



Uganda Farm Radio

Radio and interactive communications technologies to promote forest landscape restoration



GLOBAL FOREST AND CLIMATE CHANGE PROGRAMME



The designation of geographical entities in this book, and the presentation of the material, do not imply the expression of any opinion whatsoever on the part of IUCN, the government of the United Kingdom or other participating organizations concerning the legal status of any country, territory, or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.

This report has been produced by the International Union for the Conservation of Nature (IUCN) for the Global Forest and Climate Change Programme, with funding from the Department for International Development under the United Kingdom Government.

Published by: IUCN, Gland, Switzerland

Copyright: © 2015 International Union for Conservation of Nature and Natural Resources. Reproduction of this publication for educational or other non-commercial uses is authorized without prior written permission from the copyright holders provided the source is fully acknowledged. Reproduction of this publication for resale or other commercial purposes is prohibited without prior written permission of the copyright holders.

Citation: Farm Radio International (2015). *Promoting Forest Landscape Restoration through Farm Radio and ICT in the Districts of Kapchorwa and Kween, Mt Elgon Region, Uganda*. Gland, Switzerland: IUCN.

Available from: IUCN (International Union for Conservation of Nature) Global Forest and Climate Change Programme
Rue Mauverney 28
1196 Gland
Switzerland
flr@iucn.org
www.iucn.org/FLR

Cover Photo Aaron Ruben 2015

ACRONYMS

DAO	District Agriculture Officer
DNRO	District Natural Resources Officer
FGD	Focus Group Discussion
FRI	Farm Radio International
FLR	Forest Landscape Restoration
ICT	Information and Communication Technology
IUCN	International Union for Conservation of Nature
KAP	Knowledge, Attitudes, Practices
KTR	Kapchorwa Trinity Radio
LC	Local Council
NAADS	National Agricultural Advisory Services
PRS	Participatory Radio Series

TABLE OF CONTENTS

ACRONYMS	2
TABLE OF CONTENTS	3
LIST OF FIGURES AND TABLES	4
1. EXECUTIVE SUMMARY	5
Background.....	5
Results.....	5
Activities.....	5
Lessons learned	6
2. BACKGROUND	8
Project aims and description.....	8
3. ACTIVITIES	10
3.1. Inception workshop	10
3.2. Formative research	10
3.3. Program design workshop	11
3.4. Program publicity, launch and broadcast.....	11
3.5. Initiation training.....	12
3.6. ICT Training	12
3.7. Mid-term review meeting.....	13
3.8. Training of broadcasters/stakeholders on FLR	13
3.9. ICT and in-station refresher training	14
3.10. Monitoring visits.....	14
3.11. Song competitions.....	15
3.12. Outcome evaluation.....	16
3.13. Process evaluation.....	17
3.14. Summative evaluation	17
4. RESULTS	18
4.1. Program	18
4.2. Estimates of program reach	18
4.3. Cost-effectiveness	19
4.4. Farmer participation through ICTs.....	20
4.5. Radio Boda Boda	21
4.6. Results and highlights from the summative evaluation.....	22
4.7. Results and highlights from process evaluation.....	23
4.8. Results from outcome survey	24
5. CONCLUSION.....	29

LIST OF FIGURES AND TABLES

Figure 1: Field visit to IUCN project areas by the key partners during the inception workshop.	10
Figure 2: LCV chairperson Kapchorwa District hands over the tablet and Sansa audio recorder to the radio station director	12
Figure 3: FRI team visits local gardens to gather more information on FLR practice changes..	15
Figure 4: The predicted coverage of the station signal strength for handheld radios.	19
Figure 5: ICT Officer demonstrates a wind up solar-powered Freeplay radio	21
Figure 6: Men’s focus group discussion during a monitoring field visit.....	22
Figure 7: Percentage of respondents that reported listening to the radio.....	25
Figure 8: Percentage of respondents that reported practicing FLR in the past 5 months VS number of episodes listened	26
Figure 9: Influence in the practice of a FLR technique.....	27
Figure 10: Intention to practice FLR next season.....	28
 Table 1: Cumulative numbers of callers and interactions at the radio station from Jun-Jan.....	 20

1. EXECUTIVE SUMMARY

Background

In 2014 and 2015, the International Union for Conservation of Nature (IUCN) collaborated with Farm Radio International (FRI) on a project – *Radio and ICT to Promote Forest Landscape Restoration* – with the aim of promoting Forest Landscape Restoration (FLR) for landholders/farmers in Uganda. Between September 2014 and June 2015, IUCN's goal was to use radio as well as other information and communication technologies (ICT) to reach a wide audience of farmers to increase knowledge and awareness of FLR. The aim was to enable farmers and farming communities to undertake and promote specific FLR interventions for their own needs and to understand the benefits, opportunities and challenges they might face in restoring degraded land.

Results

The overall results of the project are positive and encouraging: GIS mapping¹ and population analysis indicates that a large percentage of the total target population of the IUCN project, roughly 200,000 people in the Districts of Kapchorwa and Kween, had access to the forest landscape renewal program series as well as an additional 800,000 people in adjacent districts. An outcome evaluation of the project revealed that 91% of listeners had used one of the techniques mentioned in the radio program during the previous five months. Specific outcomes are presented and analysed in the paper: *There is no Program Without Farmers: Interactive Radio for Forest Landscape Restoration in the Districts of Kapchorwa and Kween, Mt Elgon Region, Uganda.*

Activities

Pre-broadcast activities, including holding an inception meeting and conducting formative research, helped the project team gain an understanding of the specific radio listenership patterns. The formative research report also provided important inputs to the campaign design workshop, in which detailed plans for the 24-week participatory radio series were developed.

Additionally, radio staff received training on FRI's quality assurance tool, known as the VOICE standards as well as on the use of mobile-based ICTs. Coupled with content training on FLR, these activities assisted in aligning radio station and FRI staff within the same goal of producing an interactive and factually accurate radio program for small-scale farmers.

¹ See GIS map and explanation on pages 7-8

Monitoring activities revealed gaps in the listenership of the radio program and highlighted listeners' needs, which were subsequently addressed during the mid-term review process. For example, Radio Boda Boda, an innovative solution using local motorbike transport, was used to address the challenge of poor signal in the communities by taking radio messages directly to farmers.

Lessons learned

There are many positive lessons learned from using radio as a tool for extension and communication for development. However, there is considerable room for further innovation and research. Particularly encouraging, is the positive interplay between a well-established, long-term development project and a well thought out interactive communication strategy. Moreover, the existing community knowledge provided a solid foundation for the project to build on. The interactive and participatory approach helped to move IUCN's KNOW-FOR initiative forward in terms of encouraging and supporting high numbers of listeners to practice FLR techniques.

Another lesson, reinforced by other FRI project experiences, is the need to include multiple stakeholders throughout the radio strategy planning. By encouraging active involvement of partners – such as the district administration, local extension services, the Kapchorwa Commercial Farmers Association and members from several government ministries – this project ensured local and political buy-in to the project. These relationships are crucial to ensuring that the radio strategy exists as a coherent piece to the local extension system as opposed to “doing it alone” as is often seen with communication projects. It is recommended that any future radio-based communication projects take into account this partnership approach.

Areas for further development and research:

- Tailoring ICTs and activities (appearing on the show, providing weekly feedback) to suit women and allow them to play a more active role
- Developing and tailoring a suite of ICTs for the radio station to access and adapt according to specific needs
- Answering the following key questions through research into how farmers learn and how they translate new knowledge into decisions:
 - Are on-ground activities a pre-requisite?
 - Do farmers learn better in groups or as individuals?
 - Can farmers learn effectively through audio only or are there circumstances where visuals are needed – what are these circumstances/examples?
 - Do farmers need the support of face-to-face interaction or is this a good addition but not a necessity?

- What is the effect of community listening groups on learning and decision-making?
- Do listening groups work better for men, women or mixed groups?
- What types of listening groups and activities are most effective for promoting changes in practice?
- How would other information delivery systems improve or contribute to learning and increased practice? – e.g. use of video, pamphlets, demo plots or exchange visits.

2. BACKGROUND

The International Union for Conservation of Nature (IUCN) has been working with communities in the Mt. Elgon region of Uganda since 2007; facilitating participatory processes to identify and promote Forest Landscape Restoration (FLR). “Community Environment Action Plans” have been developed with clear restoration milestones. In 2012, IUCN launched the UK Government funded project – KNOW-FOR: *Improving the way knowledge on forests is understood, communicated and used internationally*.

The overriding goal of the project is to support practitioners and policy makers in mobilizing support and pledges for the Bonn Challenge target of restoring 150 million hectares of deforested and degraded lands by 2020. The project aims to achieve this by generating and packaging strategic information, crucial knowledge and decision-support tools for assessing FLR opportunities, combined with a well-defined knowledge uptake pathway, which includes capacity building and dissemination.

Project aims and description

In 2014, FRI partnered with IUCN in the Mt. Elgon region of Uganda with the goal of contributing towards the KNOW-FOR project. Together with the district government and a local radio station, FRI launched an interactive radio initiative. The aim was to enable small-scale farmers and farming communities to understand and address challenges and opportunities related to forest landscape restoration. FRI worked closely with Kapchorwa Trinity Radio (KTR), a community radio station located in the region, to design an interactive participatory radio series (PRS), which was then broadcast by KTR. Kapchorwa Trinity Radio broadcasts primarily in Kupsapiny (one of the main local languages) and English. The PRS objectives included:

- Enabling farmers and communities to understand the benefits of forest landscape restoration and the opportunities and challenges they might face in restoring degraded land.
- Allowing over 4,000 households in 89 villages within three micro-catchments areas (Sipi and Kaptokwoi in Kapchorwa and Ngenge in Kween) to undertake and promote specific forest landscape restoration interventions for their own needs.
- Assessing the potential of participatory radio, ICTs (including use of mobile phones for interactivity) for replication and widespread use as a development communication tool to increase community awareness and application of forest restoration technical information.

The anticipated outputs of the project included:

- 5 radio staff trained to deliver quality radio programming
- Activity reports, formative research, review meeting, design workshop, summative report, stakeholders meeting, inception meeting and final project report
- A comprehensive outcome evaluation
- Submission of a peer-reviewed journal article

3. ACTIVITIES

The FRI team completed all planned activities in close collaboration with the key stakeholders who provided technical support in monitoring activities, designing workshops, hosting review meetings and mobilization. These activities are described in further detail below.

3.1. Inception workshop

FRI and IUCN organized an inception workshop which took place in September 2014, which focused on planning operations for the focus areas. FRI conducted audience research, with an emphasis on radio listenership preferences, and on the knowledge, attitudes and practices (KAP) related to FLR. The workshop included a field visit to the IUCN project areas.



Figure 1: Field visit to IUCN project areas by the key partners during the inception workshop (Karen Hampson, 2014)

3.2. Formative research

FRI worked closely with IUCN to identify research communities before the start of the formative research. IUCN and FRI conducted the formative research from November 3rd to November 7th 2014. A total of 248 farmers (123 men and 125 women) were interviewed from nine villages, three from each catchment. The goal was to gain an accurate picture of KAP regarding FLR in the different communities, and their relationship with FLR, radio and ICT. This information assisted planners in understanding the most liked and trusted radio stations, convenient listening times, preferred radio formats, opinion leaders of the visited communities, attitudes and information needs to FLR and any relevant details about local culture. This information was instrumental during the campaign design workshop and the radio station negotiations.

The preliminary formative research report also helped FRI identify and contact the partner radio station. The negotiation and signing of the MOU and project agreements were finalized with the selected radio station before the campaign design workshop.

3.3. Program design workshop

The participatory radio program design workshop took place on the 4th of December 2014 and was facilitated by FRI staff. Three district officials, representatives from two civil society organizations, eight farmers (4 women and 4 men), the KTR station manager, two broadcasters, one IUCN staff member and four FRI staff attended the design workshop. FRI shared the major findings of the formative research and introduced the main components of the participatory radio campaign. Objectives of each of the four campaign stages, indicators of change, the outlines of FLR messages, stage timelines, sources of information, interaction and feedback gathering mechanisms, and other important components of the campaign plan were developed. The campaign plan guided the 24 weeks of broadcast.

After discussions with IUCN, it was decided to change the program type from a campaign to a series, in order to allow for greater flexibility and coverage of a larger number of topics. Formative research revealed that the majority of farmers had already decided to implement FLR practices. The participatory radio series (PRS) was identified as a better fit given the project's aim to create awareness on a number of aspects of FLR.

A detailed plan for the PRS was developed with IUCN, the radio station, the district team and FRI, covering key messages, program format and feedback questions. The format of the feedback segments were developed using FRI's innovative Beep2Vote questions. The series plan was then shared with all key partners in order to ensure coordination among the radio station, IUCN, FRI and the radio guests throughout the project.

3.4. Program publicity, launch and broadcast

KTR launched its program on the 9th of January 2015 in the presence of district leaders, sub county leaders, farmers, civil society organizations, religious leaders and radio station management. The Chief Administrative Officer, the District Natural Resource Officer, the Deputy Residential District Commissioner, the District Forest Officer, the LC5 chairperson, community development facilitators and LC3's from the IUCN project areas attended the launch. The live launch program reached out to a wide audience, generating publicity and awareness on the upcoming radio series. The key district leaders and other stakeholders pledged their support and participation to the program.



Figure 2: LCV chairperson Kapchorwa District hands over the tablet and Sansa audio recorder to the radio station director (Lynn Nakabugo 2015). “Trees bring riches, good wind and rain, so let’s make sure we bring back the environment well,” said the District chairperson.

3.5. Initiation training

FRI provided a month-long in-station training to KTR station from the 25th of November 2014 to the 23rd of December of 2014. Five radio staff participated in the in-station training.

The training focused on understanding the stages of participatory radio campaigns and series, FRI’s VOICE standards, basic storytelling, the role of the core story in campaigns, getting focus in an interview, basic interview skills, making interesting radio programs, presentation skills, recording sound, writing for the ear (elements of good writing) and other production, research and recording skills.

3.6. ICT Training

FRI equipped the radio station with a desktop computer, three Sandisk Sansa recorders and an Android tablet to help build the capacity of the radio station to do field recording and to help the radio station produce effective radio programs by conducting interviews with farmers and other community members as well as experts and officials. FRI’s in-station trainer and ICT officer trained KTR staff on how to use the equipment. The ICT officer also conducted an ICT needs assessment at the station and later returned for the ICT and the monitoring tools training.

The ICT officer visited the radio station in January 2015 and trained the staff on integrating ICT in the weekly program, how to do research for good programming, how to manage mobile-based feedback services (i.e. Beep2Vote and other SMS services), completing log sheets and audio clips and others. Five broadcasters (3 men and 2 women) attended the training.

The three main objectives of the ICT training were:

1. To train broadcasters on the ICT tools they can use in their programs to gather more feedback from the listeners i.e. Beep2Vote
2. To train broadcasters on the ICT tools they can use to report on their progress and also communicate with FRI staff through Gmail, Whatsapp, Telegram and Mobenzi.
3. To train broadcasters on document-sharing ICT tools (Google Drive, Dropbox), which are used to share audio programs with FRI for monitoring, quality assurance and feedback.

3.7. Mid-term review meeting

FRI held a one-day review meeting on the 1st of April 2015 in Kapchorwa District with key partners. The meeting focused on reflecting on the project progress, challenges and future recommendations. The District Natural Resources officers (DNRO), broadcasters, farmers and IUCN staff jointly proposed solutions to the identified challenges. The meeting action points were later followed up and addressed.

The monotony of some model farmers (farmers who are frequently on the radio program) and the lack of female experts on the radio program was addressed in a separate meeting held by the DNROs and the broadcasters. A contact list for all model farmers and women experts was also developed. Other challenges, such as late communication to radio guests and poor coordination among the key partners, were addressed by message reminders which were sent to the radio guests at least twice a week.

The early monitoring revealed that Reberewo village received unclear or no signal. FRI delivered a Freeplay radio set for the farmers to get the radio program series through a Boda radio strategy. The community then regularly received the latest radio broadcasts via SD cards delivered by motorcycle.

3.8. Training of broadcasters/ stakeholders on FLR

On the 4th of February 2015, IUCN Kampala and FRI field office staff trained 5 KTR staff and 19 district technical people at Masha Hotel in Kapchorwa about the latest FLR concepts.

KTR staff, District Natural Resources Officers, the District Agricultural officer, the District Forest Officer, the District Water Officer, the District Commercial Officer, Community Development Officers, Sub County Chiefs and CSO representatives attended the training. The training focused on bringing out the bigger picture of FLR from the global level (*the Bonn Challenge*), and how it narrows down to the national level and finally the local/landscape level. The training enabled stakeholders to develop relatively the same level of understanding and run

a meaningful and successful radio campaign. The trained officers provided technical assistance at all levels throughout the project life span.

3.9. ICT and in-station refresher training

Two broadcasters attended a five-day refresher training workshop in Kapchorwa. The workshop was designed as a result of requests from partner radio station broadcasters and recommendation of FRI's radio and training team. The in-station refresher training focused on how to produce a radio magazine, FRI's VOICE standards, time management and how to control distracting air waves. These skills have improved the production and broadcast skills of the broadcasters. The ICT Officer conducted refresher training for two broadcasters in April 2015 about audio compression, sharing audio using a tablet, interpreting the Beep2Vote results, DropBox and Google Drive.

3.10. Monitoring visits

Two monitoring field visits were conducted in March and April 2015. The first visit focused on listenership (timing, format, presentation style and ICTs), while the second phase sought to investigate the KAP of the farmers, community involvement in the radio program and the role of ICTs.

The purpose of the monitoring activities was to:

- Check the progress of the radio program compared to the design plan
- Seek out any issues requiring support
- Assess whether the farmers were aware of the radio program and what they thought
- Assess whether the partner radio station was complying with the agreed standards
- Assess the changes in the KAP of farmers
- Take corrective action and coaching with the partner radio station

FRI worked closely with KTR and IUCN to identify and mobilize groups that would be visited during the monitoring visits. Field data was collected with a Focus Group Discussion (FGD) tool developed by FRI. Groups were separated by gender so that women's opinions could be captured and two FGDs were conducted in each community, totalling 26 FGDs.



Figure 3: The FRI team visits local gardens to gather more information on FLR practice changes (Rashid Muzungyo, 2015)

3.11. Song competitions

FRI together with KTR organized song competitions in five schools in the three sub-counties of Benet, Kapchesombe and Kapsinda from the 1st to the 24th of June 2015. The participating schools were: Kapchesombe Primary School, Kitanyi Primary School, Chemanga Primary School, Kwoti Primary School and Kapchai Primary School.

Using radio, the KTR team informed the schools of the upcoming school song competitions in early June and five schools showed interest and later participated in the song competitions. The schools had to choose between drama, debate, poems and songs as a way of communicating key messages on conservation.

The radio station recorded and collected voices from the five schools. The entries were then played on radio for the public to vote on. The public voted the best school through call-in and Beep2Vote. The results are below, starting with the winning school:

- Kapchesombe Primary School
- Kitanyi Primary School
- Chemanga Primary School
- Kwoti Primary School

- **Kapchai Primary School**

The participating schools were given gifts such as exercise books, mathematical sets, geometry sets, footballs, netballs and certificates.

These activities encouraged student participation in raising awareness on soil conservation in the districts of Kween and Kapchorwa. The final Beep2Vote participation for the best school registered many votes, suggesting that the messages on soil conservation through songs and drama were well received on the radio.

3.12. Outcome evaluation

The outcome evaluation survey assessed the effectiveness and reach of the project in terms of increased awareness of the IUCN project, improved knowledge of FLR and the uptake or improvement of FLR practices among listeners. The contribution and effectiveness of ICTs was also assessed. As FRI did not conduct a baseline survey, the evaluation focused on the counterfactual² and the difference between those who listened and those who did not.

For quantitative data, FRI outlined a detailed evaluation strategy and methodology in collaboration with IUCN. The field team used a mobile-based survey tool, Mobenzi, which can be used on a smart phone. Structured questionnaires were used to conduct individual interviews with a representative sample of farmers from the communities surrounding the radio station. A sample size of 413 was split between three sample groups. The communities were categorized as follows:

- **“Active” listening communities (ALC)** involved in IUCN or FRI project activities or communities that had the opportunity to listen as part of a group
- **“Passive” listening communities (PLC)** had no direct involvement with IUCN or FRI project activities but have access to the radio signal
- **“Control” communities (CC)** were located outside the reach of the radio station’s broadcast areas, or otherwise unable to hear or understand the broadcasters

Additionally, a qualitative outcome evaluation was conducted using the FGD method in two passive and two active communities to provide a general sense of whether participants were satisfied with the radio program. A total of 93 people (53 women and 39 men) were involved in the FGDs, which were differentiated by gender. Slightly less than half of the participants involved in the FGDs had listened to the programs. The purpose of the FGDs was also to enable the participants to provide qualitative data on the changes in knowledge, awareness and practice related to FLR and the effectiveness of the radio program in raising awareness of FLR.

² Control communities who do not have access to the radio signal were identified. This creates a scenario where outcome can be measured against a situation where the radio intervention did not occur.

3.13. Process evaluation

FRI organized a one-day meeting involving key institutions including IUCN staff from Washington and Mbale, FRI national and regional staff, KTR and the relevant District authorities to analyse the project process and identify successes and challenges. This process evaluation with all stakeholders contributed to the continuous learning process.

3.14. Summative Evaluation

The summative evaluation was conducted in the form of a “town hall” meeting held in June 2015 and involving farmers, district technical officers, extension workers, researchers and radio station staff. Participants in the town hall meeting provided feedback about the process and outcomes of the project. The meeting also allowed FRI and Kapchorwa Trinity Radio to thank the community for their input. Additionally, the project team shared the accomplishments of the project, the feedback that was received by the broadcasters during the course of the program and the changes that were observed as part of a participatory development process.

4. RESULTS

The original aims and outputs for this project have been achieved, with some notable additions:

- Extending the PRS from the planned 16 weeks to a total of 24 weeks
- Continuation of the program for an additional 24-week period
- The song competitions
- Outcome evaluation

4.1. Program

KTR broadcast the radio program – *My Land My Wealth* – every Wednesday from 8:00pm to 9:00 pm and repeated it on Saturday from 8:00 pm to 9:00 pm. The radio station broadcast the radio series for 24 weeks and program quality gradually improved over the broadcast period.

During the summative evaluation, the broadcasters reported that the design plan allowed them to organize and coordinate guests and model farmers in advance, which improved the quality of the program. Through weekly coaching and mentoring, the radio and training officers at FRI continuously improved in their adherence to the VOICE standards. The broadcasters at the summative evaluation workshop said they ensure farmers participation in every show: “For us we now know there is no program without farmers,” said one broadcaster. This statement effectively reflects the underlying principles behind the VOICE standards.

4.2. Estimates of program reach

FRI produced a map for the FM output of Kapchorwa Trinity Radio, which uses a 300Watt transmitter at the foot of Mt. Elgon. Figure 4 illustrates the predicted coverage of the station showing both 60dB (green) and 48dB (yellow) signal strength for handheld radios, showing the coverage of KTR for rural audiences in the region.

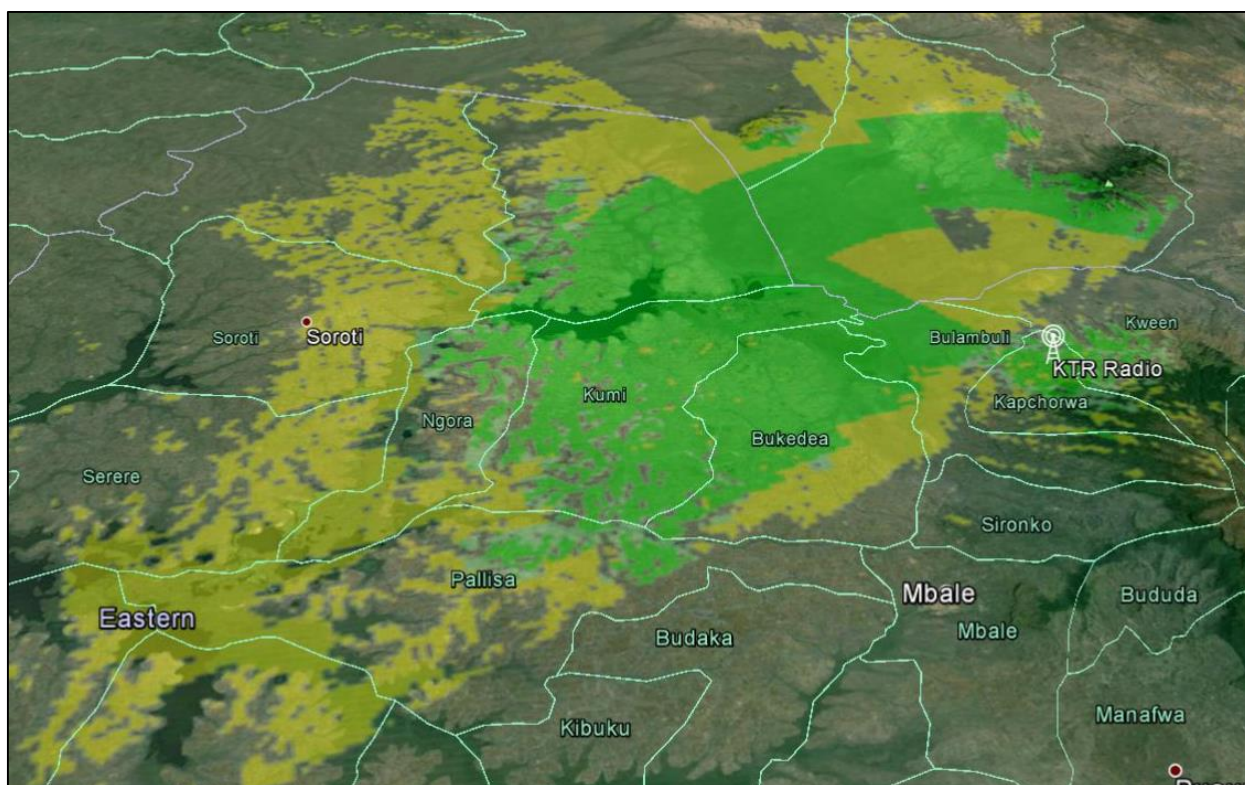


Figure 4: the predicted coverage of the station showing both 60dB (green) and 48dB (yellow) signal strength for handheld radios.

Using the open-source GIS mapping program QGIS, FRI estimated that 981,500 people live within this range (both within Kapchorwa and Kween, but also a significant coverage area further to the west). This is a significant reach for a community-based, non-national radio station. Thus, it can be inferred that a large population in the region had the potential to listen to the forest landscape renewal program.

4.3. Cost-effectiveness

Assuming that approximately one million farmers heard at least one weekly program, this would put the cost per listener reached by this project at around 16 US cents. Assuming only half of this estimate listened to the radio program: cost per listener reached would still be less than 50 US cents, which compares very favourably to other extension methods.

4.4. Farmer participation through ICTs

The use of ICTs for interactivity was a key feature of this project. The station used calls and SMS to interact with the audience. The cumulative numbers of callers and interactions are presented in Table 1.

Table 1: cumulative numbers of callers and interactions at the radio station from Jun-Jan

MONTH	BEEPS (missed calls)	SMS	TOTAL
June	558	2751	3309
May	887	1176	2063
April	1283	576	1859
March	784	0	784
February	419	41	460
January	316	179	495

A total of 1,385 callers interacted with the radio program over a six-month period from January 2015 to June 2015. There were 4,247 total ‘beeps’ (missed calls) in response to polls set by the radio presenters, and 4,743 cell phone text messages sent out to farmers by FRI, in conjunction with the radio station, using a mobile phone-based SMS management system called Telerivet. These text messages included appreciation messages (i.e. in response to some form of farmer participation in the program), reminders to tune in to the radio show, and agricultural information related to FLR. The agricultural information was developed by FRI, IUCN and Kapchorwa District Natural Resource Officers, and sent out on a weekly basis to listeners who had contacted the radio station using a mobile phone.



Figure 5: ICT Officer Viola Nuwaha demonstrates a wind up solar-powered Freeplay radio used for Radio Boda Boda (Karen Hampson 2014)

4.5. Radio Boda Boda

Radio Boda Boda is an innovative project developed at the FRI Radio and ICT Innovation Lab (also known as “The Hangar”) that allows radio content to be physically delivered to hard-to-reach places on motorcycle taxis or “boda-bodas” as they are known across much of East Africa. Farmers listen to the program on SD-card equipped wind-up, solar-powered free play radios that FRI gives to listening groups. The farmers do not only listen but also record messages. The FLR project used this innovation for two communities: Sanzara and Reberewo villages, which did not receive KTR signal. The recorded weekly radio program was brought near to the farmers of Sanzara every Thursday of the week. This was done by the District Forest officer Mr. John Checkwel.



Figure 6: Men's focus group discussion during a monitoring field visit (Rashid Muzungyo, 2015)

4.6. Results and highlights from the summative evaluation

FRI staff presented the major activities accomplished during the 24-week broadcast and then requested participants to form groups and evaluate the process of the project implementation. Three focus group discussions were held in Kapchorwa district consisting of different groups for (1) extension workers, (2) broadcasters (3) farmers (men and women), and (4) district leaders/IUCN staff.

The program presentation was highly praised. The extension workers said it is their first time to participate in such an innovative project and they would like to see more of such projects.

The broadcaster focus group discussion (FGD) acknowledged the value of the in-station training and the ongoing monitoring support. They said the campaign plan allowed them to organize in advance, which improved the quality of the program. They have started to plan the program carefully with run sheets, and to ensure the participation of farmers in every weekly program.

The extension workers FGD depicted that the radio program enabled them to reach more farmers. They said extension workers are few in number and could not cover all the districts.

Kween District Agriculture officer (DAO) said “I am the only extension worker in the district since the termination of NAADS program. The FLR radio series helped me to reach more villages”.

Extension workers received positive remarks like “we are doing what you told us to do.” Before the FLR radio series, FLR was not well understood by the farmers. Farmers used to ask “Do I change my land into a forest?” The radio program helped clarify issues such as these.

The broadcasters FGD said the radio program provided a platform for KTR staff to meet with people on the ground. The station management confessed that they are able to do the same type of campaign with the knowledge acquired with FRI support for occasional consultancy and resources. They had one computer that they used to share with the news department. The computer that FRI gave them has helped ease the production of material for the farmer’s program. They also used the Sansa digital recorder for other KTR activities. The farmers were happy that they had their voices on air without the errors made while recording. The manager even got a hen from one of the farmers.

The most frequently mentioned challenges in all the focus groups were:

1. Lack of women experts on radio
2. Improving KTR’s signal and reaching more farmers in Mt. Elgon areas
3. Poor telecom network
4. Limited Radio Boda Boda
5. Limited recorded farmer voices

4.7. Results and highlights from process evaluation

The process evaluation, conducted with institutional partners revealed that, as a whole, partners found the project to be effective, although there were some suggested improvements. All participants in the process evaluation emphasized the value of the inception meeting, as it included wider local stakeholders, who were able to better understand the work of FRI, IUCN and the project. It promoted a common understanding about the roles of FRI and IUCN, and the aims and methodologies of the project. By engaging stakeholders and answering questions openly, this activity helped to gain local acceptance for project activities at different levels.

Similarly, participation by many stakeholders (IUCN Mbale staff, farmers, radio station staff and various local government and extension representatives) in the radio program design and broadcast (i.e. as guests on the show, interacting through the phone, or receiving the monitoring reports from FRI) helped to foster a sense of belonging or investment in the project and the radio program in particular. The radio program used songs and poems by local primary schools, and short drama performances from local communities.

Similarly, strong involvement from farmers was identified as a key strength of the project. Mechanisms which enabled listeners to participate in the radio program at no cost (such as Beep2Vote and Radio Boda Boda), collection of farmer testimony on the field by KTR for broadcast on the program, responses provided on air to listener's questions, and participation of farmers as guests, were all recognized as activities which contributed to the popularity of the program among the listeners.

All parties at the process evaluation acknowledged the contribution of the ICTs to promote interaction. Beep2Vote was appreciated because it is simple to use and free. Voting in the program and receiving a text back motivated farmers to pay closer attention to the weekly program.

4.8. Results from outcome survey

The project outcome survey found that, of the respondents who lived in areas where KTR coverage can be received, some 77% of respondents had listened to the program. Amongst those that were aware of the program, 95% listened to at least one weekly program, and there was no gender difference in this figure. This means that men and women who were aware of the program were equally likely to listen.

4.8.1. Changes in knowledge and awareness

The outcome evaluation revealed that knowledge rates were very similar in all three types of community: CC, PLC and ALC. Ninety-six percent, 91% and 97% of respondents from CC, PLC and ALC respectively, scored over 60% in the knowledge quiz. These scores are higher than what is often seen in similar contexts and gives us confidence that a solid understanding of FLR exists now. Knowledge rates were slightly higher among women. Knowledge rates did not vary much according to number of episodes listened to when knowledge scores were above 60%, nor did knowledge rates differ greatly between listeners and non-listeners.

This high level of knowledge amongst listeners and non-listeners alike is probably due to the activities conducted by IUCN in the region over the last 27 years, with a focus on FLR since 2007. IUCN works closely with the District Natural Resources Officers (also the focal person for the IUCN project) and in some cases visits target communities on a weekly basis. This intensive interaction and support may explain the high rates of knowledge noted.

4.8.2. From knowledge to practice

With knowledge and understanding of FLR established, the results show that the radio program encouraged listeners to use FLR practices. Of the people in the sample who had listened to the program, 91% had used one of the techniques mentioned in the radio program during the

previous 5 months, compared to 58% of those that did not listen to the programme (Figure 7). The 58% is quite high, and again reflects the influence of IUCN's on the ground activities. However, this graph clearly shows the added effect of the radio program – 91% of listeners practicing is a very high number. There was also a direct correlation between the number of weekly radio programs that respondents listened to, and the use of the practices (Figure 8), which corroborates the findings presented in Figure 7.

Of those that listened to most or all of the weekly programs, 98% had carried out one of the practices in the previous 5 months; whereas 84% those who had listened to one episode had used one of the practices. Women were more likely to have practiced one of the techniques: 63% of the female respondents had done so, compared to 51% of men. Almost all (99%) of those respondents who had carried out an FLR practice planned to continue or to expand this practice the next season. Of those who planned to decrease the extent to which they practiced FLR, 38% said that they were doing so because they did not have adequate labour-power to carry out FLR, while 11% said that they did not have the necessary information, and 7% said that they could not acquire the necessary inputs.

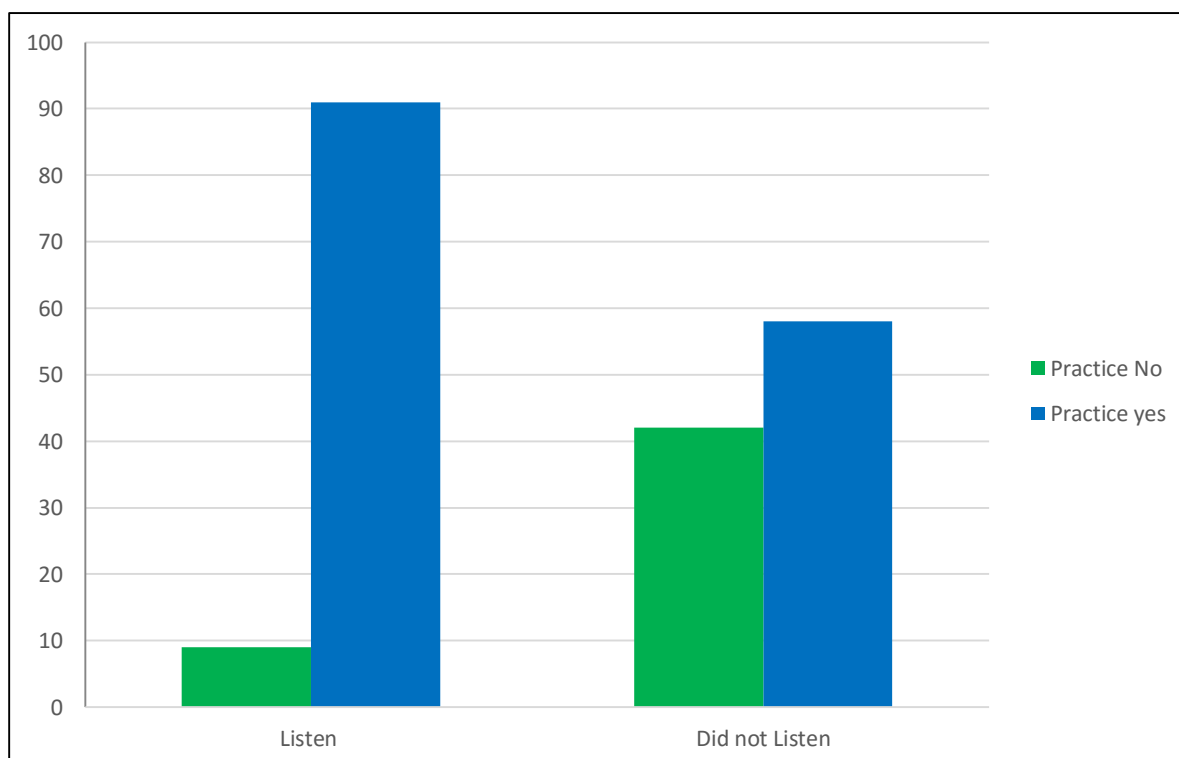


Figure 7: Percentage of respondents that reported listening to the radio.

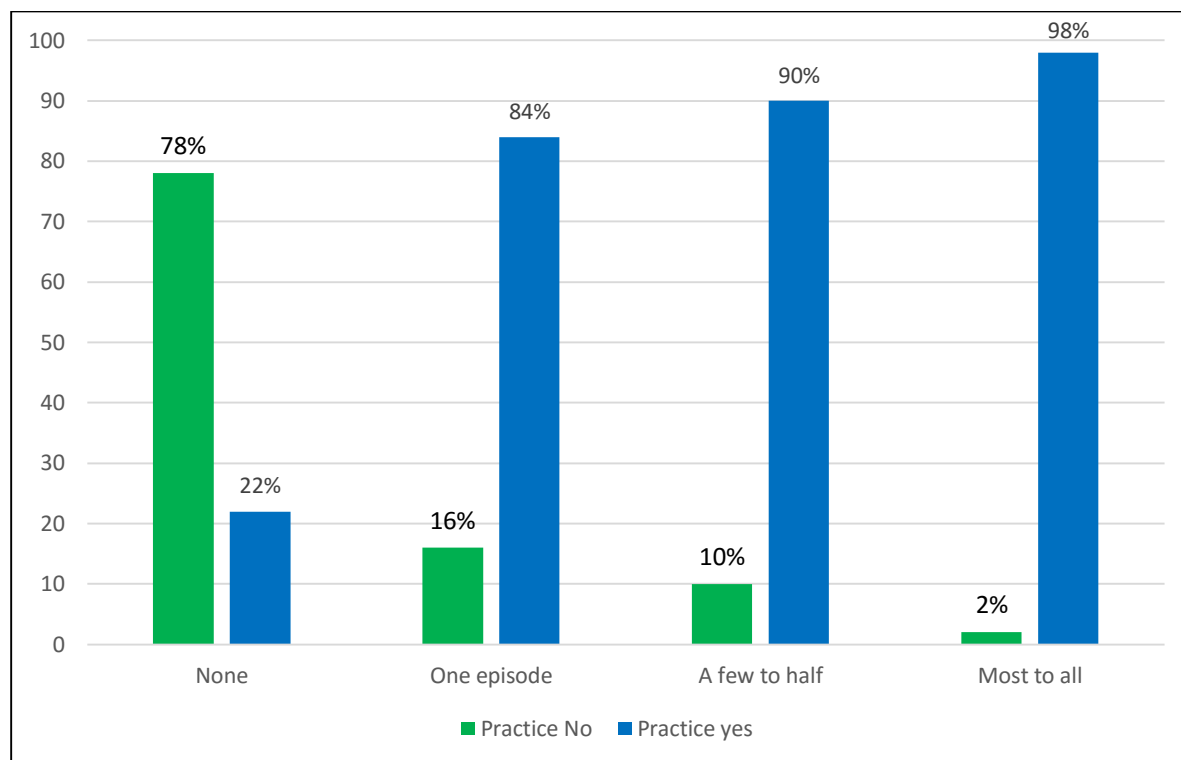


Figure 8: Percentage of respondents that reported practicing FLR in the past 5 months VS number of episodes listened

4.8.3. Radio and mobile phone ownership

Only 67% of the respondents owned a radio, although an additional 14% were able to access one through a family member, friend or other person. Men were more likely to own a mobile phone compared to women (72% of male respondents owned one, compared to 61% of female respondents). The extent of mobile phone ownership was also lower than in Uganda as a whole: 48% of respondents owned a mobile phone, while 18% were able to access a mobile phone through another person. The gender disparity in mobile phone ownership was greater than in radio ownership: only 31% of women own a phone, compared to 65% of men. However, women are more likely to have access to a phone through a relative or friend: 27% of female respondents do this, compared to just 8% of male respondents.

4.8.4. Influence of radio on decision-making

Respondents indicated that radio has an important influence on their farming and on-farm conservation practices. 82% of women and 73% of men stated that radio has a “very important” influence. Some 62% of respondents stated that the IUCN project has a “very important” influence. All male respondents rated friends and neighbours as very important influences, whereas only 70% of women felt this way, with 29% of women reporting that friends and neighbours were “somewhat important” as an influence. Those who did not listen to the FLR broadcasts were slightly more likely to rate the agricultural extension worker as a very important

influence, than those respondents who did listen. Overall, radio was rated by respondents as the most important influence on their decision to carry out an FLR practice, with women rating this particularly highly (Figure 9).

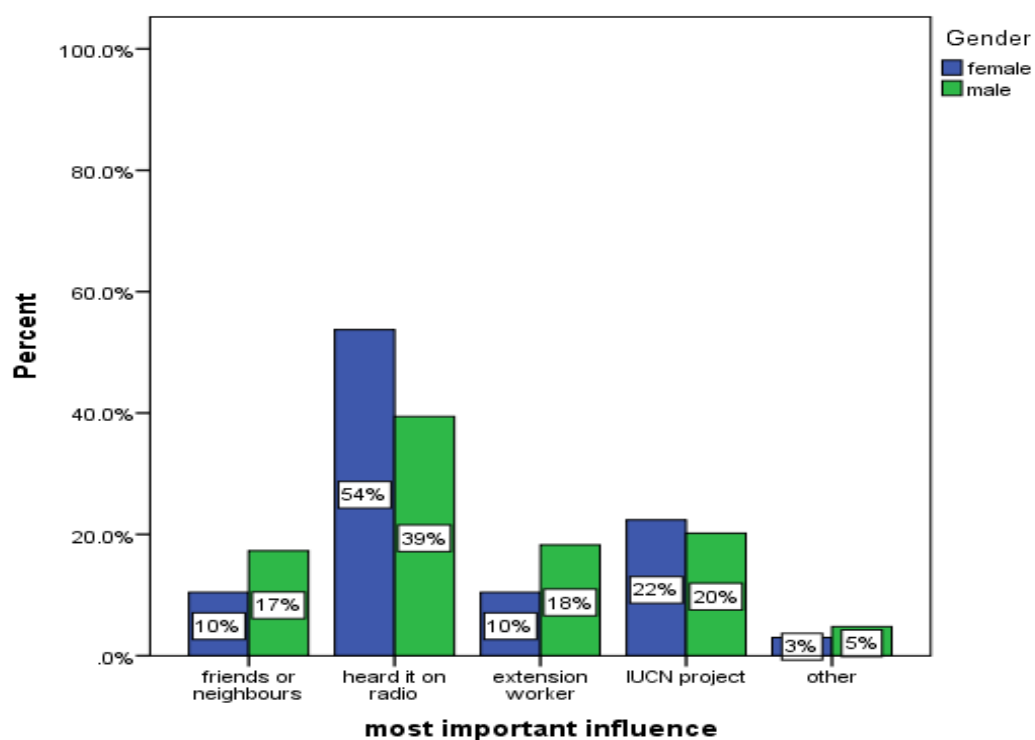


Figure 9: Influence in the practice of a FLR technique

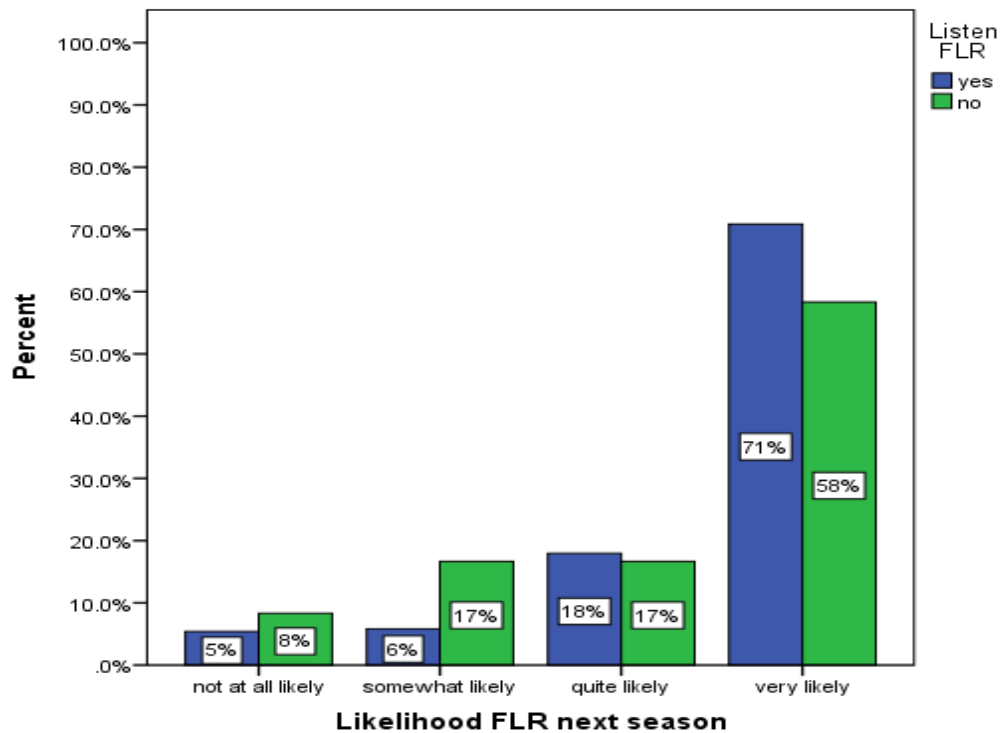


Figure 10: Intention to practice FLR next season

Figure 10 shows that those respondents who listened to the program were more likely to intend to practice an FLR technique the following season than those who didn't listen (71% amongst those who listened were "very likely" to do, versus just 58% for those who listen to the program).

5. CONCLUSION

The Forest Landscape Restoration project in the District of Kapchorwa and Kween, Mt. Elgon region of Uganda, has shown the great potential that radio has in reaching out to farmers in this region. Furthermore, the findings of this project have illustrated how radio can play a strong complementary role in projects where there has already been a long-term concerted effort to change behaviour in the past. It was clear that the radio program also served the role of bringing multiple partners together to address the challenges faced by farmers. Moreover, the quantitative data collected suggests a “catalysing” role that radio had played in actually convincing farmers to try FLR practices.

While this initiative clearly shows positive signs for similar projects in the future, there are also improvements that can be made, such as:

- Tailoring ICTs (appearing on the show, providing weekly feedback) to suit women and allow them to have a more active role
- Developing and tailoring a suite of ICTs for the radio station to access and master as required
- Answering the following key questions through research into how farmers learn and how they translate new knowledge into decisions:
 - Are on-the ground activities a pre-requisite?
 - Do they learn better in groups or as individuals?
 - Can farmers learn effectively through audio only or are their circumstances where visuals are needed – what are these circumstances/examples?
 - Do they need support of face-to-face extension or is this a good addition but not a necessity?
 - What is the effect of community listening groups on learning and decision-making? Do listeners groups work better for men, women or mixed groups?
 - What forms of listeners groups and activities within listener groups are most effective for promoting changes in practice?
 - How would other information delivery systems improve or contribute to learning and increased practice? – e.g. use of video, pamphlets, demo plots or cross visits.



INTERNATIONAL UNION
FOR CONSERVATION OF NATURE

Global Forest and Climate Change Programme
Rue Mauverney 28
1196 Gland, Switzerland
mail@iucn.org
Tel +41 22 999 0000
Fax +41 22 999 0002
www.iucn.org/FLR

