausiku Gama from Neema Group in Kishapu Village, Shinyanga

**Responses of Amani community listening group in Mwamala Village, Igunga**

Amani Group, Mwamala had the following women responding to this question:

*"My name is Khadija Mhoja from Amani Group in Mwamala B village. I have the freedom to use any family land at home for gardening. This is because in our village gardening has become something that is fundamental for our lives and our development. It also helps us to provide for our children."*

Khadiha Mhoja from Amani Group in Mwamala Village

*"My name is Suzana Bonifasi from Amani group in Mwamala Village. Yes I have the freedom to use any family land for gardening. This is because what I cultivate in my garden helps me to get all family needs and to take my children to school."*

Suzana Bonifasi from Amani Group in Mwamala Village

**Objective 3:** *To build the skills of radio station production teams in incorporating the voices, stories, perspectives and concerns of women farmers, and meeting the information needs of women farmers in their rural radio programs*

A total of 13 radio stations participated in the project (exceeding the objective by one station). As previously reported, the FRI Radio Craft Development Team created two gender equality training modules, one for use with broadcasters and one for use with listening groups. The farm radio production teams of all participating stations were trained in gender inclusive approaches to discussing all topics, whether they pertained directly to gender or not. They were also taught to gather audio content (provided by CLG members) from the Uliza dashboard and integrate it into rural radio programs. All listeners groups received a few days of training focused on: i) how to help group members discuss specific topics related to gender equality, ii) how to use mobile phones to record and send short, two-minute audio recordings directly to radio broadcasters (Beep2Vox) and iii) how to facilitate listenership for the radio programs.

The stations and topics of the radio series that incorporated the Her Voice in Air approach were as follows:

#### **Uganda**

- UBC (Eastern): Coffee and banana intercropping
- KKCR (Central Region): groundnut production
- Bushenyi FM (Western Region): Banana production and marketing
- Voice of Lango (Northern Region) Building drought resilience in Aswa -Agago catchment area (an IUCN funded project which requested the focus on gender and inclusion of women's voices)

#### **Tanzania**

- Radio Maria (Central Region): Sorghum production
- Faraja FM: Vegetable production
- Radio 5: Vegetable production

#### **Malawi**

- Dzimwe CR (Mangochi, Southern Region): Ridging as a soil conservation practice
- Nkhotakota (Central Region): General Farmer program
- Maziko Community Radio (Central): General Farmer program

#### **Ethiopia**

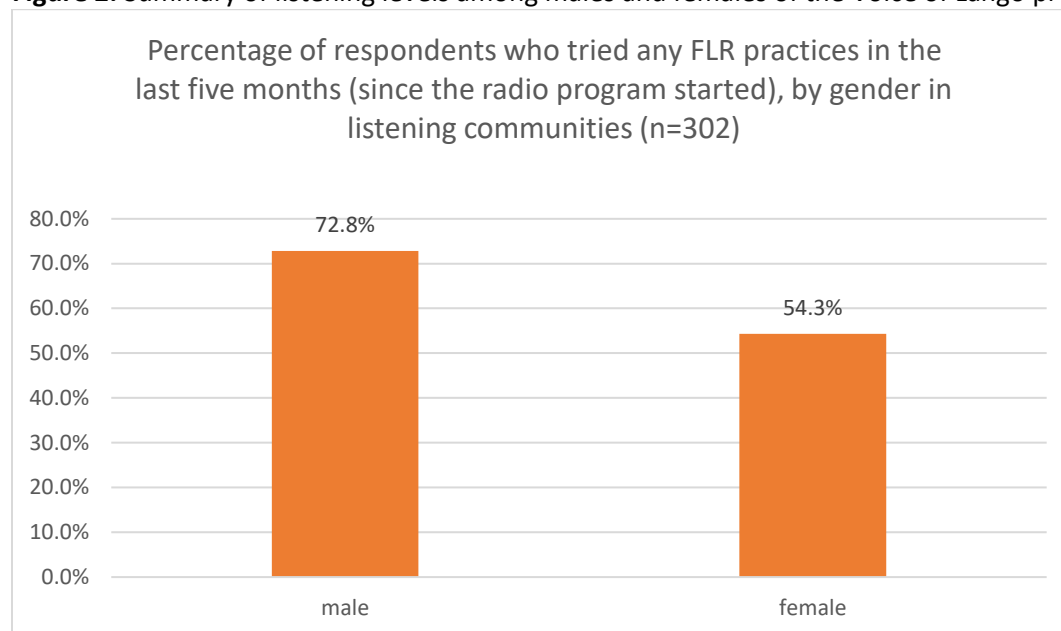
- Dmitse Woyane (Tigray): two series – Conservation farming with a focus on micro irrigation; and Quality Protein Maize (QPM) promotion
- Kembata Community Radio (Southern): false banana (Enset) production
- Legedadi radio (Oromia): two series -Wheat, Teff and Chickpea production; and the use of the Aybar Broad Bed Maker

FRI conducted a full outcome evaluation on one of these series – in Uganda, with funds from IUCN, on the “*Building drought resilience in Aswa -Agago catchment area*” project. The outcomes, in terms of increased knowledge and uptake of forest landscape restoration practices are impressive. Respondents also note that the key influence on their decision making is either radio or family/friends. **Figure 3** below



presents a summary of the level of listening to programs on Voice of Lango as presented in the IUCN-funded evaluation.

**Figure 2:** Summary of listening levels among males and females of the Voice of Lango program



**Objective 4:** *To ensure that weekly episodes of farm radio programs of 12 rural radio stations regularly feature the voices, perspectives, stories and concerns of women farmers through weekly program monitoring.*

Farm Radio International staff have monitored the programs on a weekly basis, through Uliza, and also through the regular program monitoring that staff do by listening to a selection of programs each week and checking them against our VOICE standards, and also for gender inclusion – either through a dedicated segment or through regularly featuring women. In general the stations have done a great job, as presented in the April 2016 the progress report, and the evaluation results below.

Each radio station set up a dedicated segment in each week’s program for the messages and discussion that came from the women’s listening groups to the Uliza dashboard. Each week two groups were selected to have their messages played, to ensure that every group gets a turn. This is embedded in the series design documents.

The following tables show an outline of select radio programs that employed the use of the Her Voice on Air approach that was pioneered for this project. These are only a snapshot of the types of programs that were on the air.



## UGANDA

### Summary:

In Uganda's western region, Banana (*Musa spp*) is a key staple and food security crop. While it is commonly grown, Banana Bacterial wilt (BBW) has considerably affected yields in the changing climate, and food shortages have, in the past, forced farmers to sleep hungry. To improve and standardize production, farmers requested information on banana cultivation, focusing on improved agronomic practices, pests and disease management, soil fertility and water conservation, validation of indigenous knowledge or supplementary research results, and improved seed or varieties.

**Partner radio station:** Bushenyi Model FM (BFM)

**Program name:** 'Omurisa nomuhingi (To mean a farmer's voice )

**Duration:** 24 weeks, with one 45-minute broadcast per week and one repeat.

### Topics/content:

Pests and Disease control, Soil fertility management and water conservation in Banana production.

- What is banana bacterial wilt (BBW), how is it spread, symptoms to different plant parts and growth stages.
- What are the preventative measures? Suspension of use of farm tools in different plantations, field inspection, removal of male buds after formation of last cluster. How to address barriers to women's participation in BBW.
- Discussion on by-laws about BBW.
- What are weevils, Nematodes? Symptoms and conditions influencing spread
- What is soil fertility, benefits of soil fertility, what are soil fertility indicators.
- Fertilizer application, appropriate fertilizer types, advantages and disadvantages of different fertilizers.
- Benefits of conserving water, water conservation methods
- Mulching types and benefits of mulching, construction of bunds and why bunds are important as a way of conserving water in the soil.
- -Water harvesting methods (Channeling runoff water, rain water harvesting), forking, cutting down.

**Features/Radio formats used:** Live talk shows and interviews with policy makers and leaders, field interviews, Uliza voices , testimonies, case studies (and core stories), interviews, vox pop, live shows with farmers and technical persons , call-ins, call-outs and Beep2Vote.

The programs were broadcast in the local language, Runyankore-Rukiga widely spoken in Western part of the country.



**Summary:**

In the Kembata region, enset (*Ensete ventricosum*), a perennial root crop, is a key staple and food security crop. While it is commonly grown, yields are unstable in the changing climate and food shortages have, in the past, forced farmers to consume immature plants. To improve and standardize production, farmers requested information on improved agronomic practices, disease prevention, validation of indigenous knowledge or supplementary research results, and improved seed or varieties. In response to those needs, FRI, in partnership with Kembata Community Radio, ran a Participatory Radio Campaign (PRC), on enset in a collaboration with Irish Aid.

**Partner radio station:** Kembata Community Radio Station

**Program name:** 'Wese,' meaning enset or false banana

**Duration:** 16 weeks, with one 30-minute broadcast per week and one repeat.

**Topics/content:**

Use of quality seed for planting 'enset' or 'false banana'

- Site management for enset;
- Symptoms of enset diseases, and preventive and control mechanisms;
- Enset variety seed selection;
- Preparing and planting enset tubers.
- Harvest and post harvest management;
- Food preparation; and
- Market linkage.

**Features/formats:** Opening broadcast of interviews with leaders, field interviews, testimonies, case studies (and core stories), interviews, vox pop, open broadcast with farmers, call-ins, call-outs and Beep2Vote. The broadcast was in the local language, Kambatigna.

## MALAWI

### Summary:

Mangochi District is situated in the Southern Region of Malawi. It is situated at the Southern end of Lake Malawi. The district entirely surrounds the eastern tip of Lake Malawi. It shares an international boundary with Mozambique in the East and North East. According to the District Development Plan produced in 2010, environmental degradation and food insecurity are cited as one of the main developmental issues in the district. The major challenges facing agriculture are low production and low productivity. Low agricultural production is as a result of three reasons. These are (1) food insecurity (2) loss of biodiversity and environmental degradation, and (3) low household income levels. An upscaling of information on Climate smart agricultural practices were one of the topics isolated as of interest by farmers in Mangochi, following the PRC which focused on conservation agriculture in 2014.

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**Partner radio station:** Dzimwe Community Radio Station

**Program name:** Liwu la Mlimi pa Wailesi meaning “The voice of the farmer on air “

**Duration:** One 30-minute broadcast every Sunday

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### Topics/content:

A regular quality farmer program addressing farmers’ needs for information on climate smart agriculture and agriculture productivity:

- Manure making and usage
- Treatment of pests and diseases
- Market information
- Promotion of conservation agriculture
- Description of early maturing varieties
- Early garden preparation for winter cropping
- Afforestation
- Livestock production

**Features/formats:** Opening broadcast of interviews with leaders, field interviews, testimonies, case studies (and core stories), interviews, call-ins, market information and weather information



## TANZANIA

### Summary:

The Singida region is located in the Central zone of Tanzania and is a semi-arid region. The major food crop grown in the region is sorghum as it is resistant to drought compared to other crops such as maize. Despite the fact that most farmers in Singida cultivate sorghum, its production was low, contributing to food insecurity. Programs in Tanzania thus promoted the use of improved seed varieties, good agronomic practices, specifically row planting and bird control.

Radio Maria has a weekly one hour program on sorghum, plus a repeat (funded under Irish Aid). These programs have a segment of 5-8 minutes for “Her Voice on Air”, known as Paza Sauti. The presenter announces it and then play the recordings sent in by the groups. This is usually followed by a guest or expert who responds to the content in general (may not answer specific questions). This segment is usually half way through the program. The weekly questions for the women’s groups were set during the program design, so that each question corresponds to that week’s topic. Each week the group discusses the questions and sends responses through the Interactive Voice Response system set up by FRI on the smartphone. These listeners have also recently been listening to the programs on soybean through Radio Maria.

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**Partner radio station:** Radio Maria Tanzania

**Program name:** “Kilimo Chetu” means Our Farmin

**Duration:** 18 weeks, with one hour broadcast on Wednesdays 9:00pm – 10:00pm and one repeat on Mondays 9:00pm – 10:00pm.

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### Topics/content:

Sorghum production

- Types of sorghum and its importance
- Weather and types of soil suitable for sorghum farming
- Birds control
- Farms preparation
- Seeds selection and availability
- Planting (spacing)

**Features/formats:** Magazine format (introduction, weekly polling question, farmers/field interviews, vox pops, songs/drama/poems from farmers, experts interviews, questions and answers, call ins, announcing the weekly polling results, wrap up). The broadcast in the national language, Kiswahili.



***Objective 5: To ensure that the weekly farm radio programs address the priority information needs of women farmers***

All radio series featured in this project began with formative research study through which Farm Radio heard directly from rural women about the crops and related topics they wanted to learn about as well as their radio listening and interaction preferences.

Women indicated in end-of-project evaluative focus group discussions that the programming addressed both their agricultural needs, and their needs as women, by, for example, featuring on-air discussions regarding women in farming, gender based violence, and family planning. Highlights from this qualitative evaluation exercise in Uganda and Tanzania are presented below.

**Uganda**

The Uganda team heard from focus group discussion participants that the Her Voice on Air audios/segment has increased participation and interactivity of women on the radio shows in question, and that this has had other positive effects in the communities, with some examples provided in the April 2016 report, and more below. Now, more women's voices are heard in the programs, and they share a lot of interesting experiences and ideas. Men also have their say in the radio programs through the regular phone calls. Some react to the Her Voice on Air topics, while others react to the issue at hand. And many farmers are now able to identify and discuss gender roles.

**Tanzania**

From the evaluative group discussions with farmers in Singida, we heard that the most common interactions during Her Farm Radio segments were about sorghum seed varieties, pest and bird control and nutrition. The programs in Arusha focused on vegetables and in Shinyanga focused on chicken rearing and sorghum production. Some success stories are shared below. These are all topics that women farmers had sought information about.



## RESULTS AND BENEFITS DERIVED FROM THE PROJECT

Farm Radio International collected both quantitative and qualitative data for the purposes of this study.

### QUANTITATIVE RESULTS

Through a **quantitative** structured survey of 378 people in the region of Uganda where one of the participating stations - Bushenyi FM - we were able to identify the relationship between level of interactivity with the radio programs and the level of uptake of proposed agricultural practices by women and men, and perceptions about gender roles in agriculture. For this survey, we engaged the services of GeoPoll, a major player in the media insight industry across Africa.

The survey was implemented to assess the overall effect of the Her Voice on Air approach on women's participation in the Bushenyi FM radio program on banana production, which was aired between January and July 2016, in Uganda.

#### Sampling procedure

The survey was administered following two different procedures.

First, a voice survey was administered using FRI's internal Uliza interactive voice response system to a list of 300 phone numbers – 150 randomly selected from a list of 245 numbers from attendance list of meetings involving the Community Listening Groups and 150 randomly selected from a list of 373 phone numbers of people that had called the radio program through the Uliza platform. We received 20 completed surveys from the first list and 58 from the second list, for a total of 78. The survey was administered on June 28, 2017.

Second, an SMS survey was administered by Geopoll. The survey was to be administered to a total of 300 respondents, half of which to be selected among people that had listened to Bushenyi FM and half, among people who had not listened to the station. There were, however, some difficulties obtaining non-listeners due to the popularity of the radio station and, as a result, the Geopoll sample of 300 respondents included 267 listeners to Bushenyi FM and 33 non-listeners. Note that 64 of the Bushenyi FM listeners did not listen to the radio program. The random selection of respondents for the Geopoll is taken from their pool of respondents in the study area.

#### Summary of results

In total, 378 respondents participated in the survey – 300 from the Geopoll survey and 78 from the Voto survey. Thirty-five percent (35%) of the respondents were female. The percentage of respondents that had listened to the PRC radio programme is 71.6% with no significant difference between female and male respondents. The percentage of respondents belonging to a CLG group involved in the preparation of the programme is 49.0 %, with a higher percentage of female respondents belonging to such group – 58.3% compared to 44.1% for male ( $p < 0.010$ , chi-square test).

A high percentage of respondents (85.2%) indicated that they had implemented new practices to improve banana production since the start of 2016, with no significant difference between female and male respondents. Radio was considered the main source of information about these improved



practices for 58.1% of the respondents compared to 23.0% (extension officers), 15.2% (family and neighbours), and 3.7% (other). The percentage of respondents implementing these new practices was higher for PRC listeners (88.9%) than for non-listeners (74.0%) ( $p < 0.001$ , chi-square test), and for CLG members (92.7%) compared to non members (76.9%) ( $p < 0.001$ , chi-square test ).

The results obtained for five agreement scale questions are presented in the Table below.

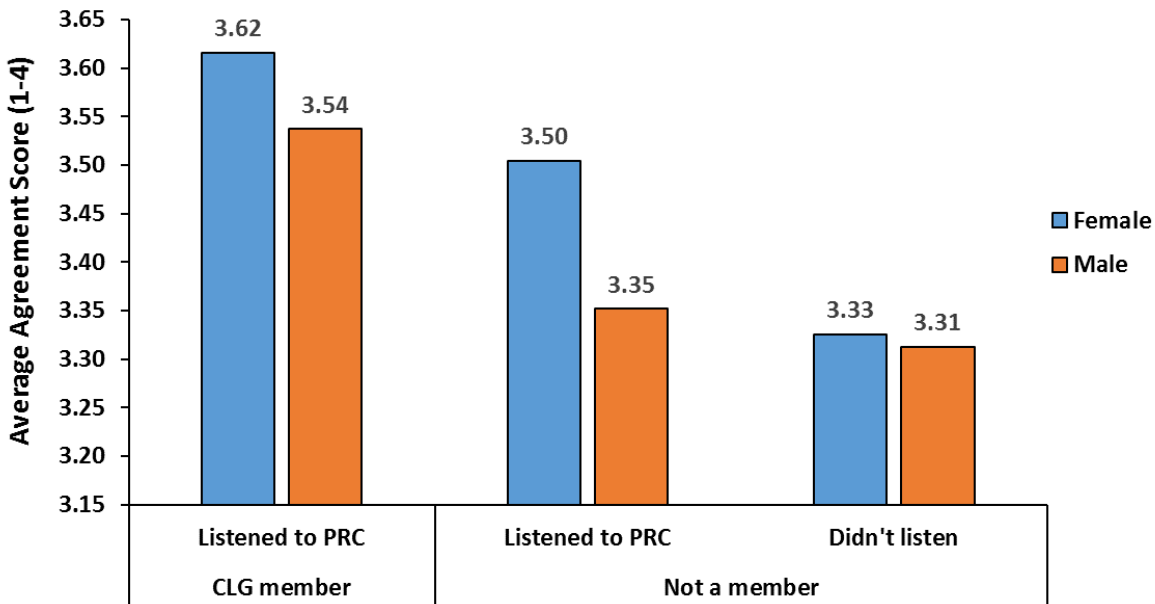
**Table 2: Results of key gender equality agreement scale questions**

	Female				Male			
	Strongly Agree	Agree	Disagree	Strongly disagree	Strongly Agree	Agree	Disagree	Strongly disagree
1. Men and women should share productive and domestic tasks more equally	64.39%	31.06%	1.52%	3.03%	59.59%	31.43%	4.90%	4.08%
2. Both man and woman should agree on when to sell bananas	71.21%	27.27%	1.52%	0.00%	63.11%	34.84%	1.64%	0.41%
3. Women who have access and control over land are better banana farmers	58.02%	32.82%	7.63%	1.53%	42.32%	43.15%	12.03%	2.49%
4. Women should contribute more to decisions about farming and use of income	53.91%	35.16%	8.59%	2.34%	46.89%	40.66%	9.13%	3.32%
5. There should be more women's voices on the radio and other media	62.50%	30.47%	4.69%	2.34%	55.83%	35.42%	6.67%	2.08%

Overall, a high percentage of both female and male respondents tended to be in agreement with the statements. A higher percentage of female, however, indicated that they strongly agreed with the various statements. To help summarize the information and examine relationships between these agreements scales on gender-related issues and the PRC activities, results for the 5 agreement scales were converted into a score with Strongly agree = 4, Agree = 3, Disagree = 2, Strongly Disagree =1. An average score calculated over the 5 questions was also calculated to further summarize the results.

Using the agreement score averaged over the 5 agreement scales, our results indicate that CLG members had a higher average agreement score (3.57) than non-members (3.35) ( $p < 0.001$ , Mann-Whitney U test). Similarly, PRC listeners had an average agreement score of 3.51 compared to 3.31 for non-listeners ( $p < 0.004$ , Mann-Whitney Utest). The figure below further highlights that the average agreement score among listeners was higher when they belonged to a CLG.

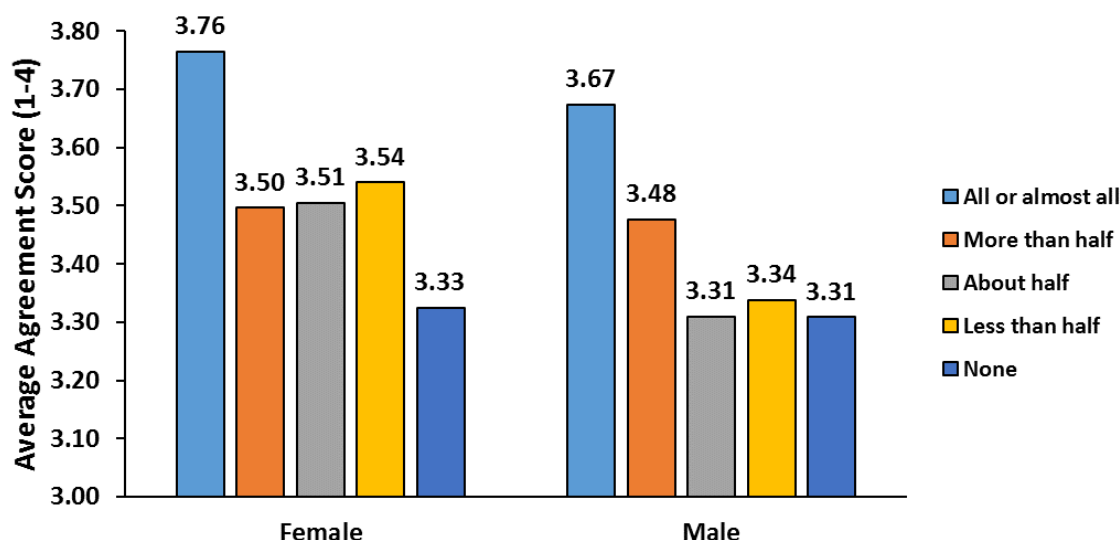
**Figure 3.** Effect of CLG membership and PRC listenership on the agreement score (1-4) averaged over the 5 gender-related questions



The following figure illustrates the effect of the listening frequency to the PRC episodes on the agreement score averaged over the 5 gender-related questions. An overall trend is observed in which the average agreement score tends to increase with the listening frequency to the episodes – i.e., the more the respondents listened to the program, the more likely they were to agree with the statements. For both female and male respondents the average score was much higher when listening to all or almost all the episodes. Then, female respondents listening to some of the episodes had a higher score than those not listening to the program. In the case of male respondents, the average score of those listening to half or less of the episodes did not differ from those not listening.



**Figure 4.** Effect of listenening frequency to PRC programme episodes on agreement score (1-4) averaged over the 5 gender-related questions



A number of the survey questions specific to the PRC program were asked to respondents who had listened to the episodes. Among respondents who had listened to the program, 81.1% indicated that they had started implementing some of the practices promoted, with 17.4% stating that they had not yet but would in the future and only 1.5% stating that they had no intention to do so. The listening frequency had some effect with 91.2% of respondents listening to more than half the episodes implementing the practices compared to about 67.6% for those listening to half or less. Over 92% of those implementing the practices indicated that they had seen some benefits. The majority of the listeners indicated that the program regularly featured women speakers (83.0%) and was effective at given women a voice (94.9%).

The full survey tool is included in **Annex 1** at the end of the report.

## QUALITATIVE RESULTS

For the **qualitative** evaluation data, twelve focus group discussions were conducted with both women and men in communities in Uganda and Tanzania, which allowed Farm Radio International to gain insights from women and men on how the project effected them and their communities. The results were positive: women reported that they were equipped with the skills they needed to interact with the radio program either through calling in or Beep 2 Vote, and that the radio station incorporated their perspectives, concerns, and information needs. The focus group discussions also revealed positive impacts beyond the project objectives, most overwhelmingly being a sense of empowerment and understanding among women and between women and the men in their communities. Interestingly, participants in the focus group discussions in both Uganda and Tanzania said that the program also led to communication and unity among members in different communities.

## Uganda

In Uganda, 8 community listening groups were visited. Interviewers met with a total of 126 people, including 87 females and 39 males. Participants reported on the positive impact of the Her Voice on Air program.

Respondents in Uganda said that their questions were responded to, and when broadcasters could not answer themselves, experts were involved to get an answer. Beyond this, respondents noted that their own inputs to the radio programs were discussed and elaborated upon to the point that they ended up learning more information than they had initially contributed.

Ugandan participants agreed that the training they had received equipped them with both the recording skills they needed and the confidence to put those new skills to use. 17 women who had previously had no knowledge on how to use phones before the training said with the knowledge they had they could now participate in the radio programs.

Anna Akello from the Alolololo East-Alebtong District noted: *“I used to fear speaking on phone because I thought I would press a wrong button and spoil everything. But now I even pick up my husband’s phone when it is ringing.”*

Beyond the confidence to speak over radio and mobile phones, women participants also noted an instilled confidence in their ability to educate others.

Sarah Apili from the Alolololo East-Alebtong District comment spoke to a newfound confidence among some women to become role models in their communities, *“I was so happy when I heard myself educating others on air. This made me realize everyone has something to contribute in this world even if you are just a farmer with no education.”*

Grace Akite from Orit south-Lira district said the project gave her the confidence to contest for her community’s local council, *“I thought no one could believe in me because am uneducated and a woman. But my group members chose me as their chairperson. This gave me confidence to even contest for the Local Council 1 position which I got.”*

Participants were also able to report on some issues they had with the radio programs, and to make suggestions for improving the implementation of future programs of this kind. There were some issues regarding topics and airtime raised during the focus group discussions. There were some topics that were mentioned as being too broad to understand well enough to participate in on air discussions. Participants also mentioned other constraints that prevented them from participating such as: they had no airtime to call; the studio lines were jammed; fear to call on air; lack of phone; poor network; and belief that broadcasters would not pick up numbers that were not saved in their system.

Participants suggested a number of areas for improvement that would solve difficulties they had:

- Making sure the system has no error before the program day.
- More time should be allocated to the recording section so that one can air their views accurately and the system should also have a warning alarm in case one is running out of time so that they



are able to know and speed up.

- Participants also requested more training on how to use the phones, especially for those with no phones.

## **Tanzania**

Focus group discussions and a town hall meeting in Tanzania facilitated the evaluation of Her Farm Radio. Women and men were separated during these discussions to facilitate freedom of expression.

Participants agreed that most of the topics they wanted to be discussed on air were covered. However they also mentioned that in the future they would like information on some other specific crops that were not covered (sunflower, cassava, and soybeans). Most of the radio program pertained to education about sorghum, such as; improved varieties of sorghum; nutritional information about sorghum; and pest and bird control of the crop. The information they received allowed them to improve their agronomic practices and increase their food security at the household level.

As a result of Her Farm Radio, women reported feeling happy that they were able to share their experiences and educate others. Before the training sessions that came with the implementation of the program, only 15 percent of women in the participating communities in Tanzania knew how to use smart phones. In the communities in Tanzania where focus groups were held, women overwhelmingly reported their increased confidence in having their opinions listened to and considered over the radio. This was a direct result of the discussion aspect of the radio program: when other listeners called in to expand on an experience that they had shared, or when they heard their questions aired and responded to by an expert. Participants also noted increased program listenership throughout the implementation of the program as friends and neighbours became interested in listening to what their community members had to say.

Participants in Tanzania also noticed a change in gendered roles in farming activities. Women noted that their husbands had been impacted by the program as well, and that some were now engaged fully with all farming activities. After hearing women participate in programs they heard issues that they wanted to be heard and worked on, and had since become included in activities that would be normally regarded as womens' activities. Men affirmed this observation.



## SUCCESS STORIES OF HER FARM RADIO

### SARAH APILI, ALEBTONG DISTRICT, UGANDA



Sarah Apili is 32 years of age from Alolololo Parish East, Omoro Sub-County, and Alebtong district. She says she listened to all the 24 episodes of the radio program on Voice of Lango, and recorded all the radio programs for other group members to listen to during their community group meetings.

Mrs. Sarah recorded her voice three times during the radio program to speak about gender issues, tree planting and environment management. Her participation in the program, specifically her discussion about tree seedlings, led her to buy 20 orange seedlings from the local market in her community to plant in her garden, and to continue to care for her 100 Shea butter trees. Mrs. Sarah called to the radio station 5 times during live radio talk shows and the experts and the broadcaster were able to give answers to her questions. She also participated in the Uliza “Beep to Vote” system where she gave her views and recorded herself on phone 4 times on different topics. Due to the radio program. Mrs. Sarah was given a group phone and free play radio to look after on behalf of her group.

## SYLVIA ALUMU, OTUKE DISTRICT, UGANDA

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Sylvia Alumu is 42 years old from Barwala Village in Cungtek group Okwang sub county Otuke District, Uganda. She recorded her voice 4 times to contribute her experiences in family planning, conservation fund, waste management and land fragmentation. After two weeks her voices were played on air and these encouraged her to buy ten mango tree seedlings, ten orange tree seedlings and twenty pines, which she planted around her compound.

Mrs. Sylvia also recorded her voice using her phone through Uliza (Beep for Voice system) to ask questions and listened to 10 topics of the radio program.

She was also invited for a radio talk show together with her husband Mr. Ogwang Francis and Mrs. Sylvia said, while laughing, "I was excited and I felt great because it was my first time-my whole life in the radio station studio and my capacity was built because I was talking to so many people in different districts and they were listening to me. The topic was Gender Based Violence and this has really helped very many communities because husbands can now help and support their wives at home and during garden work, people are now planting trees, making rubbish pits, reduced Cavara damping..." She also called to the radio station several times but it did not go through because of line congestions.



## BETTY OBAA, OTUKE DISTRICT, UGANDA

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Betty Obaa is 30 years from Akano village Okwang sub-county Otuke district. She listened 16 episodes of the radio program and recorded her voices 3 times on her experiences with land management, land fragmentation, waste management and conservation fund. She advised farmers to work together with their husbands. After two days it was played on air and a few weeks later she bought 17 orange seedlings which she planted around her compound. She is also practicing natural resource regeneration management of two big gardens of Shea nut trees and mangoes. Mrs. Obaa also mentioned that, due to the radio program she was able to save and protect the wetland area in the swamp and she can now get fish which she sells every day and earns UGX 20,000 (USD 5.57) per day, using the money for basic necessities for her family. Mrs. Obaa notes that, “the conservation fund has brought peace and harmony in [their] families because before the fund, [their] husbands would steal produce to sell at drinking joints cheaply to buy alcohol but now they can borrow money together with their wives in groups and pay back.

Mrs. Obaa also participated in the “Beep for voice system” where she recorded her voice and answered questions that were asked. During the radio program, she was hosted on air during the radio program and she said “I was very, very happy because many people were listening to me and my friends were calling and that gave me courage to speak confidently.”

## LILIAN ATIM, ABIM DISTRICT, UGANDA

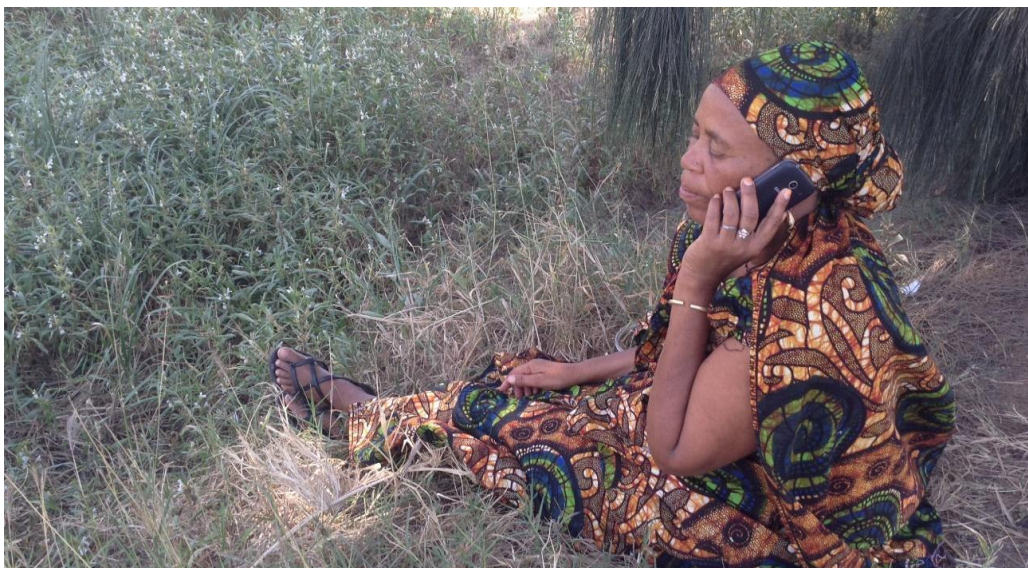
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Lilian Atim is 26 years from Ating village. She recorded her voice 3 times on tree planting, bush burning, digging wetlands. In a weeks' time her voices were played on air. She was excited because she had never had her voice on radio and it very clear and sounded the same. Since then the community has started respecting her. She also bought 5 orange tree seedlings from the local market which she planted in her compound, and has preserved her garden of shea nut trees. Mrs. Atim listened to 23 episodes of the radio program on Voice of Lango and participated in beep for voice system where she recorded her voice using her phone and asked questions.

## ZAINA ISSA, SINGIDA REGION, TANZANIA

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Zaina Issa is a 51 year-old widow who has devoted her life farming to feed the family and pay school fees for her children.

On the very cold and windy Friday, she sits under the tree at her house. Her face was graced by an habitual smile as she explained how the mobile phone had provided a solution to her long-term problems: “wherever I see something strange in my farm I just turn to my phone to seek solution.”

Mrs Issa is a smallholder farmer in Msisi village, on Singida-Mwanza highway some 18 miles from the central region town, Singida in Tanzania.

For the past 25 years, the mother of six has also grown maize, and Sorghum occupied most of her recent three years farming. She talked about the phone and how it has help increase yields.

She says, as she grew up she only watched how her parents would farm and adopted. “And when I got married farming was my second job after been a housewife. After losing my husband eight years ago, I became father and mother to my children.”

Mrs Issa explains that life wasn’t easy, despite retaining the house and farms. The house demands kept increasing and conventional farming could not satisfy her needs and the family.

She says it was Farm Radio International who introduced the phone, trained her alongside other smallholder farmers in the village chiefly to record their query and send to experts for response.

“I shared the same knowledge to other fellow women and they’re now happy farmers, very autonomous,” she smiled, showing how to record and send a voice recording.



The farmers also received radio set. But to Mrs Issa, the phone was more than money. She says, in addition to send voice message to the radio she also used the phone to call extension officer to guide her farming activities. On her three-and-half acre, Mrs Issa harvested 24 sacks of sorghum. This was a shocking increase from 1 sack she used to harvest on the same field before attending training and adapting to modern farming method.

“The only problem is birds. I patrol the farm alone or send children to help,” the energetic mother said. “We cannot blame the drought as many places are suffering the same.

Although the program on sorghum aired on Radio Maria has ended, Mrs Issa has been listening to soybean farming now being focused on southern highlands regions in Tanzania.

“I want to diversify and farm soybeans. I have been following the radio broadcast and I want to give it a try,” she said.

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Like Mrs Issa, Luciana Philip a 36-mother of two in Msisi village says the phone has helped the bridge the gap between farmers and extension officers.

Mrs Philip who produced 15 sacks of sorghum in her 1 acre says it’s a big improvement from 8 sacks she used to harvest.

“We don’t get the improved seeds on time. The seeds supplied by authorities is too little to meet the entire village, alternatively we divide to ensure everyone gets what is available.”

One kilo of sorghum in the village is sold at a rate of Tshs 1,500 (Us\$0.7). It is also available in agro-input shops in town.

Due to climate change with erratic rains, the farmers use Naco Mtama One, the sorghum seed released by Naco seeds.

Mrs Philip and other farmers report that it’s a high yielding, early maturing and non tannin seed making it suitable for food, feed and brewing.

She also learned on best practice to farm improved sorghum seeds though the phone and listening to Radio Maria’s Kilimo program.

Through group discussion, Mrs Philip says women in her village are now the champion trying to educate their husbands to turn to best practice of farming: “Indeed we’re at better place than before.”

## LILIAN ATIM, ABIM DISTRICT, TANZANIA

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As thousands of farmers in central Tanzania battle with long spells of dry weather and erratic rainfall with no hope to feed their family, Juliana Yusuph is no longer worried.

The 39-year-old mother of five is one of the many converted smallholder farmers in Ntongo village, some 25 miles from the central region town, Singida.

“I knew nothing about sorghum farming. I never bothered to try it, but the weekly radio program on Radio Maria did,” she says. “It has transformed my entire farming attitude and culture.” The introduction of radio programs and the smart-phone support we received has been very helpful in getting the necessary and timely information on sorghum farming.

Mrs Yusuph had all this while growing maize. It is the highest consumed staple food here and, a subsistence crop. However yields had relatively dropped owing to prolonged spell of dry weather and erratic rains.

Unlike some other smallholder farmers, Mrs Yusuph has already harvested 5 sacks of sorghum in her 1 hectare field. She is still harvesting, hoping for eight sacks, enough to feed her family.

She says when the trainings alongside radio broadcast started in 2015 she didn’t pay attention. “My neighbour attended the training and later told me to join a group of smallholder women farmers. In the group I learnt over the radio program. Ever since, I have been addicted to the radio program ... I never miss it.”

Maize farming is now a challenge in Ntongo according to Mrs Yusuph and other farmers. It requires sufficient money to buy the very expensive seeds, yet must-have sufficient rains to be able to harvest.

Farmers here learnt through the radio program sorghum was much nutritional than maize. On health benefits.

## MAPPING RADIO STATION COVERAGE

For years, Farm Radio International was in need of a system for reliably measuring the number of rural people that could be served by a particular radio station. Over the course of this project, we developed an improved system for mapping the reach of one station. Using data from the radio station and population data from <http://www.worldpop.org.uk/>, we can now produce maps which show broadcast coverage zones for each radio station we work with. Using the below method, data was collected to complete the population coverage of the radio stations included in this project (See Table 1).

We gathered the following information from each station:

- a) The location of the station transmitter (using GPS)
- b) The radio station frequency
- c) The height of the station transmitter
- d) The power of the station transmitter (Watts or Kilowatts)
- e) The gain of the station transmitter (dB)

These five variables were fed into GIS mapping software which adheres to FCC standards for determining FM radio contours.

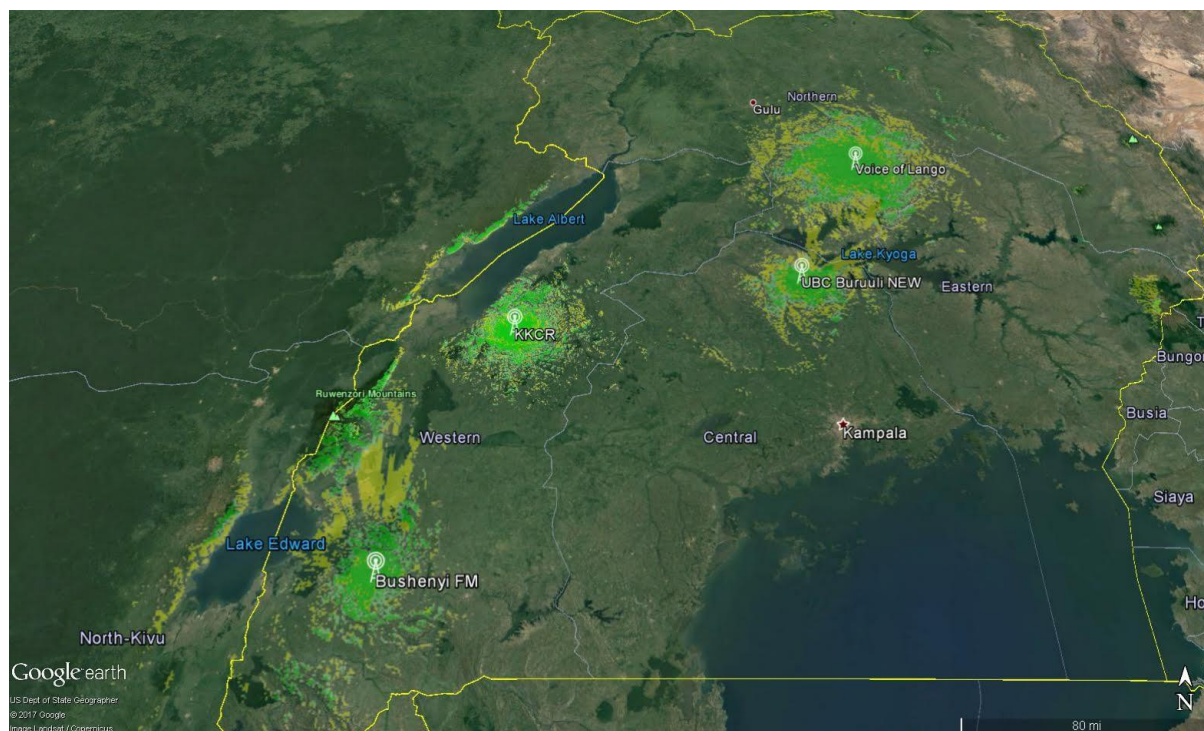
Population maps obtained from <http://www.worldpop.org.uk/> were overlaid with the radio contour maps produced by this method, and two calculations made in each broadcast zone: a) total potential population – the population in the station’s broadcast coverage zone, and b) total potential rural population – the rural population in the station’s broadcast zone (“rural” is defined as less than 400 people/km<sup>2</sup>).

The map of the station's broadcast coverage zone produced on Google Earth. The green and yellow shading shows the broadcast range (coverage) of each station, with the signal getting weaker further from the station. The population reached by each station is presented in Table 1 above.

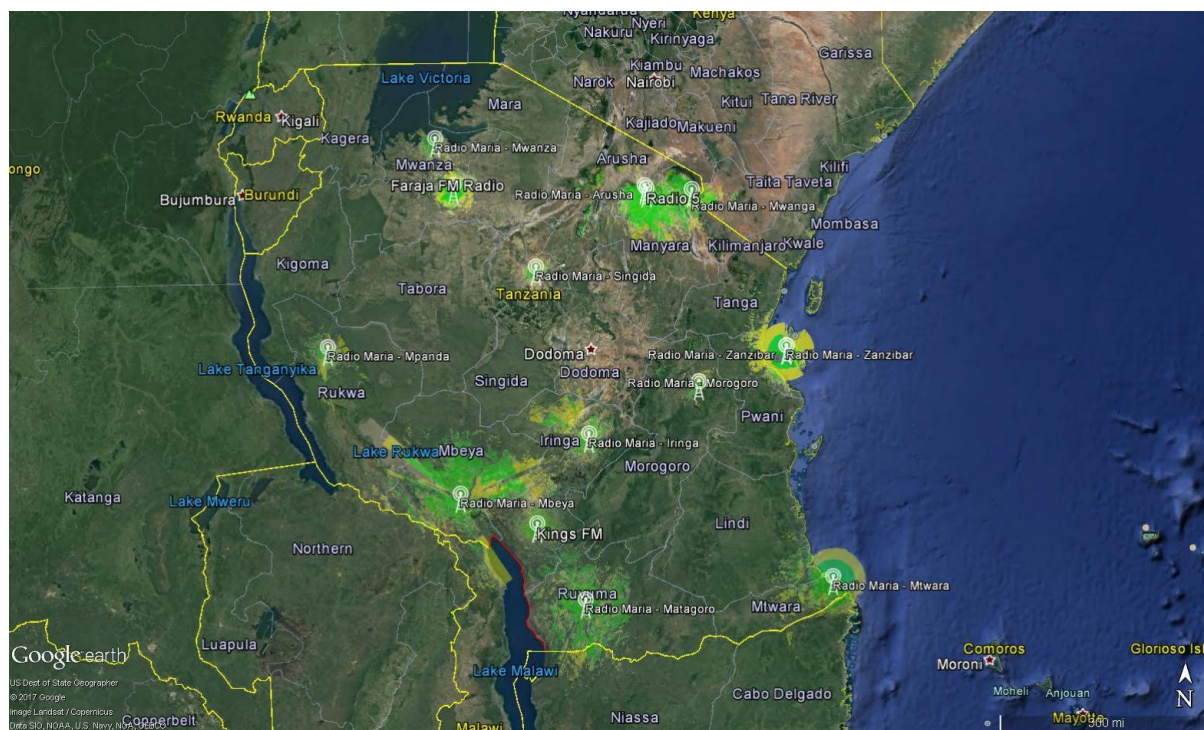




**Figure 5.** Uganda - all stations Population coverage map for all Ugandan radio stations included in this project (BFM, UBC Buruli, KKCR and Voice of Lango).

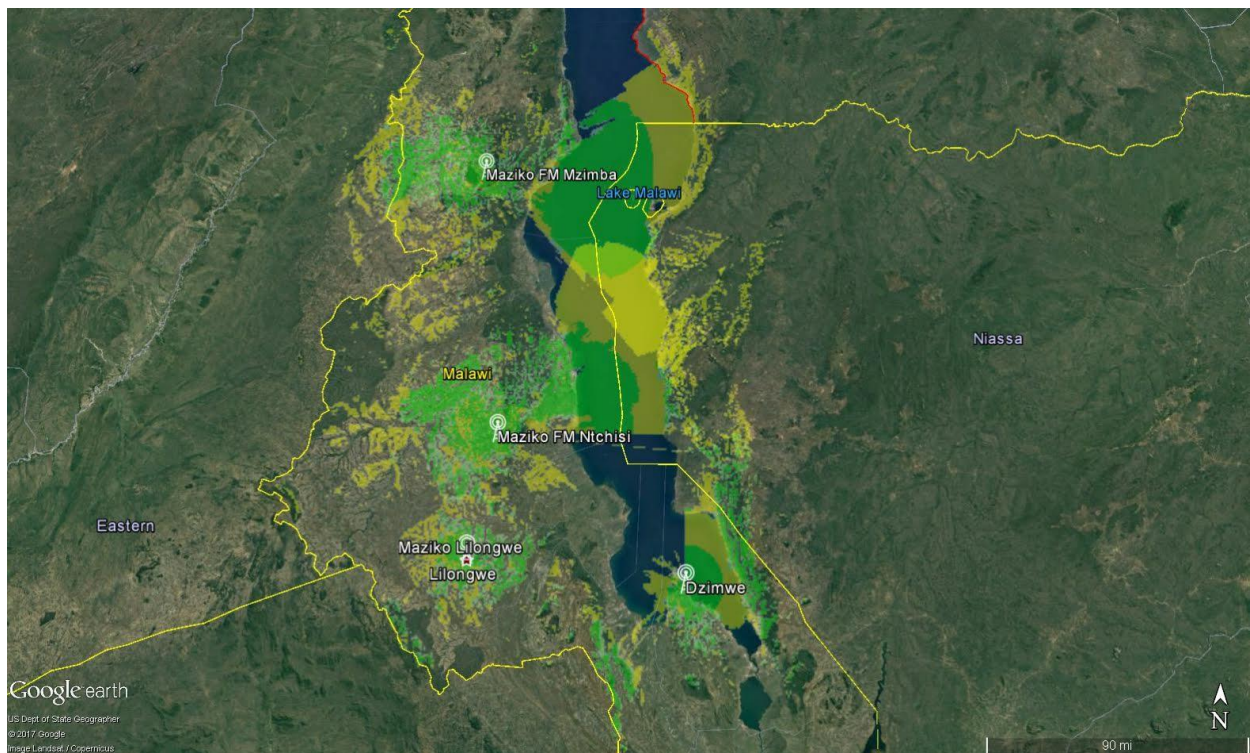


**Figure 6.** Tanzania - all stations. Population coverage map of all Tanzanian radio stations included in this project.

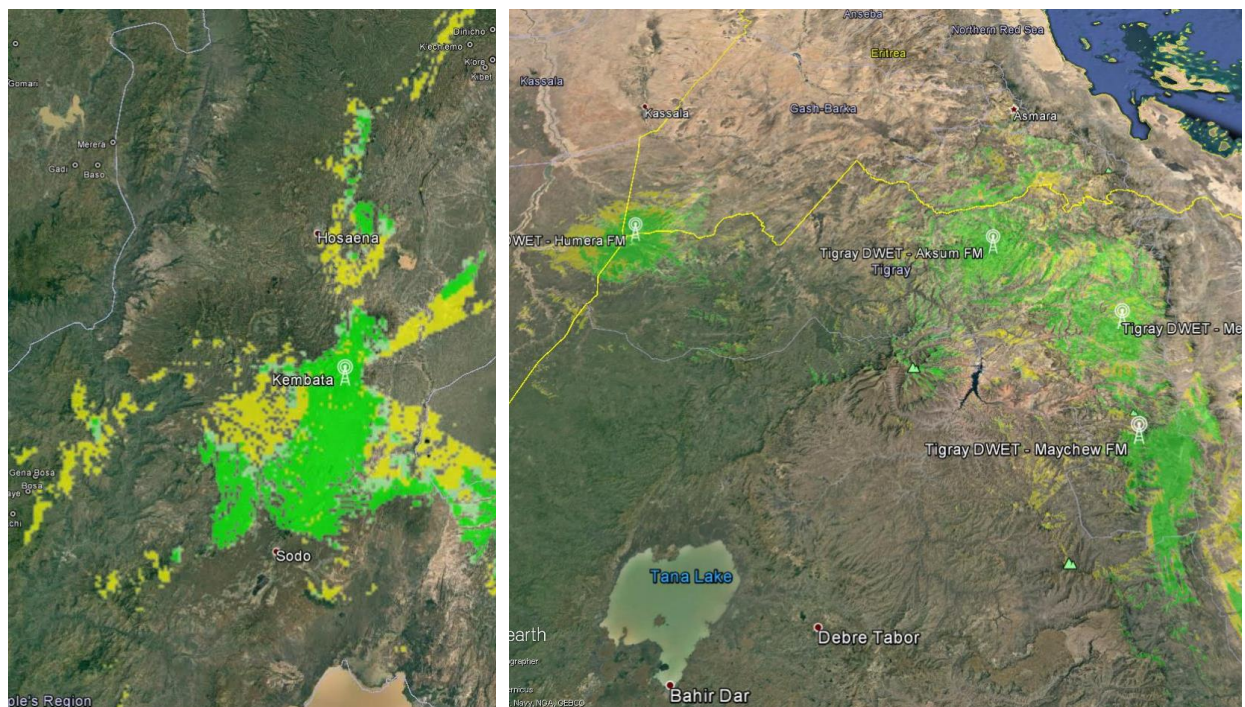


**Figure 7.** Malawi - all stations.





**Figure 8.** Ethiopia- coverage for Kembata FM and Dmitse Woyane.



## CONCLUSION AND NEXT STEPS/RECOMMENDATIONS

Based on the objectives we set out to achieve and the outcomes we planned, the Her Farm Radio project was a success, and has had better-than-hoped effects on women's self-confidence, gained through engagement in the groups and inclusion in radio programs.

- In all countries except Ethiopia, community listening groups received at least one, and up to five days of media training. Community listening groups in Ethiopia received a half day training.
- Over 120 listening groups received smartphones and recording MP3 radios
- The “Her Voice on Air” system, built on Farm Radio’s Uliza dashboard was established and made available for use among all community listening groups.
- A training workshop was delivered to farm radio production teams at 13 stations, and all stations underwent the training.
- 262 weekly episodes of agricultural radio programs were produced and broadcast, reaching a combined potential audience of well over 2 million farmers and featuring voices of women farmers.

Beyond the outputs that correspond to the objectives of this project, focus group discussions revealed that the implementation of the project had had a positive impact on their lives, with women in Tanzania and Uganda overwhelmingly reporting an increased sense of self-confidence, and also increased respect from others in their community.

Furthermore, the quantitative survey data collected through GeoPoll also supports the relationship we believe to exist between level of interactivity with the radio program and the chances of uptaking the agricultural practices discussed on the program, as well as an increased awareness of, and belief in, gender equality in agricultural practices. Perhaps even more striking is the finding that, regardless of gender, the more the respondents listened to the radio program, the more likely they were to agree with statements that showed a positive view of gender equality in agriculture. This clearly shows an association between exposure to the radio program and shifting views on gender equality. The survey also showed that radio was indeed the most influential source of information for most respondents, even above that of agricultural extension workers and family/neighbours.

Of course this survey was only conducted at one station in Uganda, but we are interested in conducting similar assessments in other geographies that use the Her Voice on Air approach in the future.

With the employment of the focus group discussions and the collection of GeoPoll/Uliza data for the purposes of measuring the effectiveness of this project, we have a clear idea of our successes and potential for improvement in the implementation of future projects of the kind.

For example, participants in focus group discussions in Uganda mentioned a number of areas for improvement regarding difficulties they had recording and sending in their responses. Participants also suggested possible ways that these issues could be addressed, as follows.

- Participants noted that one minute for each recording is little, and suggested that more time be allocated to responses and that the system should have a warning alarm when they are running



out of time.

- At times the system had an error and did not call them back, which meant they could not offer their views. They suggested that radio stations check the system for errors before the program day.
- Some reported still lacking the knowledge necessary to record on their phones on an individual basis, and some reported that others in the group still lacked the confidence to record answers. Women requested more training for the groups on how to use the phones, and broader training to reach those who did not have a phone but could occasionally use the group phone.

This detailed feedback from the audience and users has helped FRI, organization wide, to review this approach, and apply it to other projects where gender is an emphasis. At the strategic level, we propose to take the use of the training modules, weekly questions, and group training to the next level by incorporating these elements into a “gender package” that can be used as part of a networked set of resources by any stations signed up to a national, FRI-led Interactive Rural Advisory Platform (IRAP). A fledgling Interactive Rural Advisory Platform (IRAP) will soon be ready for testing and development in Ethiopia. With a proven method for incorporating the concerns and voices of women into widely heard farm radio programs, we can work through our broadcasting partners to serve the interests of small-scale farmers and their communities, and contribute to improved food security.



## ANNEX 1: QUESTIONNAIRE USED IN ULIZA AND GEOPOLL ASSESSMENT (ENGLISH VERSION)

**Q1. Location. What District do you currently live in?**

Provide choice of Districts

**Q2. In what year were you born. Reply with a four-digit number like 1980:**  **Go to Q3**

**Q3. Are you male or female?**

- 1) Male
  - 2) Female
- } **Go to Q4**

**Q4. Do you grow bananas on your farm?**

- 1) Yes → Q5
- 2) No → END

IF Yes,

**Q5. Since the start of 2016, have you implemented new practices to improve banana productivity/ control pests and diseases?**

- 1) Yes → Q6
- 2) No → INFO1

IF Yes,

**Q6. What was the main source of information about these improved practices.**

- 1) Radio
- 2) Extension worker
- 3) Family/Neighbor
- 4) Other

} **Go to INFO1**

**INFO1. React to the following statements on improving banana production in your community → Q7**

**Q7. Men and women should share productive and domestic tasks more equally**

- 1) Strongly agree
  - 2) Agree
  - 3) Disagree
  - 4) Strongly disagree
- } **Go to Q8**

**Q8. Both man and woman should agree on when to sell bananas**

- 1) Strongly agree
  - 2) Agree
  - 3) Disagree
  - 4) Strongly disagree
- } **Go to Q9**





**Q9. Women who have access and control over land are better banana farmers**

- |                      |   |                  |
|----------------------|---|------------------|
| 1) Strongly agree    | } | <b>Go to Q10</b> |
| 2) Agree             |   |                  |
| 3) Disagree          |   |                  |
| 4) Strongly disagree |   |                  |

**Q10. Women should contribute more to decisions about farming and use of income**

- |                      |   |                  |
|----------------------|---|------------------|
| 1) Strongly agree    | } | <b>Go to Q11</b> |
| 2) Agree             |   |                  |
| 3) Disagree          |   |                  |
| 4) Strongly disagree |   |                  |

**Q11. There should be more women's voices on the radio and other media**

- |                      |   |                  |
|----------------------|---|------------------|
| 1) Strongly agree    | } | <b>Go to Q12</b> |
| 2) Agree             |   |                  |
| 3) Disagree          |   |                  |
| 4) Strongly disagree |   |                  |

**Q12. Did you listen to the program *Eiraka ryomuhingi no muriisa* on banana production that aired on Tuesdays and Fridays last year on Bushyeni FM?**

- 1) Yes → **Q13**  
2) No → **END**

IF Yes,

**Q13. Were you part of a listening group participating in the preparation of that program?**

- |        |   |                  |
|--------|---|------------------|
| 1) Yes | } | <b>Go to Q14</b> |
| 2) No  |   |                  |

**Q14. There were 30 episodes of the program. How many did you listen to?**

- |                      |   |                  |
|----------------------|---|------------------|
| 1) All or almost all | } | <b>Go to Q15</b> |
| 2) More than half    |   |                  |
| 3) About half        |   |                  |
| 4) Less than half    |   |                  |
| 5) One or two        |   |                  |

**Q15. Have you started implementing some of the practices promoted during that program?**

- 1) Yes → **Q16**  
2) No, I intend to try them in the future → **Q17**  
3) No, I do not expect to try them → **Q17**

IF Yes,

**Q16. Did the use of these improved practices lead to an improvement in banana productivity?**

- 1) Yes
  - 2) No
  - 3) Don't know
- Go to Q17**

**Q17. Did the program regularly feature women farmers speaking on the air?**

- 1) Yes
  - 2) No
  - 3) Don't know/don't remember
- Go to Q18**

**Q18. React to this statement: the program was effective at giving women a voice**

- 1) Strongly agree
  - 2) Agree
  - 3) Disagree
  - 4) Strongly disagree
- END**

