

INITIAL SCOPING STUDY:

Delivering climate services at large scale for farmers and pastoralists in Tanzania and Malawi through rural radio



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Submitted to:

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2. EXECUTIVE SUMMARY

This audience research, conducted in October 2014, shows that for both Malawi and Tanzania, radio and mobile phones are in common use, and are rated by farmers and pastoralists to have great potential as effective and trusted channels where they can access various climate information services.

The data shows farmers are currently rarely receiving or using weather forecasts in a systematic manner. Rainfall data and forecasting was mentioned as a particular need. In general, farmers would trust climate information received via their preferred radio stations to the extent that they would use it in decision-making on their farms. Other key points include:

- women have less access to radios, and listen less than men. They also have less access to and spend less on mobile phones.
- radio listening is common practice
- access to mobile phones is relatively high and they are in common use.
- few listening groups exist. Other types of groups exist and there is interest in joining listening groups.
- two radio stations in each country stood out as most popular and trusted
- farmers prefer radio shows which are relevant to their needs and include interviews with farmers. They will also tune in to hear specific shows, and where the signal is strong.
- farmers are used to hearing weather forecasts on the radio but do not appear to listen in or use them in any systematic way as yet
- respondents would welcome daily weather services
- key information requested, whether daily, weekly or seasonally, is regarding rainfall patterns and temperature. Respondents would also welcome warning about extreme events.
- radio programs were the most preferred method for receiving weather information
- farmers express that they would use weather information from the radio to help them make decisions on their farms.

3. INTRODUCTION

With growing recognition that farmers may benefit from climate information services, Farm Radio International, in cooperation with the Global Framework for Climate Services initiative and CCAFS, is undertaking a scoping study in Malawi and Tanzania to assess the potential for using radio to deliver climate services to targeted communities. The scoping study will be conducted during the period October 1, 2014 - December 31st, 2014.

The scoping study in its entirety consists of two main activities:

- audience research in targeted communities, and;
- identifying stakeholders and engaging with knowledge partners.

It should be noted that this initial summary report presents highlights from the audience research only. The final report will present the findings from the audience research in full, together with additional information gathered through key informant interviews, a document review, and the stakeholder analysis and engagement.

Findings are presented per country.

4. SCOPING STUDY – OBJECTIVE

The entire scoping study has the aims of:

- a) identifying and engaging relevant stakeholders working on climate information services in each country, and;
- b) listening to potential farming audiences about their specific information needs.

The audience research, and therefore the contents of this report, answer to the second aim, that of listening to potential audiences about their climate service information needs.

The two aims contribute to the overall objective of the scoping study, which is: **to prepare and present detailed recommendations on local needs and feasibility for using radio to deliver climate services at large scale for farmers and pastoralists in Tanzania and Malawi.** The full final report, to be completed by the end of 2014, will respond to this overall objective.

5. AUDIENCE RESEARCH - METHODS

The findings covered in this report are derived from audience research, done by individual interview. In each of the ten selected regions, the aim was to interview at least 50 individuals from a randomly selection of community members – (approximately 50% being female). As presented in the table below, a total of 655 individuals in Malawi and 625 in Tanzania were interviewed, with a grand total of 1280 interviews making up the audience research.

Table 1: Sampling data

Country	Region	Gender breakdown	Sub-totals	Totals
Malawi	Nsanje	101 female, 106 male	207	655
	Lilongwe	128 female, 108 male	236	
	Zomba	115 female, 97 male	212	
Tanzania	Longido	49 female, 54 male	103	625
	Iramba	25 female, 42 male	67	
	Kiteto	80 female, 75 male	155	
	Kondoa	25 female, 26 male	51	
	Longido	78 female, 81 male	159	
	Mkalama	17 female, 31 male	48	
	Singida	22 female, 20 male	42	
Total respondents				1280

FRI consulted with CCAFS and WFP to select the communities for research. Country teams visited the relevant local authorities (traditional and government), and gained understanding, acceptance and support for the study.

FRI used non-paper based survey tools –a combination of mobile phones and web-based software, Mobenzi. Enumerators underwent a one-day training on the use of Mobenzi Researcher to collect data via mobile phones. This method is quick, cost-effective and reliable. The system was tested, and data tracked as it came in. Various glitches were resolved and fieldwork was completed by both teams by October 17th, 2014.

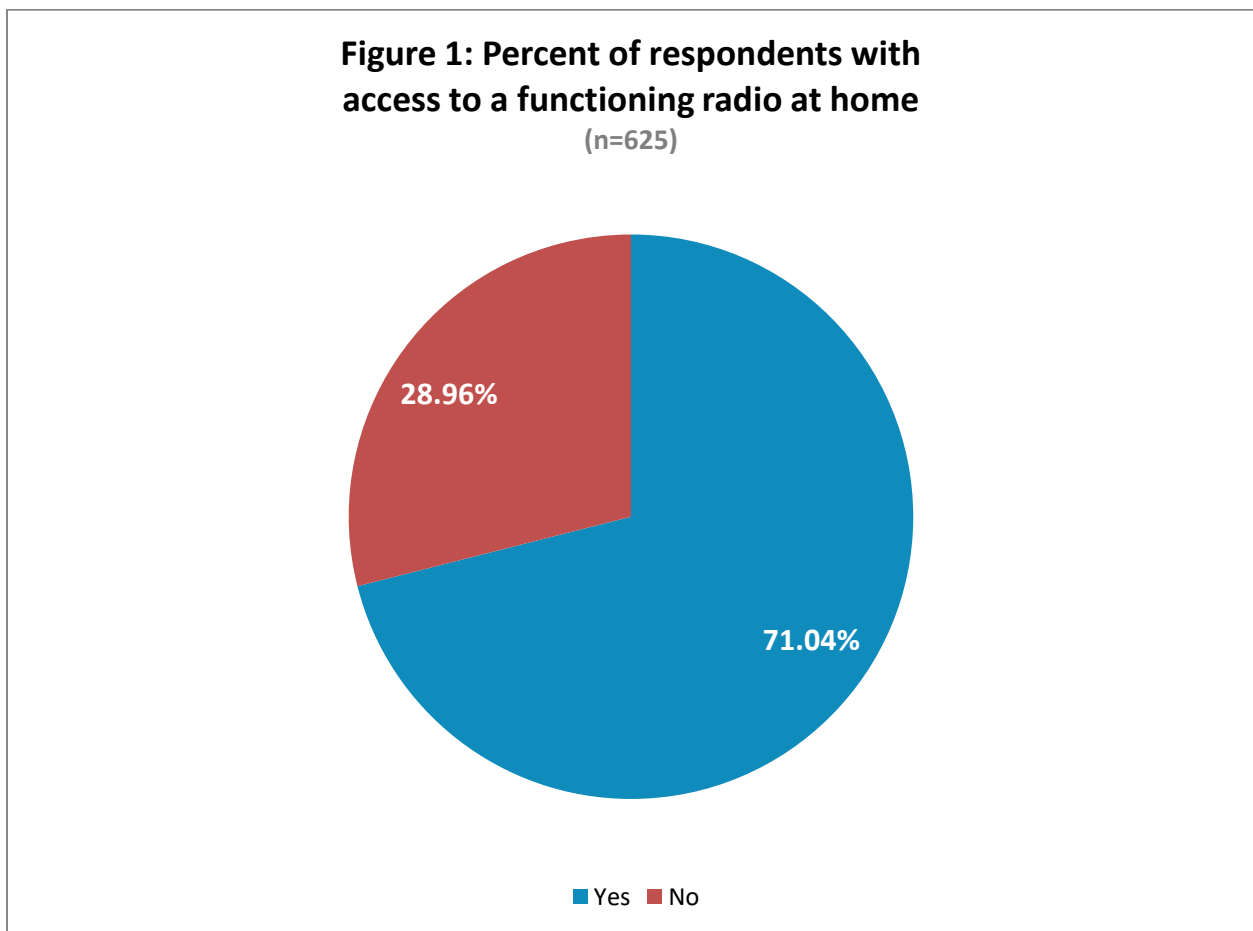
6. TANZANIA - KEY FINDINGS

6.1 LISTENERSHIP AND BROADCASTING

In this section we ask general questions on access to radio and listening habits, as well as access to mobile phones and listening clubs.

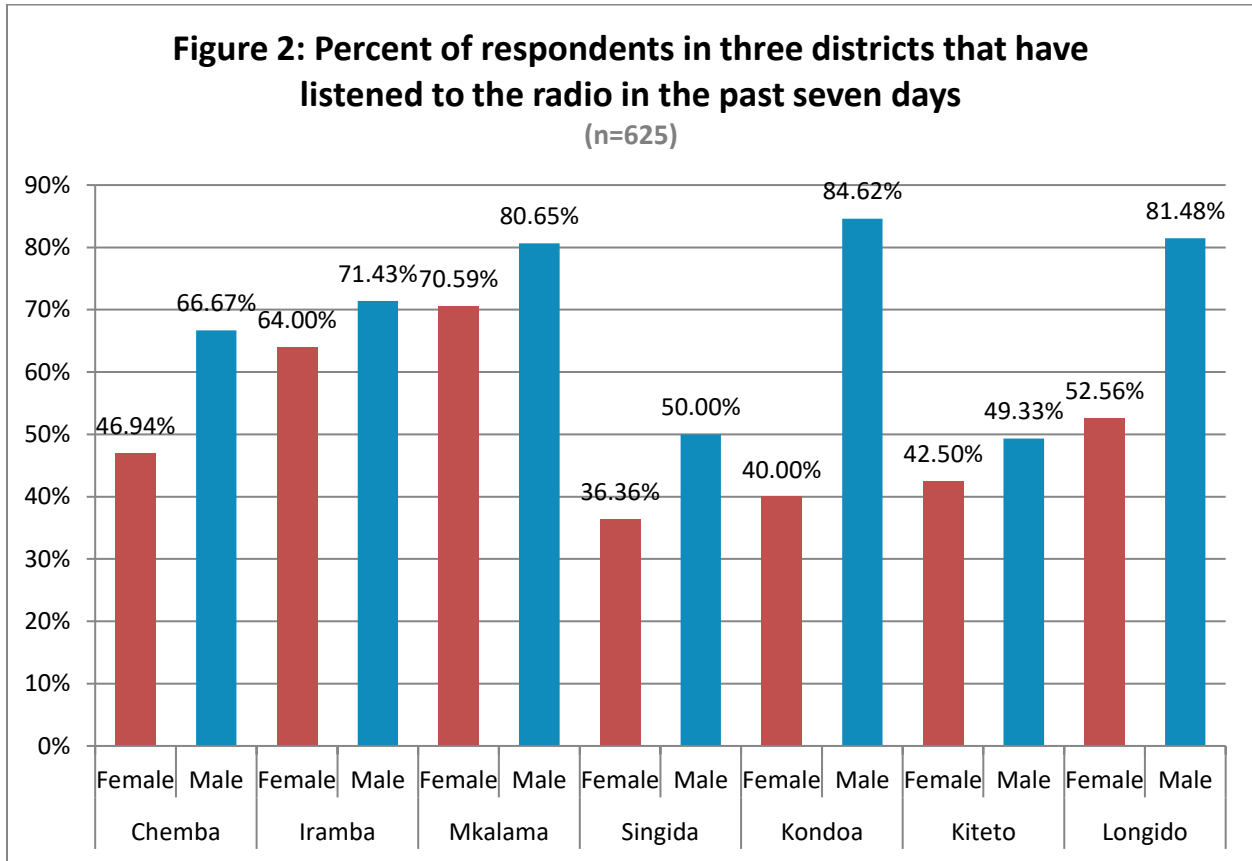
a) Access to radio

A key issue when planning to use any form of radio broadcast for reaching dispersed populations, is to be aware of how common and accepted radio listening is in the locality. Respondents were asked if they had access to a functioning radio at home. As the chart below shows, 71% responded positively, showing that access to radio is common in these regions. The survey found that respondents claim the radio set is owned “by the whole family” (55%) or by “both husband and wife” (23%).



b) Frequency and other listening habits

An average of 59% of the entire respondents claimed to have listened to the radio in the last seven days. Listening rates were highest in Mkalama and lowest in Singida. Women listen to radio less often than men in general.

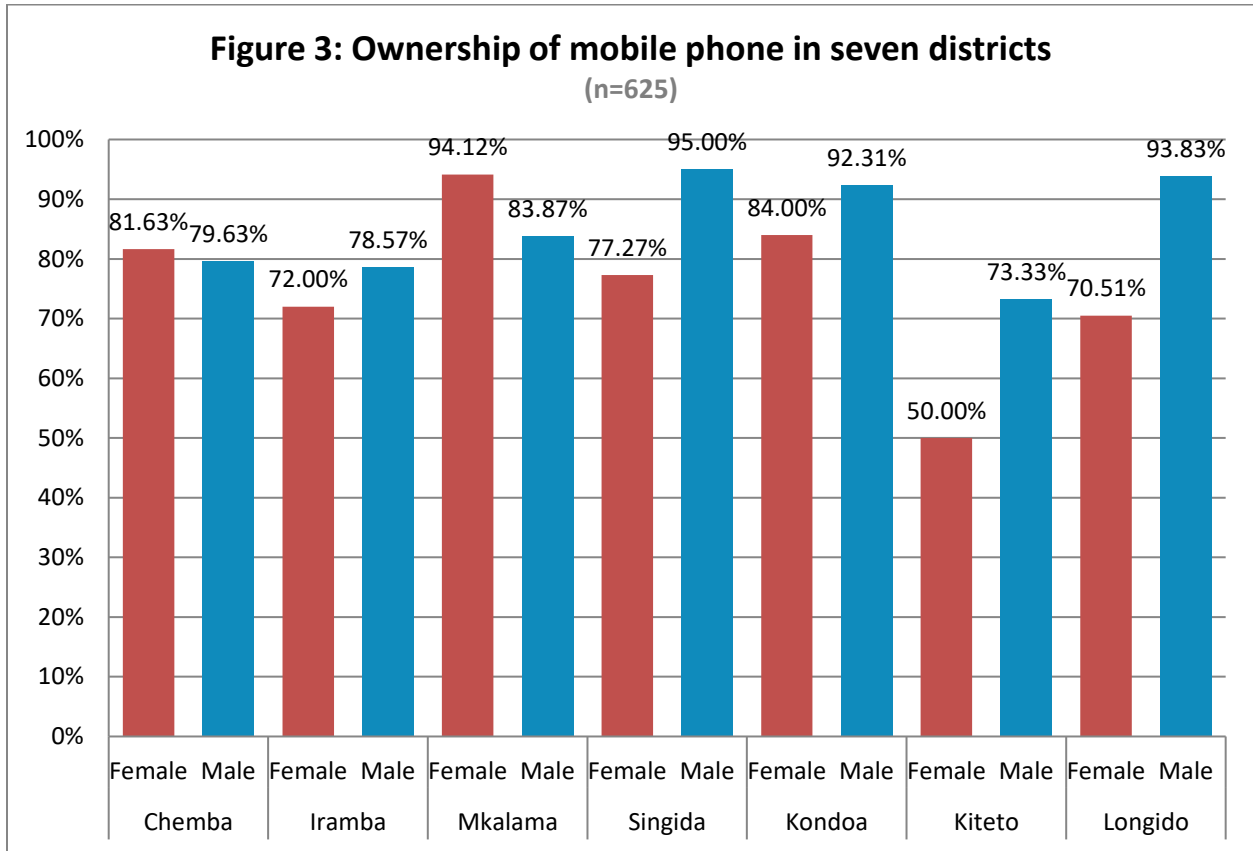


Similarly, 53% of all respondents claimed to listen to the radio on a daily basis. Again, more Mkalama residents listen daily, and Singida had fewest respondents who listen daily. Conversely, a total of 33% said they listen “rarely”.

Respondents were offered a list of choices regarding where they listen to the radio, if they listen outside of the home. The most common response was “at a friend’s house”, while many replied that they did not listen outside of home. A third of respondents listen in a public place, while 53 listen by mobile phone, a relatively low number.

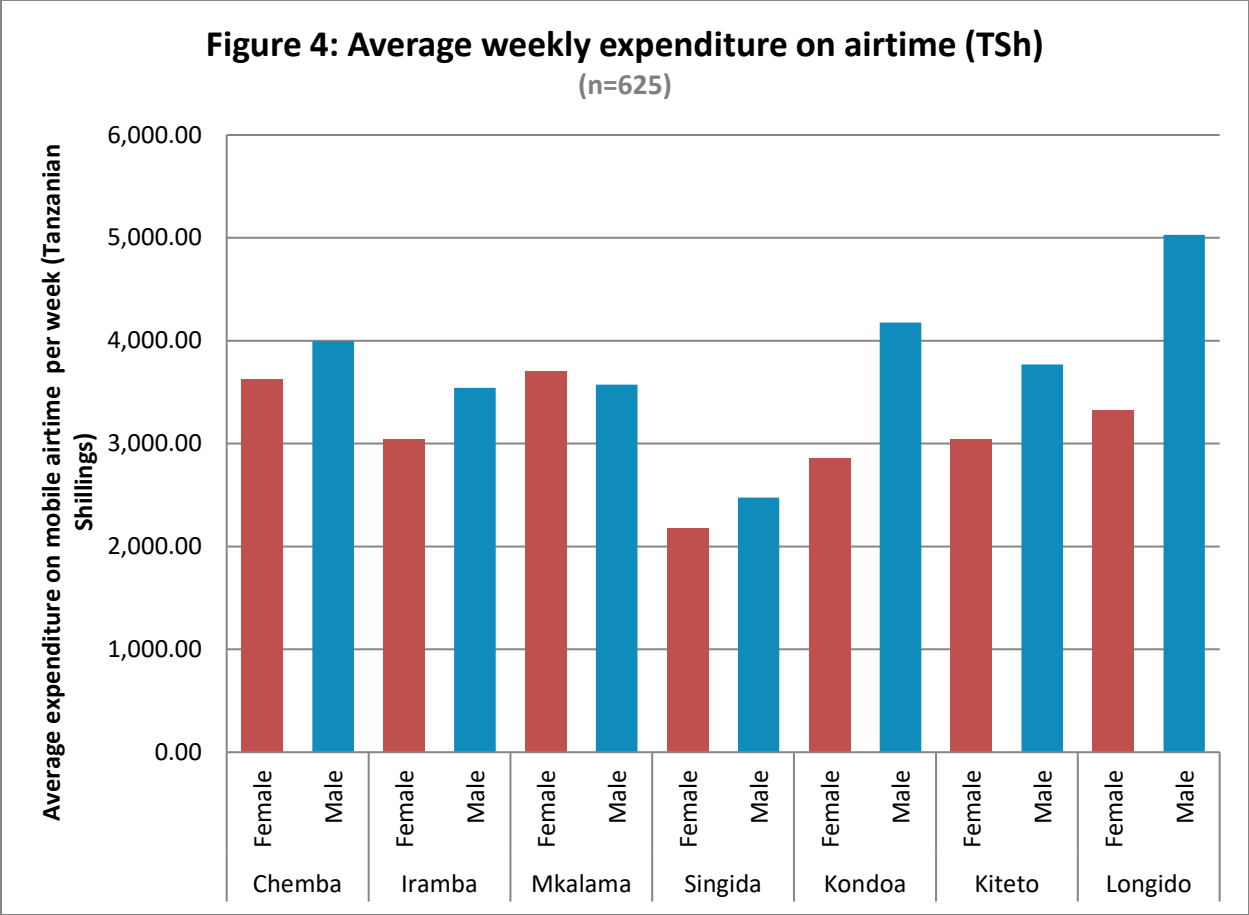
c) Mobile phone ownership and use

Mobile phone ownership in the studied regions is high, up to 95%. Ownership is still more common among men than women, but these rates give us confidence that interaction by mobile phone is not constrained by ownership.



Respondents who do not own their own phone most commonly borrow a family member’s phone (80%) while the remaining 20% use a friend’s phone.

To assess available budget for phone use, we asked how much respondents spend on airtime per week. The average spent is over 3,500 TShs (one US dollar is approximately 1680 TShs) with male residents of Longido reporting spending 5,000 TShs. Males spend more than females.



d) Listening groups

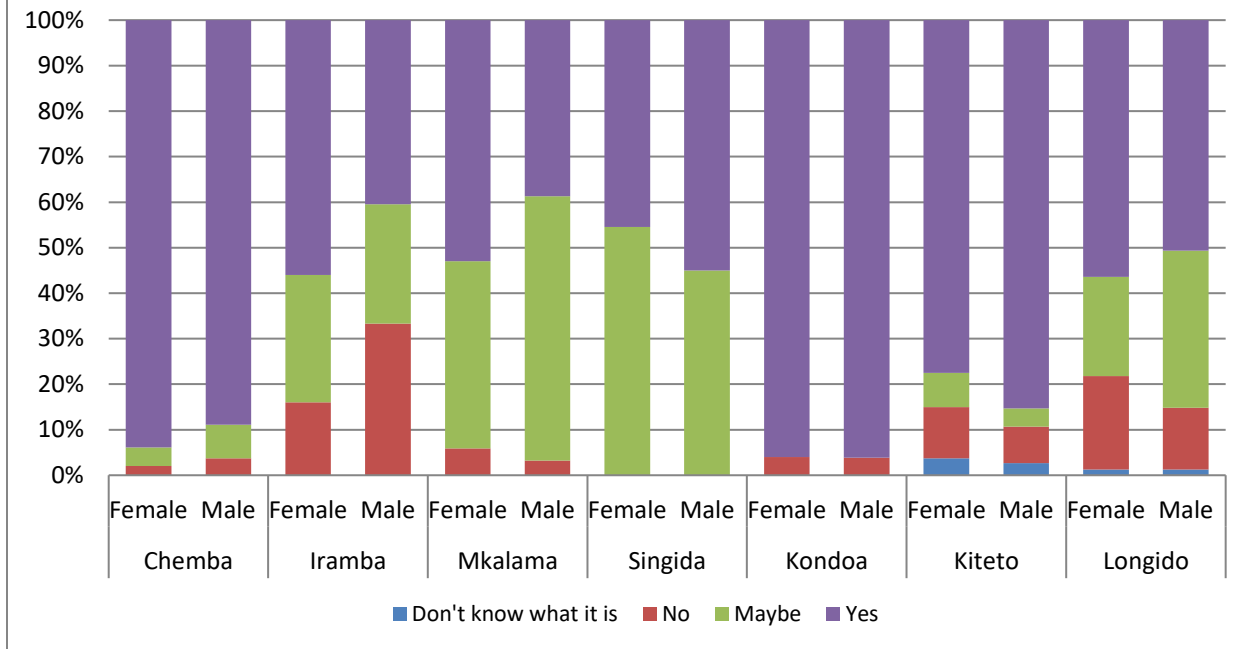
In Farm Radio International’s experience, when farmers listen in a group, they learn more and are more likely to act on the information they hear in a radio show. For these reasons we encourage the formation or use of Community Listening Groups in our radio projects. The first step is to find out which groups exist in a community and how these are viewed by the community members, as it is more effective to work with existing groups.

Listening groups are not common, with over 91% of respondents reporting that they do not know of a listening group in their community. When asked if they would like to join a listening group if it existed, responses were mixed, with some regions, such as Chemba, Kondoia, and Kiteto showing a lot of interest while residents of Mkalama and Singida appeared less keen.

When asked a follow-up question about why they would join, two reasons stood out:

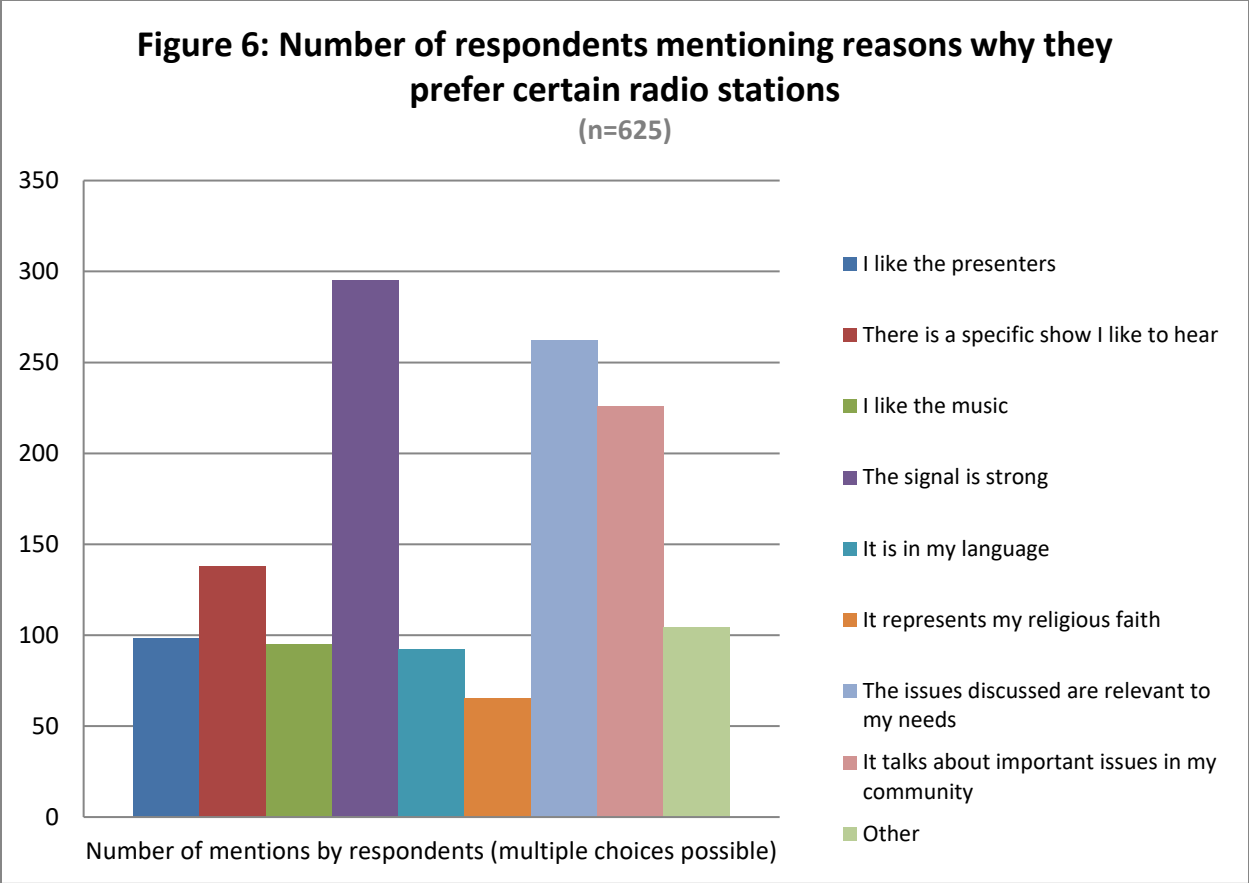
1. I can discuss with my friends
2. I might learn something

Figure 5: Percent of respondents that expressed interest in joining a radio listening club in their community if it was to exist
(n=625)



e) Trusted radio stations and preferred types of programming

Two radio stations stood out as most preferred – TBC 1, and Radio Free Africa, when respondents were asked to name the radio station they trusted for agricultural information. When probed as to why this station was preferred, two interesting issues came up – one issue is simply that signal is strong. Secondly, listeners want content that is relevant to their needs and talks about issues they face within their community. This is summarised in Figure 6 below.



When asked in detail about what kinds of content farmers would like on agricultural shows, the most common answer was “agricultural news” followed very closely by “interviews with farmers” – showing the importance farmers set on hearing from other farmers. Experts opinions and weather forecasts were also mentioned often as desirable elements of a farm radio show. Evenings is the most preferred listening time for both males and females.

6.2 CLIMATE INFORMATION THROUGH RADIO AND ICT

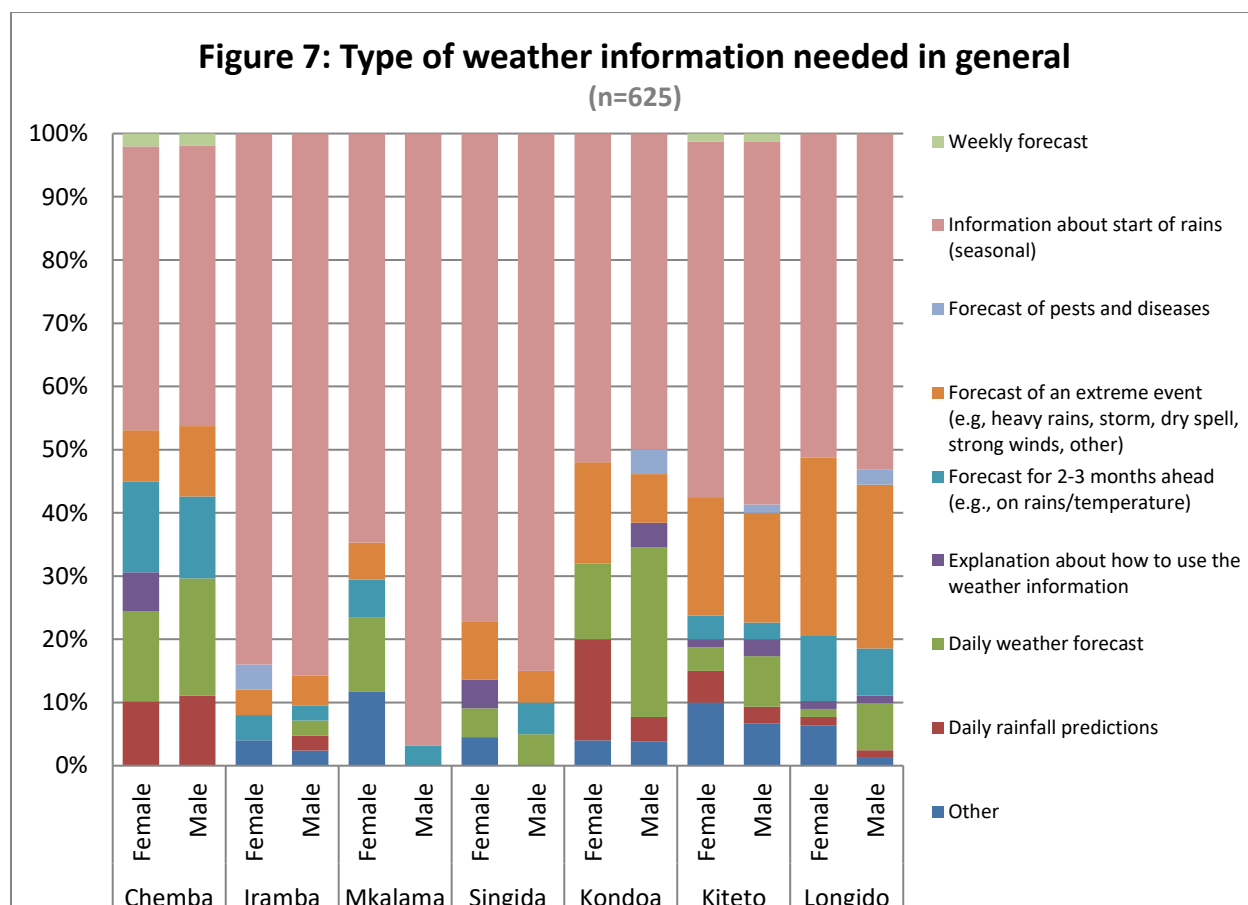
a) Access to weather forecasts on radio and their current use

An average of 61% of respondents have listened to weather forecasts on the radio in the last six months. Weather forecasts are common. However, when probed, over half of respondents said they heard it simply because it was on while they were listening, rather than tuning in with the intention of hearing a forecast. 25% claimed to use the information to help them decide when to plant. Currently, daily forecasts are the most common weather service on the radio, followed by predictions of the start of the rains, and warning of extreme weather events.

Respondents reported that there is currently little access to weather information by mobile phone, with two thirds of respondents noting that “no” information is available. Some respondents claimed they can get daily or weekly forecasts, or prediction of the start of the rains.

b) Type of weather information needed and how often

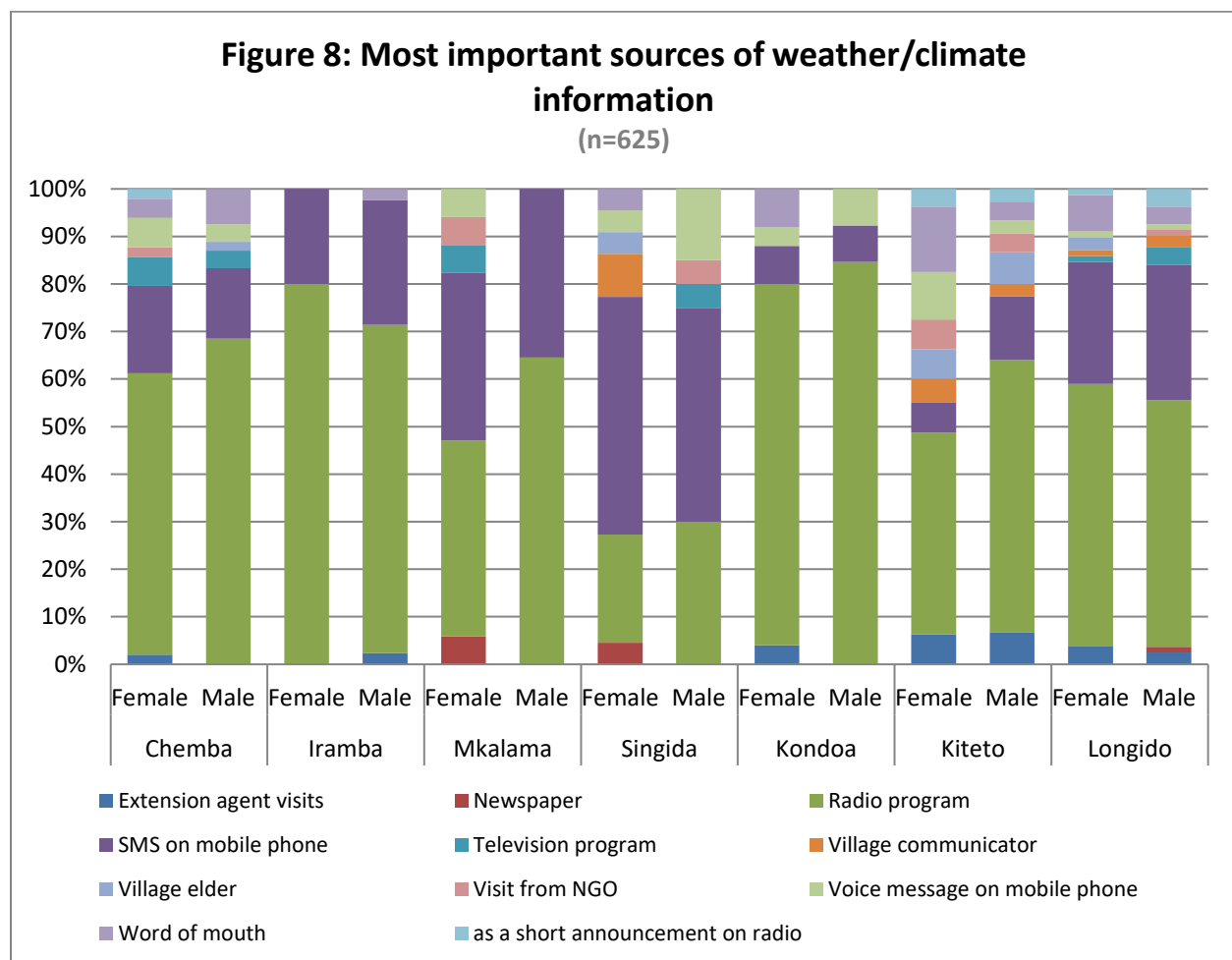
More than half of respondents said they would want to know when the rains would begin as the key weather information needed. Second most popular response was the forecast of an extreme weather event. However, when asked how often they wanted to receive weather information, more than half said “daily”. The second most common response was “before every change of season”. These are key issues to be considered in the design and focus of climate information services for Tanzania.



When asked as to what key information would be useful on a daily basis, the most common response, given by over two thirds of respondents was “if it will rain or not”. This is perhaps to be expected in a region dependent on rainfall for cultivation. The answer was the same when asked what information would be needed on a weekly basis. And again, the most common request for information provided on a seasonal basis was regarding the start of the rains.

c) How respondents prefer to receive weather information, and its perceived benefits

Over half of respondents said their preferred method for receiving climate information was by radio program. Second most preferred method was by SMS on mobile phone. This gives confidence that messaging delivered in either method will be accessible. It is worth noting that SMS messages will cater to a different group of farmers who are relatively more literate than many who rely on radio programming for weather/climate information.



Over 500 respondents claimed that they would use weather information to help them make decisions on the farm. When asked directly “How likely are you to make decisions on your farm based on weather information you have heard on radio?” over one third said definitely. Trust in information received via mobile phone seems to be lower, with a comparable figure of nearly one third saying they were unlikely to make decisions on farm based on information received via phones.

Figure 9: "How likely are you to make decisions on your farm based on weather information you have heard on radio? (scale of 1-5)"
(n=625)

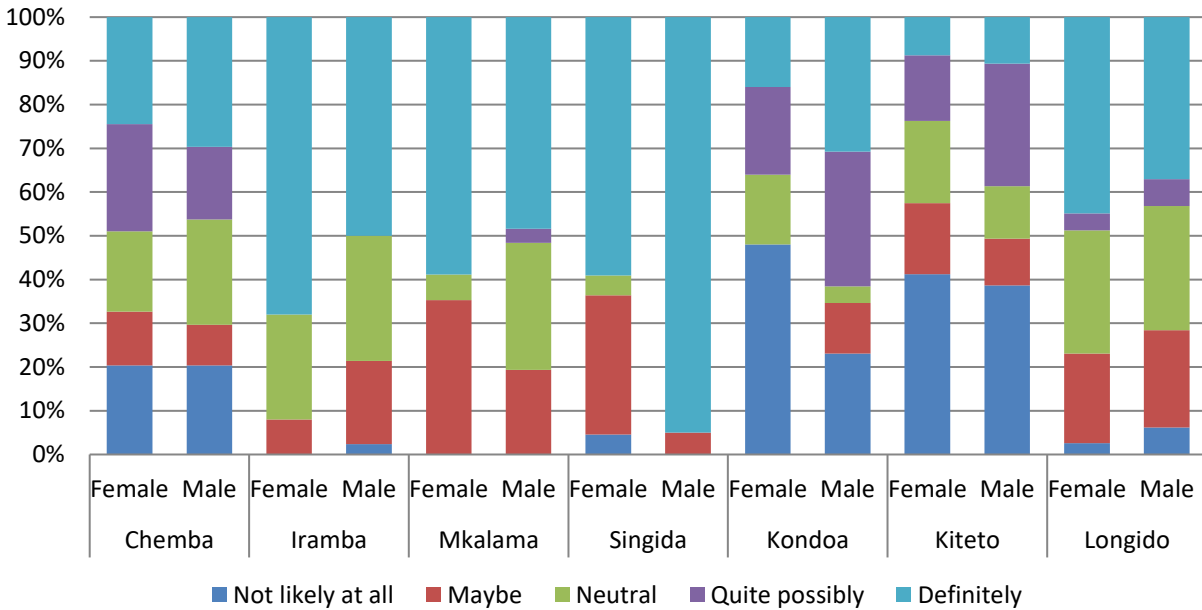
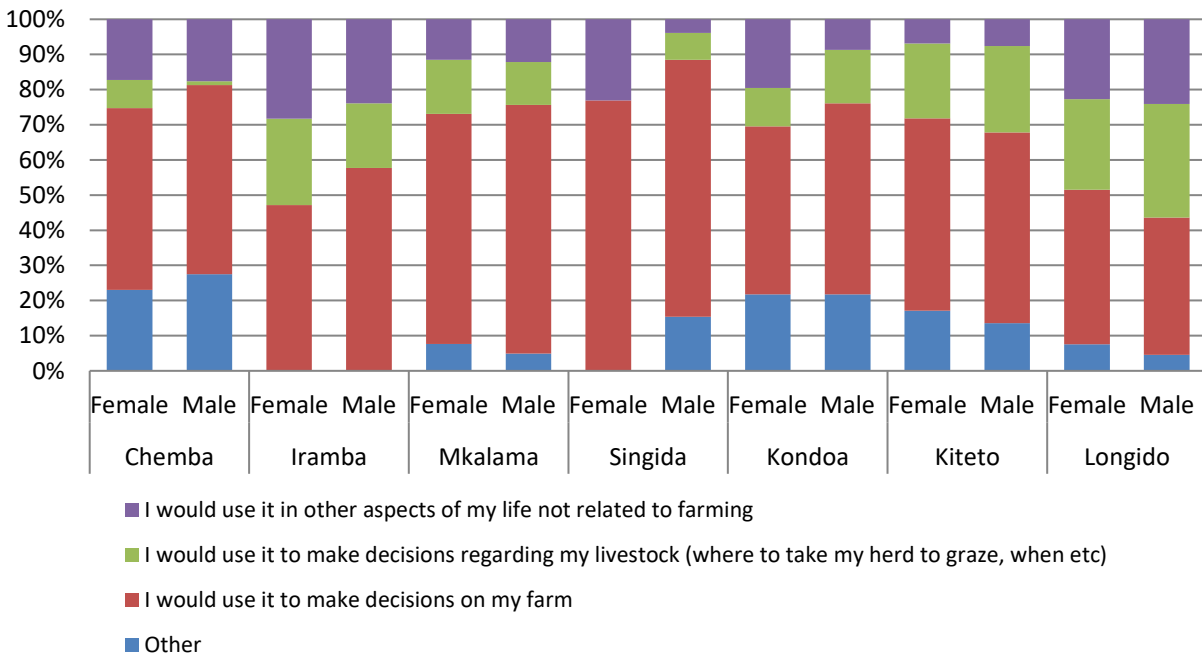


Figure 10: Benefits that respondents would hope to see from using weather/climate information
(n=625)

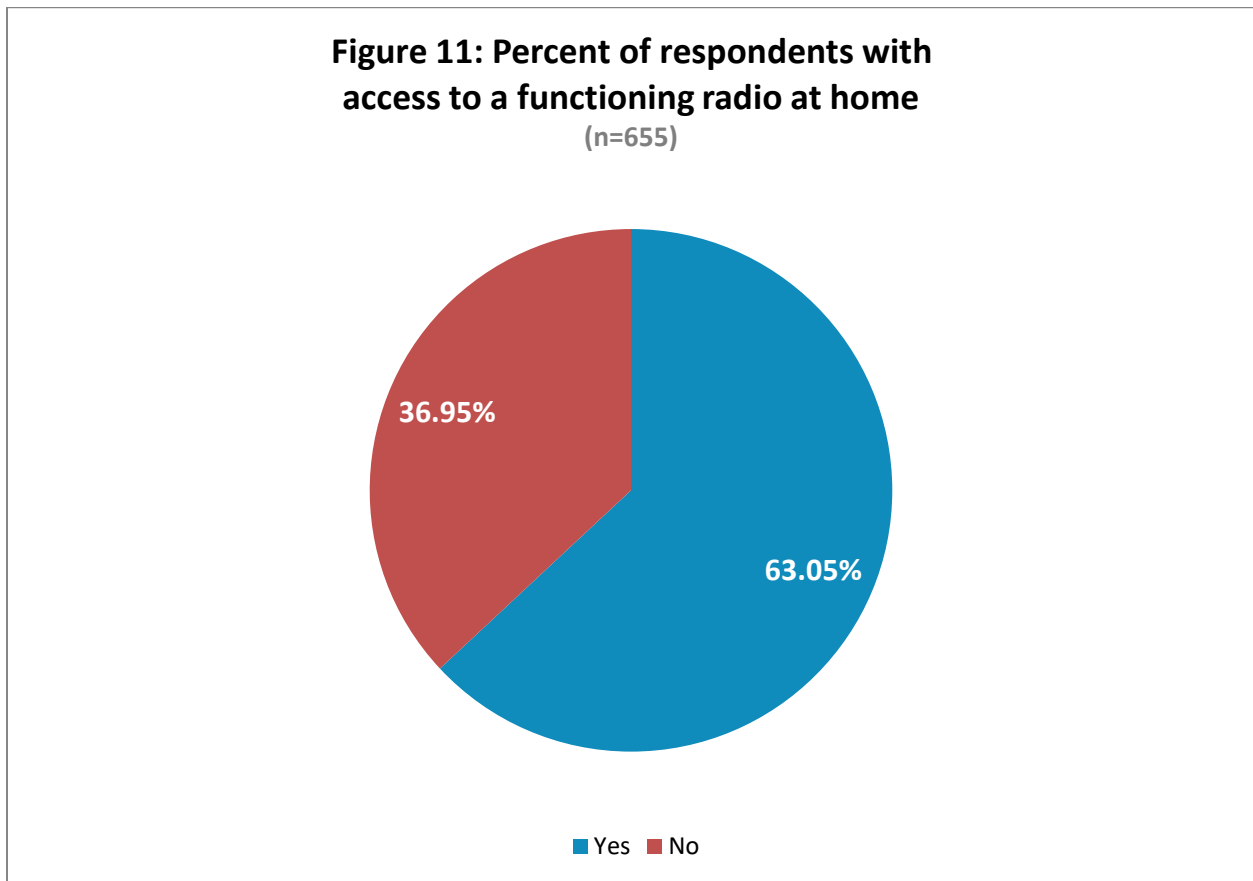


7. MALAWI - KEY FINDINGS

7.1 LISTENERSHIP AND BROADCASTING

a) Access to radio

Respondents were asked if they had access to a functioning radio at home, of which 63% responded positively, while 37% said they did not have access to a radio set at home. This is consistent with national findings -the National Statistics Office puts radio ownership at 64.1%. Most FRT/FRI research in Malawi puts radio ownership around 60-70%, therefore, this data is consistent and backs up previous findings. Broken down by region, it is notable that Zomba has lower rates of radio ownership, at 56%, while 44% do not.



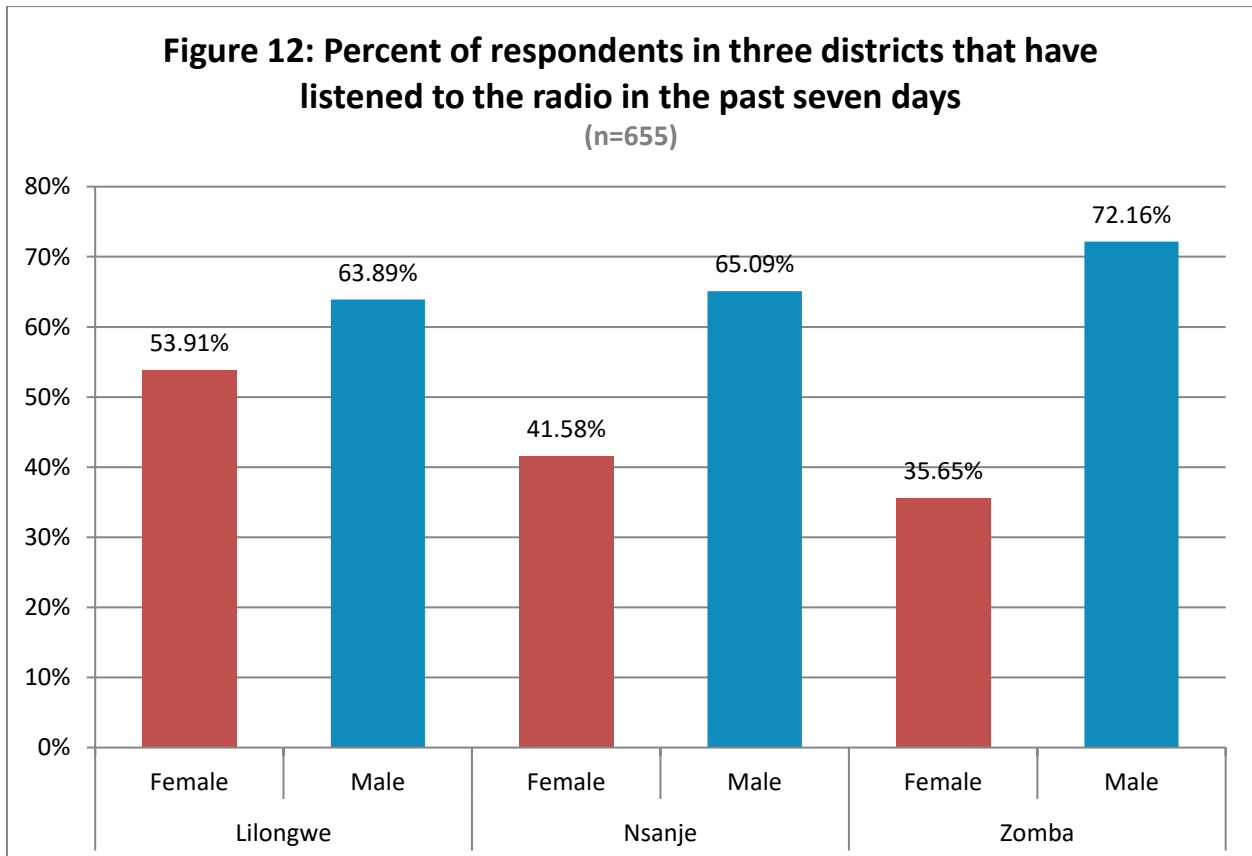
When asked “who owns the radio?” the most two most common responses were “husband” at 33% and “whole family” at 39%. Notably, less than 9% of women were reported to own the radio. This may negatively affect their opportunities to listen to their preferred radio programs.

b) Frequency and other listening habits

On average, half of all respondents reported listening to the radio on a daily basis. However, the responses differed by region, and by gender. More men than women listened daily in all regions. Lilongwe showed highest daily listening rates, with an average of 61%, while Nsanje has lowest daily listening rates at 42.5% who reported this activity. The responses from Zomba were polarised – 46% report listening daily, while 37% claim to listen “rarely”. This can be explained in part by the lower rates of radio ownership in Zomba – where only 56% of respondents report having a radio at home, much lower than Lilongwe, and lower than Nsanje. However with an average of half of respondents listening to radio every day, this is a good indication that radio listening is common and accepted within these regions.

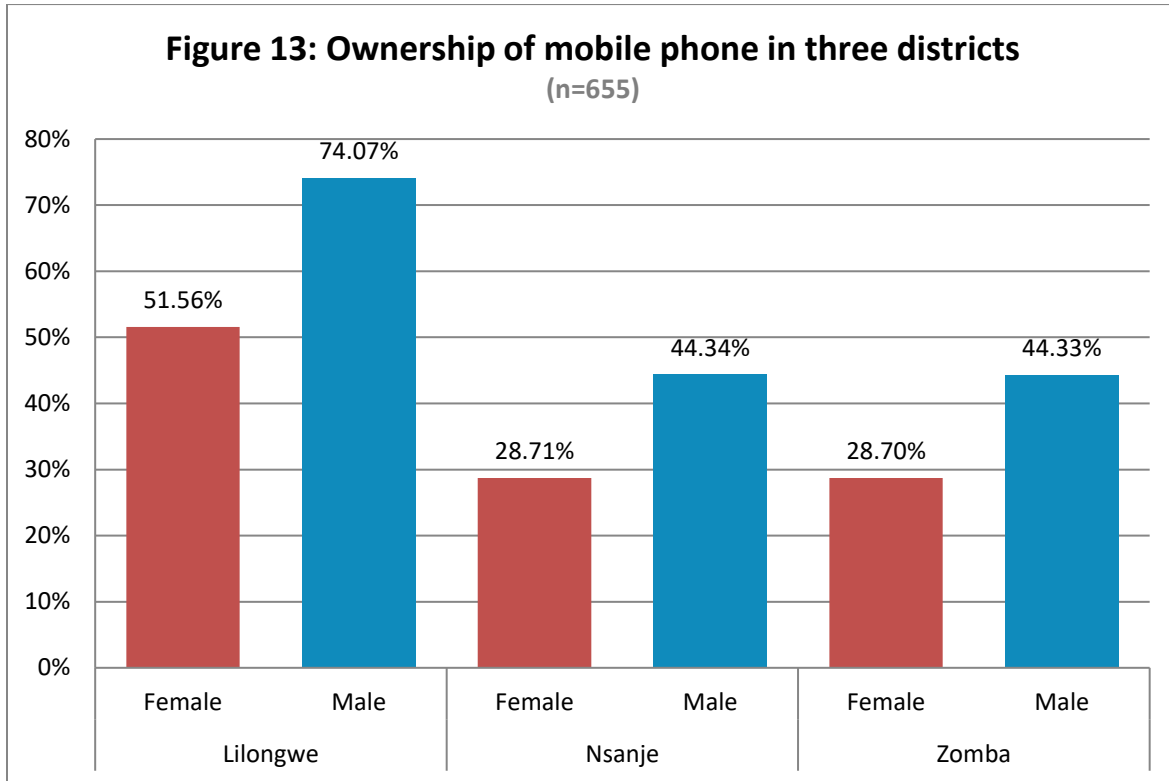
Respondents were offered a list of choices regarding where they listen to the radio, if they listen outside of the home. They could name as many places as relevant. The most common response was “at a friend’s house”, while many replied that they did not listen outside of home. Forty people claimed to listen by mobile phone, and 26 in a group meeting.

Digging deeper and cross-checking on radio listening habits, we asked if respondents had listened to the radio in the last seven days. The numbers were encouraging, with at least 64% of respondents listening in the last week, correlating with the previous questions about frequency of listening. Again, it should be noted that in all cases, fewer women are listening regularly.



c) Mobile phone ownership and use

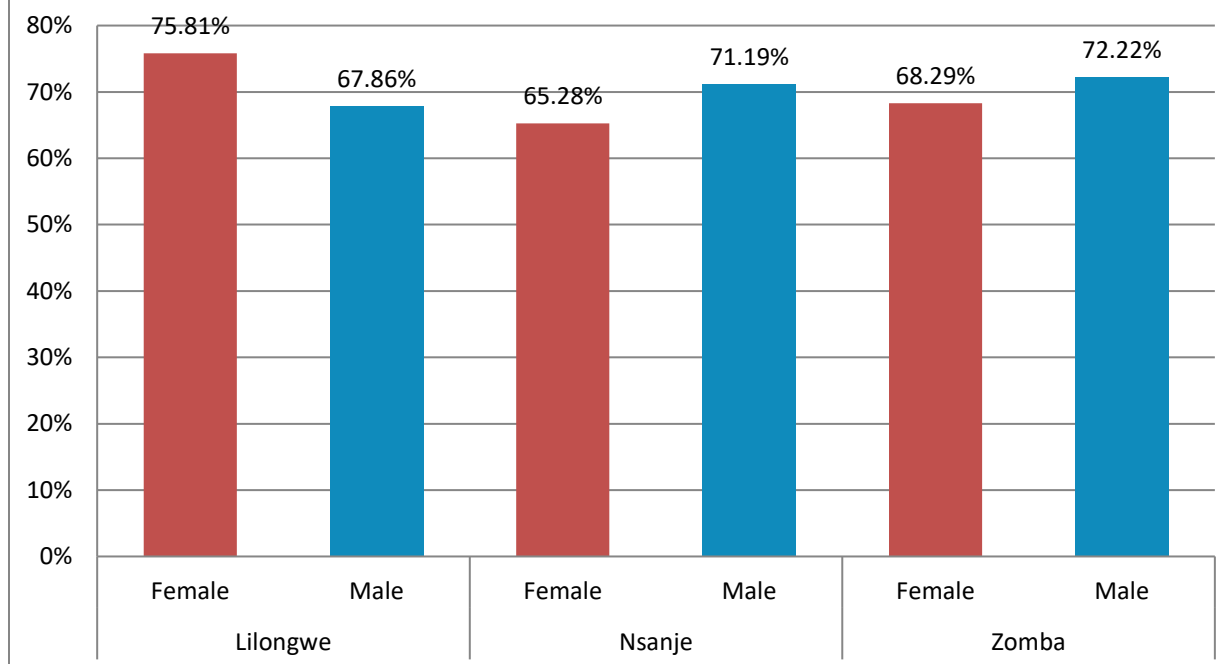
Mobile phone ownership, as shown in Figure 13 below, is higher in Lilongwe than the other studied districts. At this region has more urban areas, this is to be expected. In addition, ownership among men is more common than among women. This, along with lower radio listening and access rates among women, is a key aspect to consider when planning to ensure the inclusion of women in radio shows, and ensuring they, and not just their husbands, receive the information they need.



The following chart explores how people who do not own a phone can access one. Excluding respondents who own a phone, this shows that while phone ownership among women and in both Nsanje and Zomba is relatively low, the majority of these respondents do have access to mobile phones. Sixty-six percent of respondents use a family member's phone, while 31% use a friend's phone. The rest will pay for the service.

Figure 14: Access to mobile phone by those respondents who do not own one

(n=357)

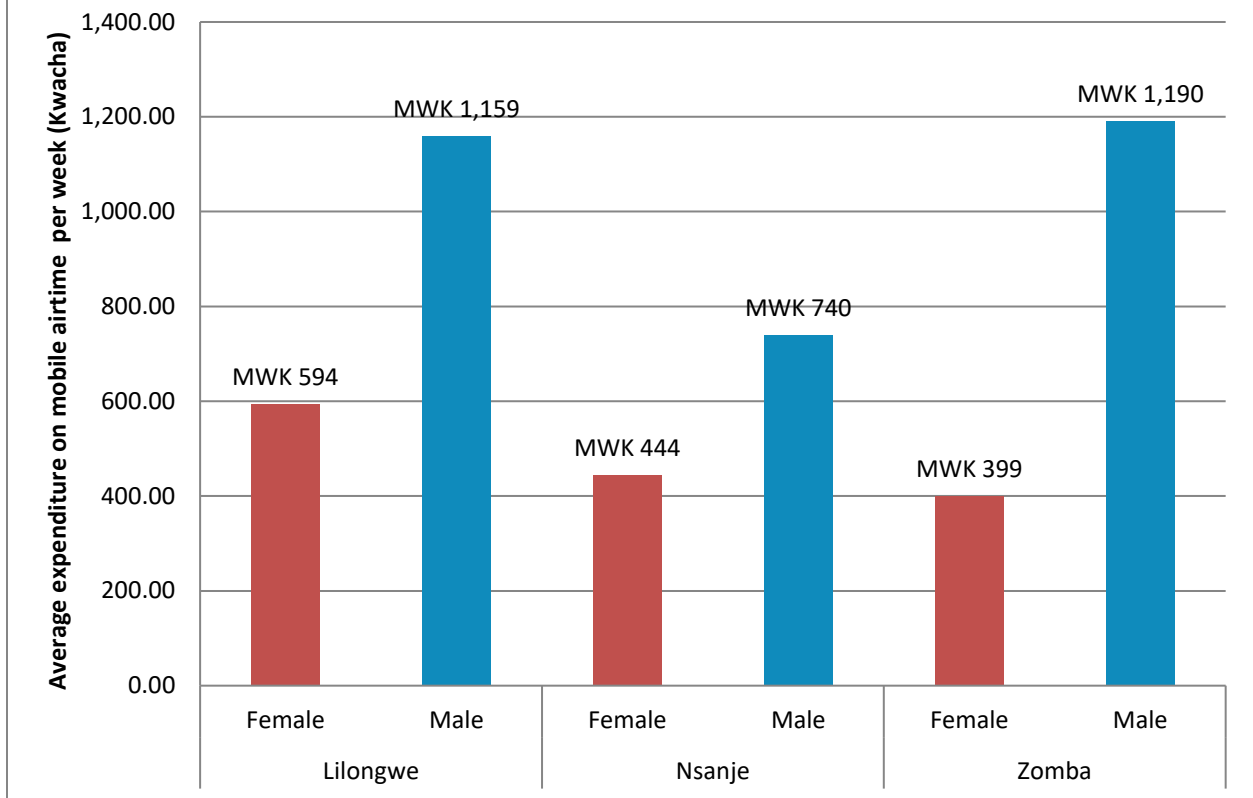


Of those having access to a phone, the most commonly used function, by a long way, was calling, mentioned by 527 respondents. The next most common function was SMS, mentioned by 97 respondents, followed by radio and then flashing/beeping.

To assess the frequency of use, and the available budget for using a phone, we asked respondents how much they spend per week on phone airtime, on average. The result is presented in Figure 15 below. Men spend more, and inhabitants of Zomba spend a comparable amount to inhabitants of Lilongwe. This may be due to the very rural nature of Zomba. Nsanje residents spend a little less.

It is to be expected that Lilongwe has higher expenditures on mobile phones, since the study was conducted in a peri-urban area of the capital city. Nsanje and Zomba are more rural. In Zomba, the terrain of the scoping study sites was difficult, which could explain greater use of mobiles for communications. These findings show that farmers at all sites are able to spend a few dollars week on airtime. At time of writing, MK400 is equal to approximately one US dollar.

Figure 15: Average weekly expenditure on airtime (MWK)
(n=357)



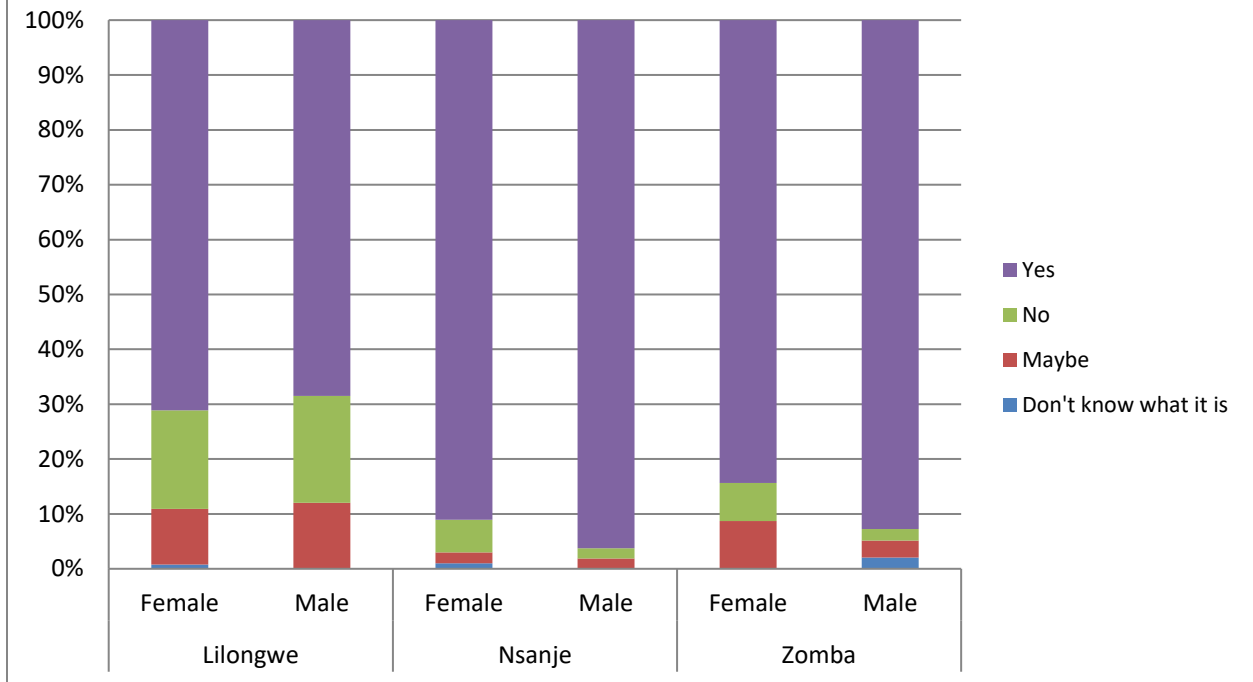
d) Listening groups

Around 80% of respondents said there is no Community Listening Group (CLG) in their community. However, as shown in the graph below, the vast majority of respondents (minimum value 68%) said they would be interested in joining a club if it were possible. Similarly to Tanzania, when asked about why they would join, two reasons stood out:

1. I can discuss with my friends
2. I might learn something

This finding will be useful when planning implementation.

Figure 16: Percent of respondents that expressed interest in joining a radio listening club in their community if it was to exist
(n=655)

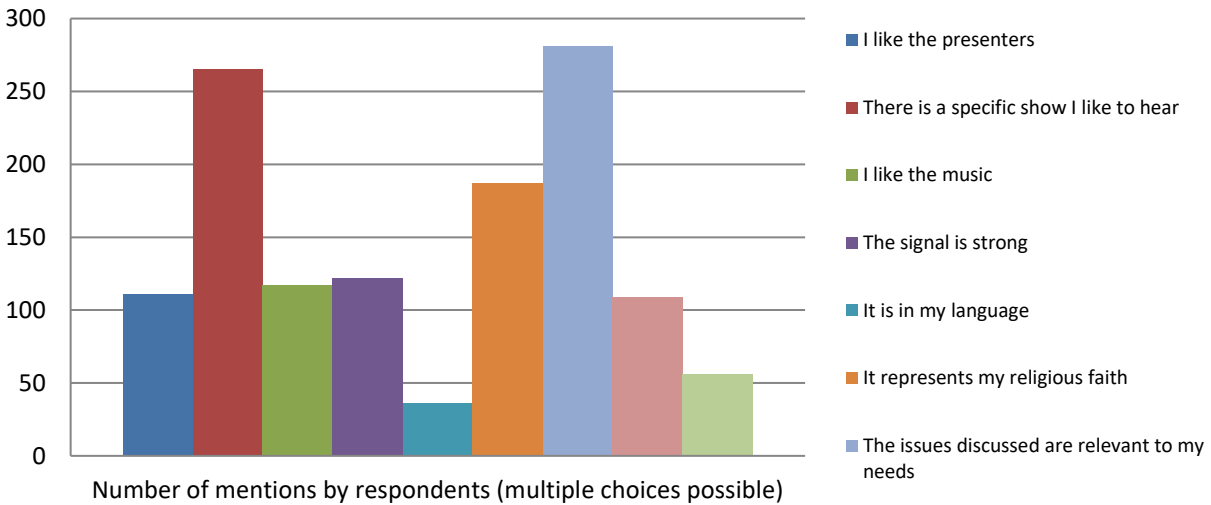


e) Trusted radio stations and preferred types of programming

When asked to name the station most trusted for agricultural information, two stations stood out among the 16 options. These were ZBS and MBC Radio 1. As a follow up and to understand the reasons for this, and what farmers value in an agricultural radio show, we asked why this station was preferred. The responses are summarised in Figure 17 below. The reason mentioned most often was “The issues discussed are relevant to my needs”. While to be expected somewhat, it is a key reminder that any programming, to be successful and useful, must respond directly to farmers’ needs, which in turn shows the value of pre-broadcast audience research, such as this study.

Figure 17: Number of respondents mentioning reasons why they prefer certain radio stations

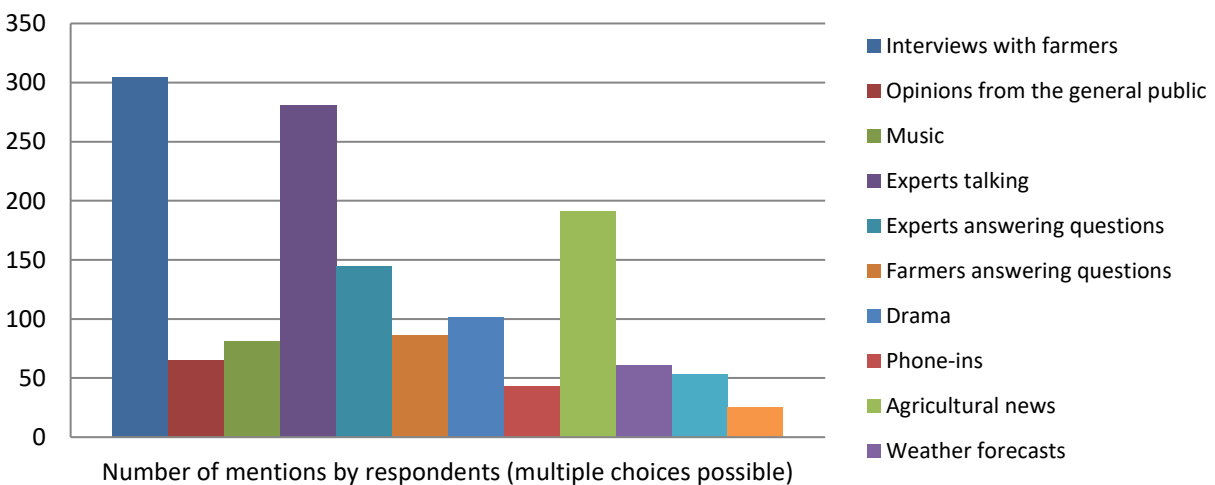
(n=655)



Looking more in-depth at the type of content on agricultural shows that farmers would find useful and relevant, it is interesting to note from the chart below, that “Interviews with farmers” was the most mentioned program element. This shows the value placed by farmers on listening to and learning from their peers, and is a key consideration when planning radio program content and formats. Following this, respondents valued hearing experts’ opinions and also agricultural news. In this question, weather forecasts were mentioned only 61 times as preferred content for agricultural radio shows. This can be triangulated with questions in the following section.

Figure 18: Number of respondents mentioning types of content that they like on agricultural radio programs

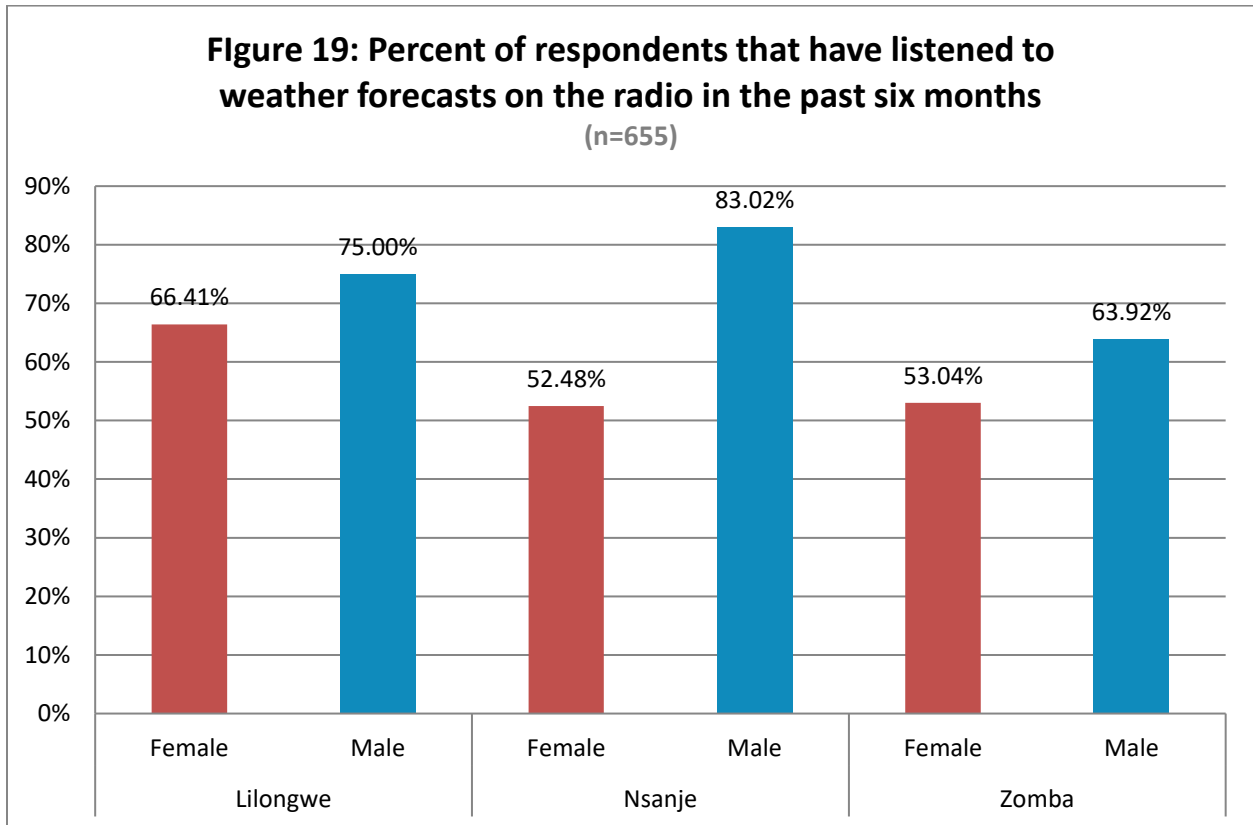
(n=655)



7.2 CLIMATE INFORMATION THROUGH RADIO AND ICT

a) Access to weather forecasts on radio and their current use

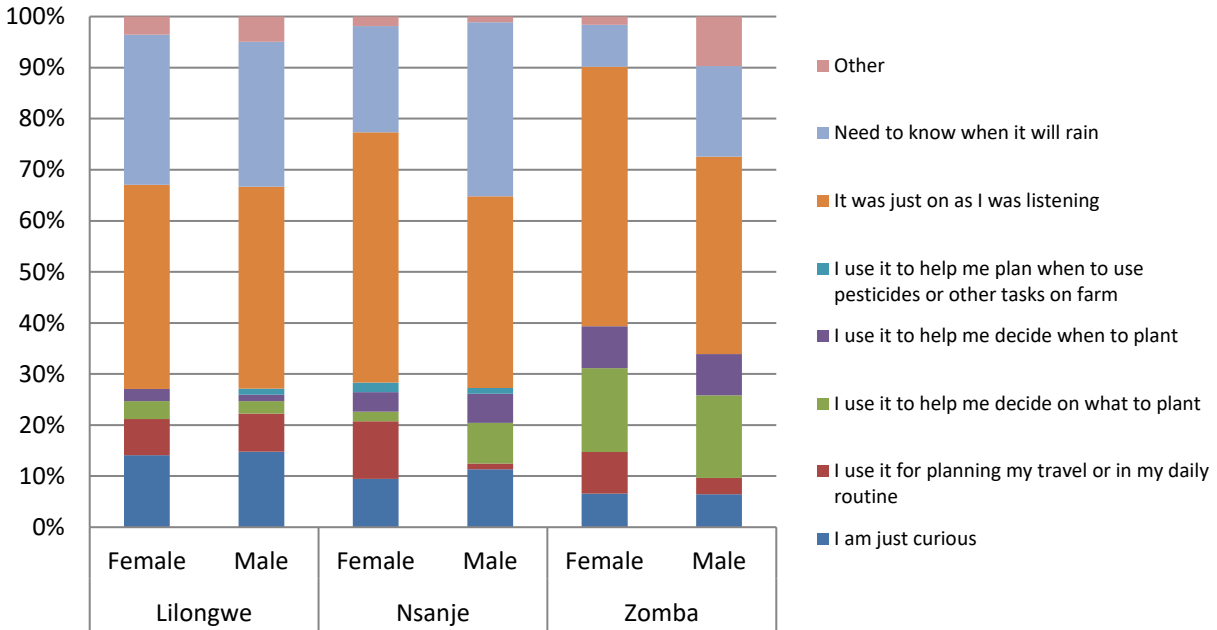
An average of 65% of respondents have listened to weather forecasts on the radio in recent months, with slightly fewer listeners in Zomba. This is a solid base from which to build, as the population in these regions are familiar with hearing weather information on the radio.



However, the following graph shows that the express intent to listen, or tune in for weather forecasts may be low, as many respondents report they heard the forecast “just because it was on”. The second highest number of respondents mentioned that they listened because they need to know when it will rain. The importance of the rain is a trend we see repeated in the following results.

Figure 20: Reason why respondents listened to weather forecasts on the radio

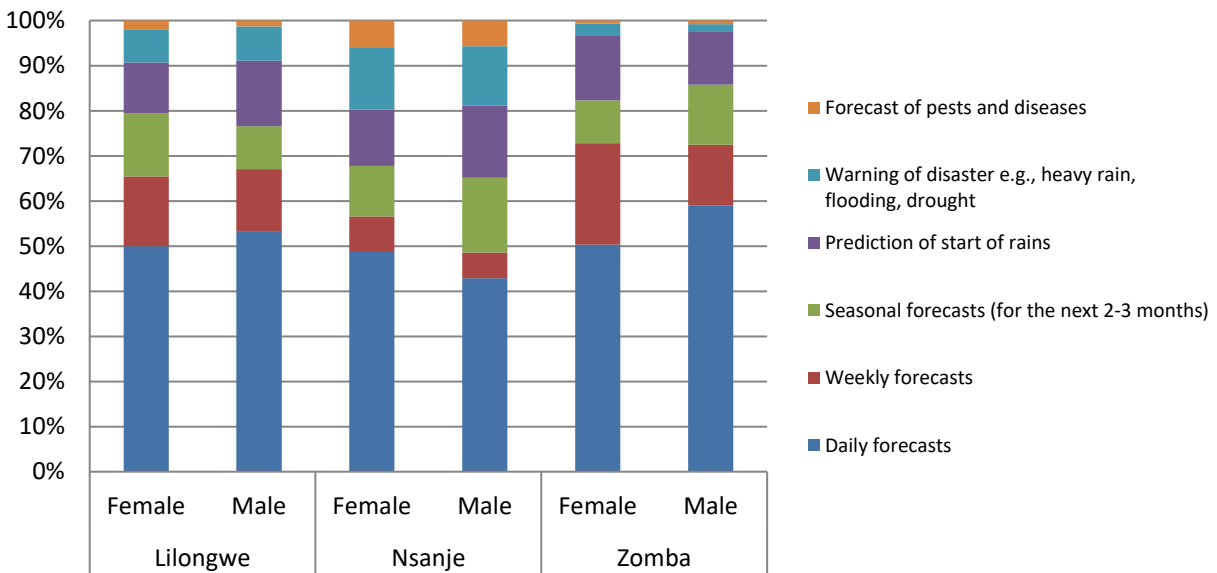
(n=430)



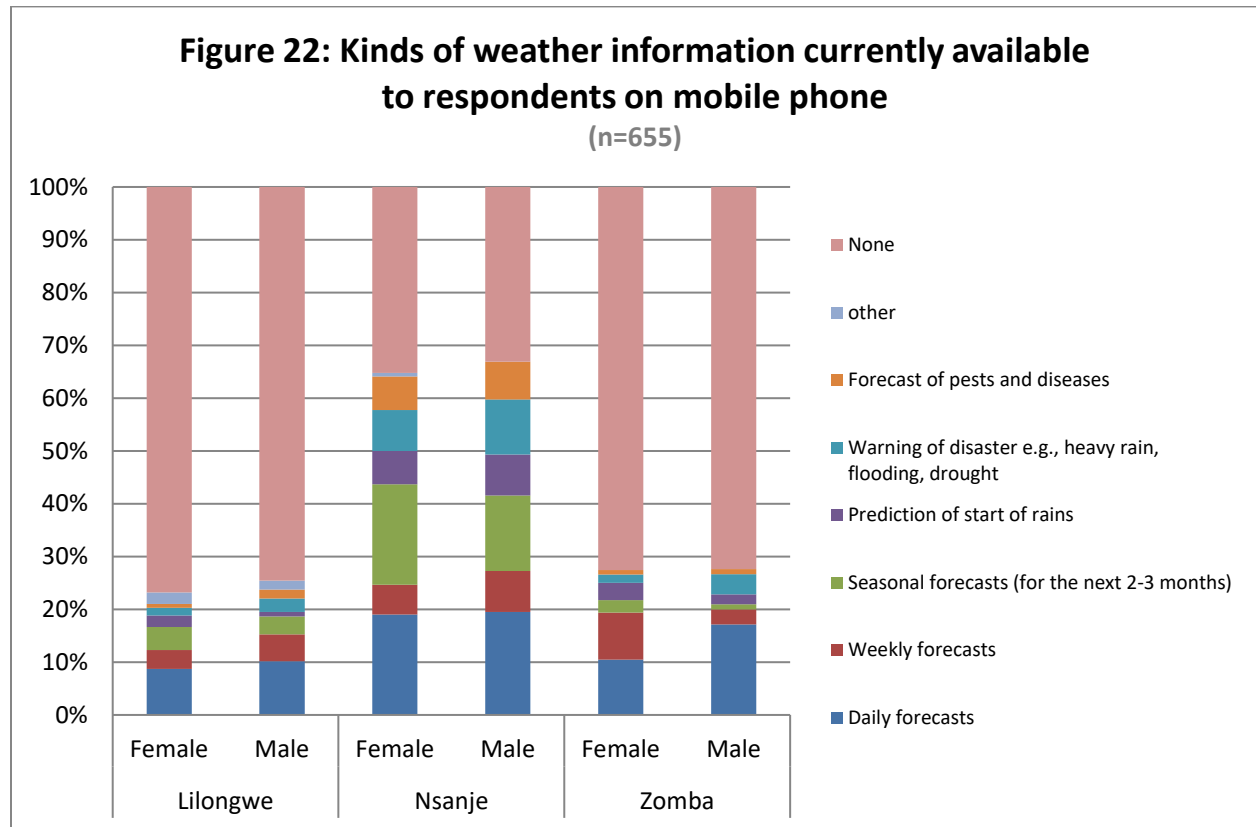
Currently, the weather information most often heard on the radio is daily forecasts, as shown in Figure 21, although weekly and seasonal forecasts are also mentioned.

Figure 21: Kinds of weather information currently available to respondents on the radio

(n=655)



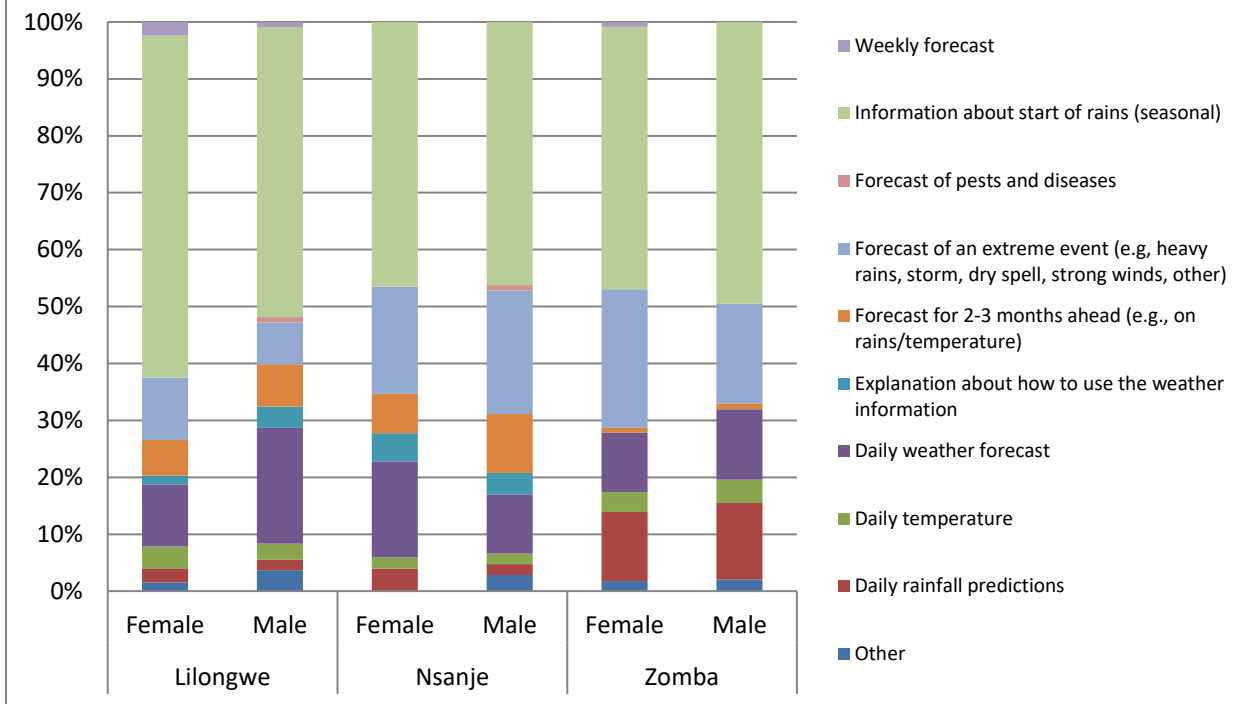
In Lilongwe and Zomba, very little weather information is available by mobile phone, as shown in the graph below. With significant ownership and access to mobile phones, this is an opportunity and a gap that could be filled. The results are slightly different for Nsanje which may be partially explained due to the presence of the Enhancing Climate Change Resilience Program, funded by DFID and implemented by Christian Aid. They are concentrating on early warning systems, since Nsanje is a flood prone area. This project will be included in our stakeholder review and will be reported on in the full report.



b) Type of weather information needed and how often

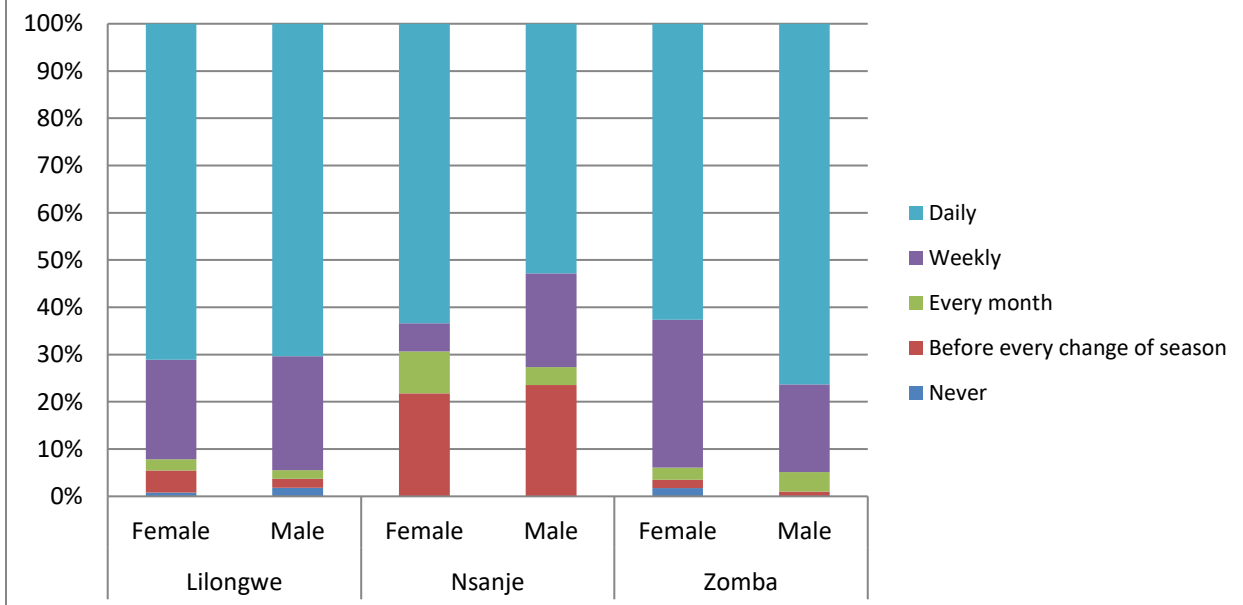
When asked what kinds of general weather information was needed, approximately half of all respondents said they wanted to know when the rains would begin. Second most selected response was to receive warning of an extreme event such as heavy rain or high wind. These are key issues that can be considered in the design and focus of climate information services for Malawi.

Figure 23: Type of weather information needed in general
(n=655)

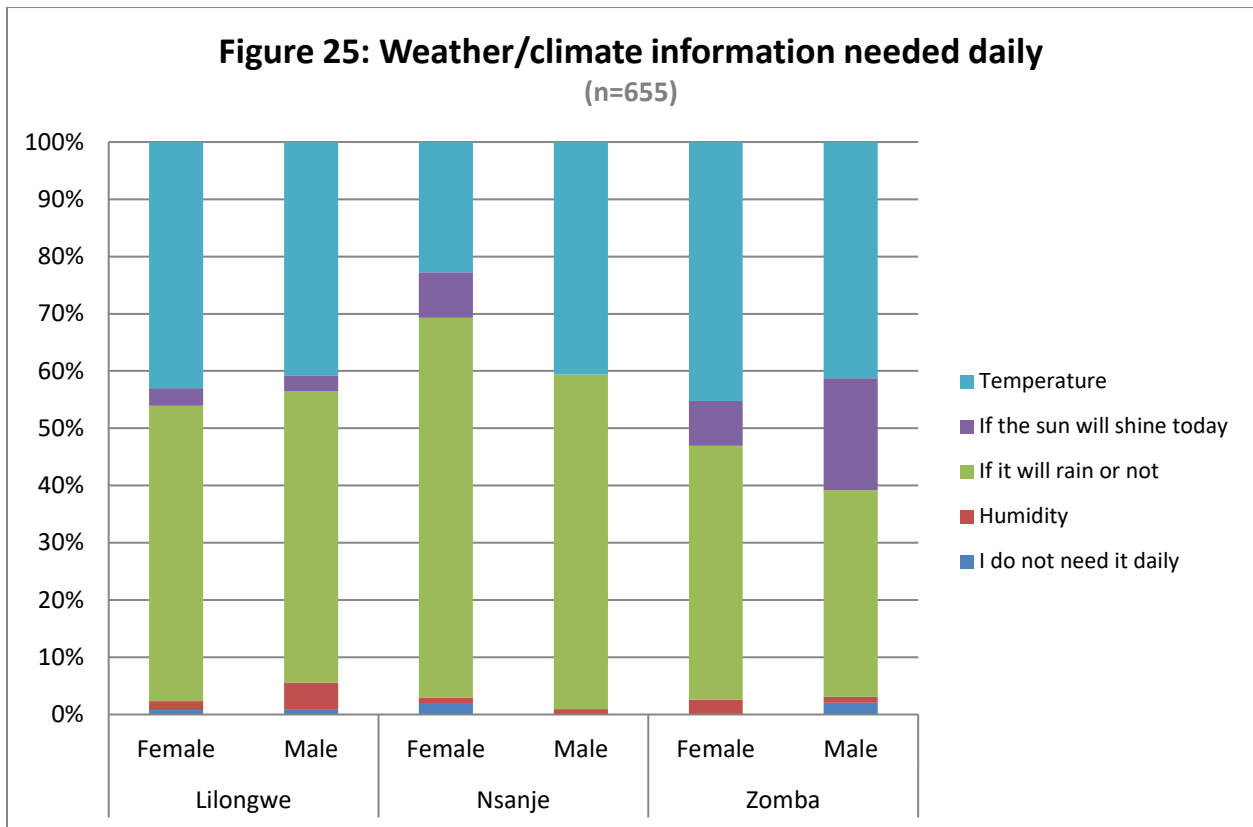


When asked “How often do you need weather/climate information?” the most common response was “daily”, given by over two-thirds of respondents, and broken down by region and gender as in the following graph:

Figure 24: Frequency needed for weather/climate information
(n=655)

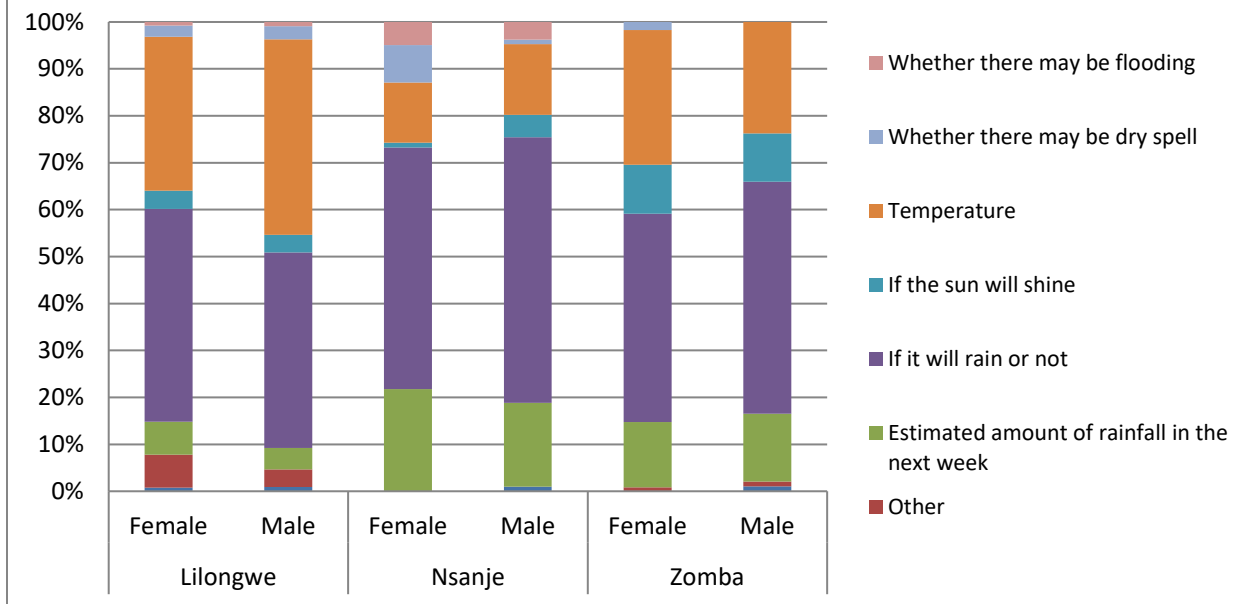


When asked for more detail on what kind of information is needed on a daily basis, the issue of rain was mentioned by over half of the respondents, followed by the temperature, mentioned by approximately one third.



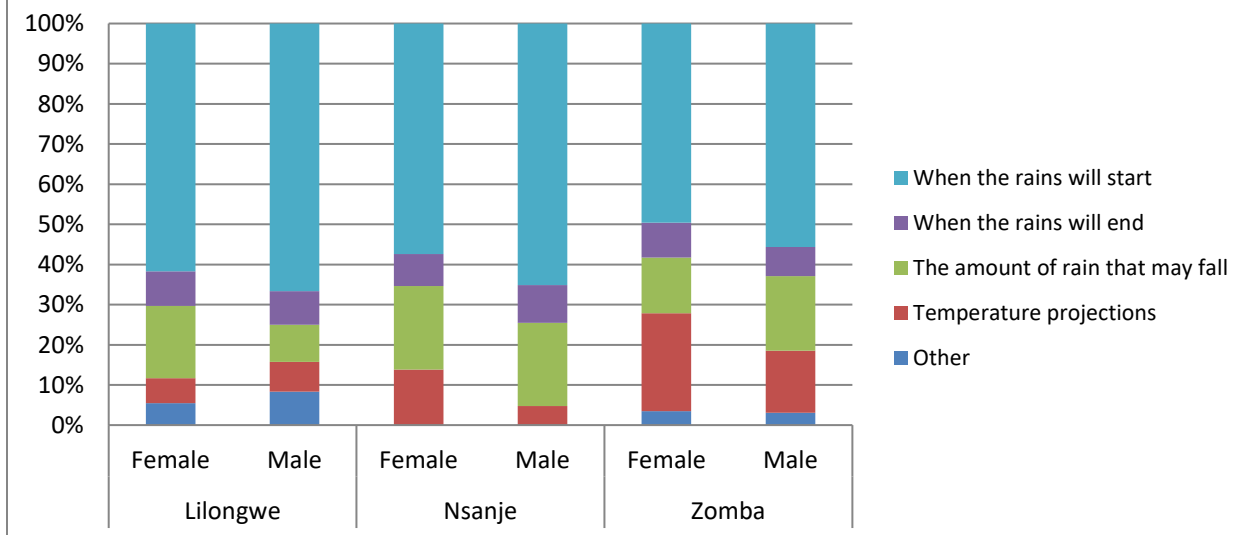
When asked the similar question of what information is needed on a weekly basis, the result is similar – people want to know “Will it rain this week?” and “How hot will it be?”

Figure 26: Weather/climate information needed weekly
(n=655)

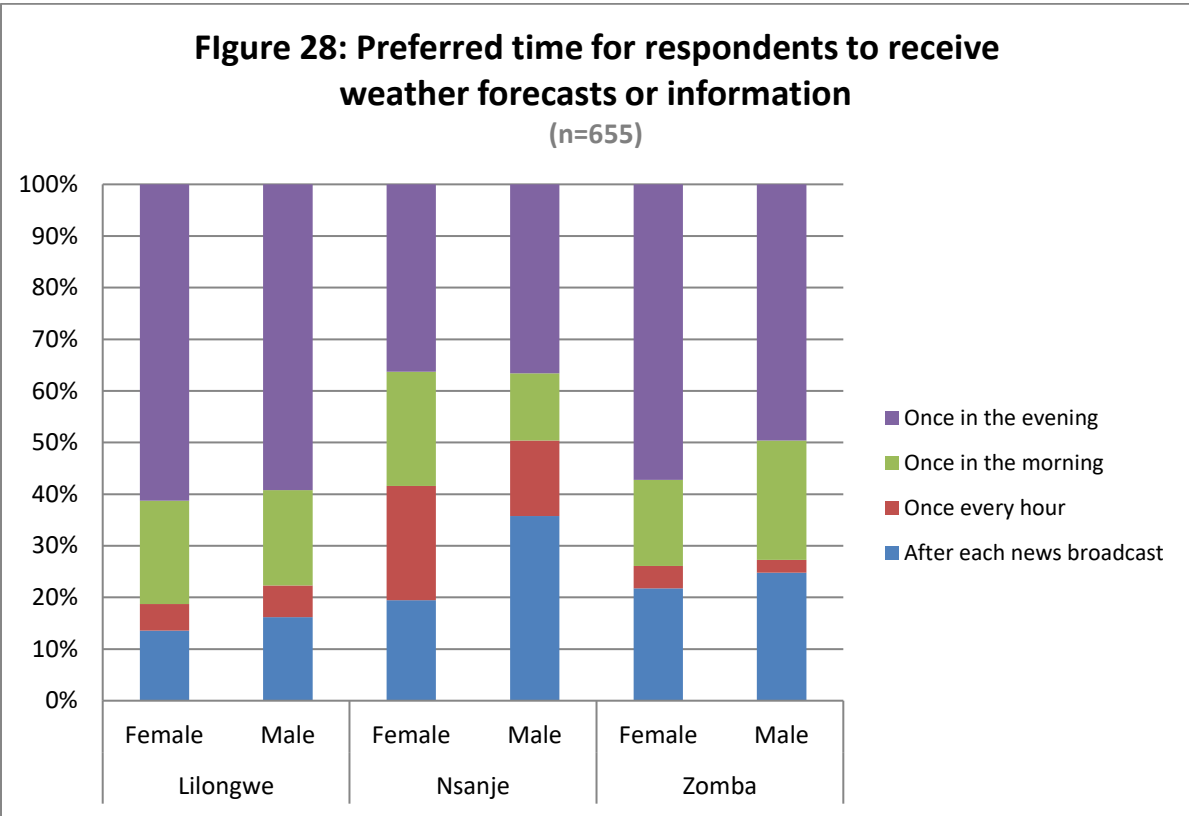


Looking at seasonal forecasts, approximately two thirds of respondents repeated a similar request – to know when the rains will begin, as the most important information needed seasonally.

Figure 27: Weather/climate information needed seasonally
(2-3 months ahead, especially at the start of the season)
(n=655)



In addition we asked respondents what time of day they prefer to receive weather information. The graph below shows that results were varied, but the most common response was “Once in the evening”.

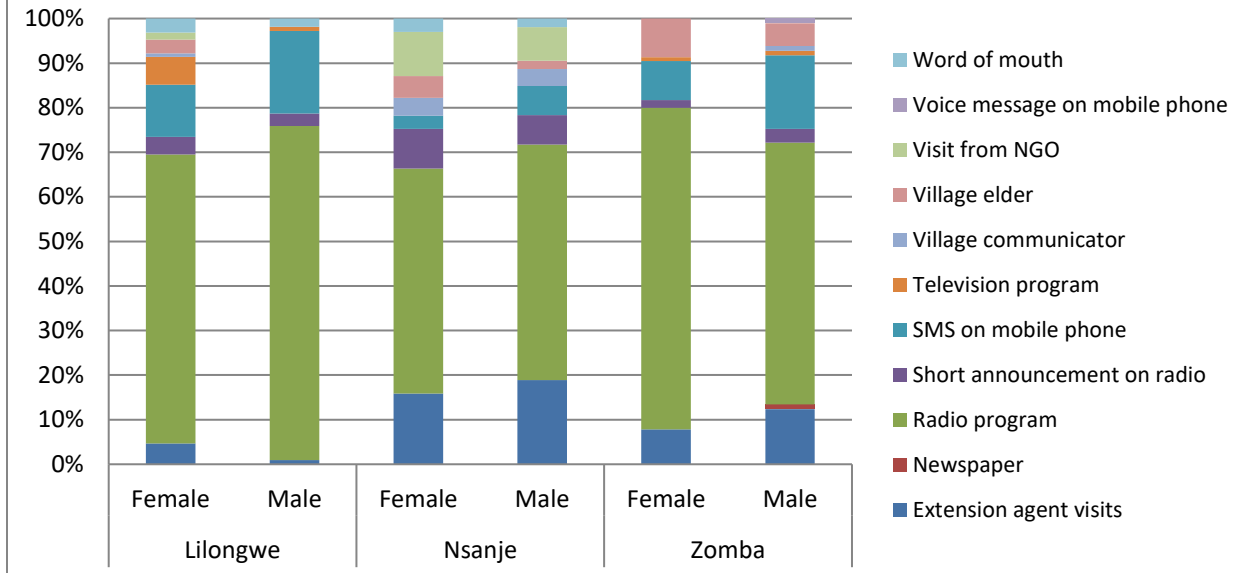


c) How respondents prefer to receive weather information and potential for use and benefits

When asked “How would you prefer to receive weather/climate information?” over two thirds of respondents answered “radio programs” as their first preference. A much lower number stated “short announcement on radio”, by comparison. One third of respondents mentioned radio programs as their second preference for receiving climate information. While this is very encouraging, we must acknowledge that there may be some bias present here as the respondent is aware that the survey is conducted by an organisation working with radio, and is planning to implement radio strategies on climate information services. That said, the number is enough to give us confidence that radio will be accepted as an effective and accessible medium for providing climate information services. In addition, this finding is backed up by all other surveys FRT/FRI have done in the past , either independently or with other independent organizations, which have consistently showed that radio remains the major source of information to smallholder farmers in Malawi.

Figure 29: Most important sources of weather/climate information

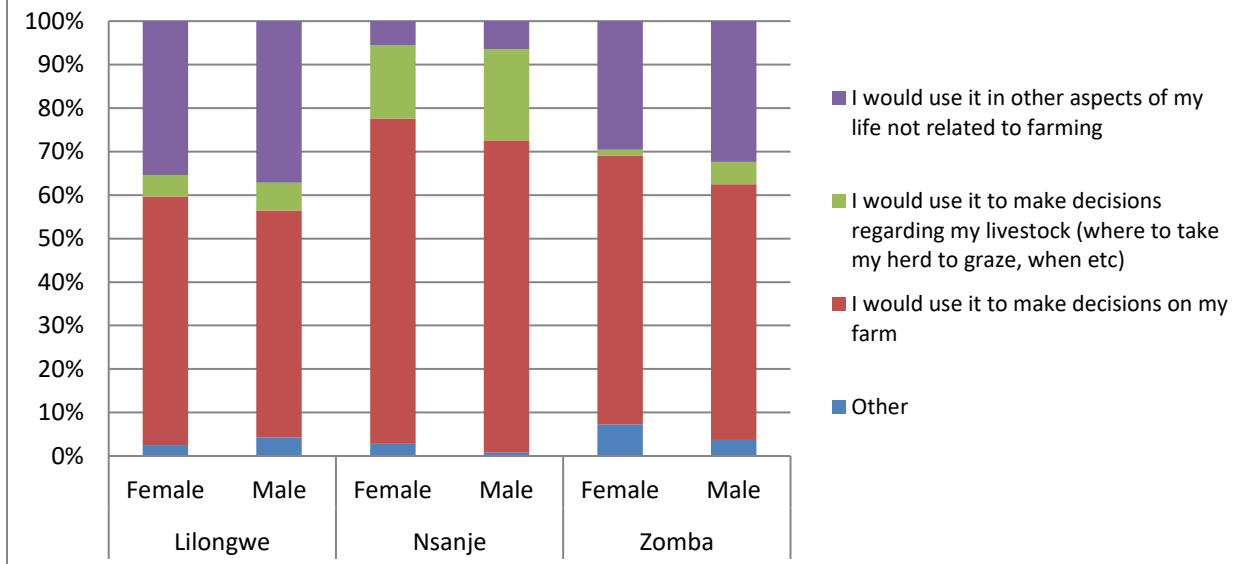
(n=655)



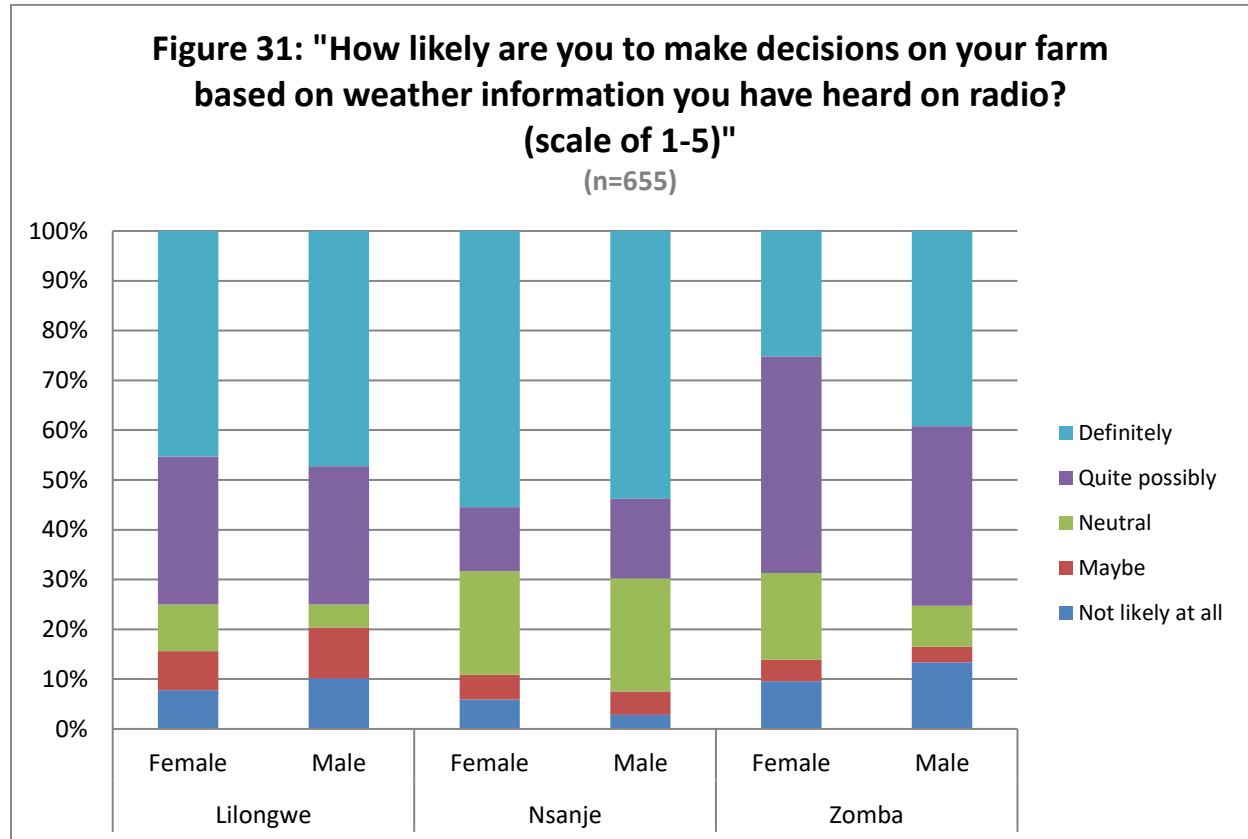
When questioned as to the potential benefits and uses farmers and pastoralists would expect, the most common response was that farmers would use the information to make decisions on their farms. The lower number who mentioned livestock reflects the fact that there are no pastoralists included in the sample in Malawi, but rather a small number of farmers who raise animals.

Figure 30: Benefits that respondents would hope to see from using weather/climate information

(n=655)



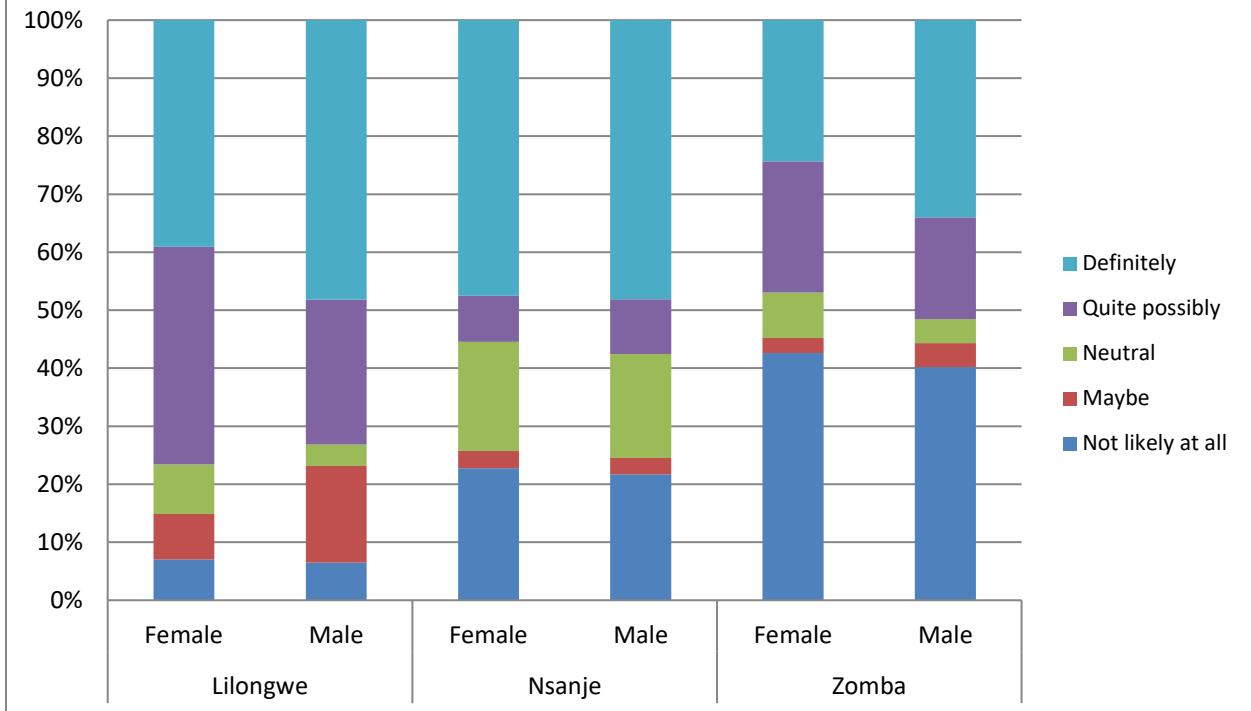
The previous question was substantiated by the response to the question asking about the likelihood of respondents using weather information from the radio to help in decision making on farm. 72% of respondents replied “definitely” or “quite possibly”, which indicates that farmers would trust the radio and use the information heard.



Asked the same question but with regard to mobile phones, around two-thirds said “definitely” or “quite possibly”. Trust in information by mobile phone therefore appears to be slightly lower but still accepted. FRT in Malawi has noted similar findings in previous surveys, and has found it is mostly because information on mobile phones is not detailed compared to that which comes via radio programming strategies.

Figure 32: "If you receive weather information by mobile phone, how likely are you to make decisions on your farm based on this information? (scale of 1-5)"

(n=655)



8. CONCLUSIONS AND RECOMMENDATIONS

This audience research-focused section of the scoping study shows that for both Malawi and Tanzania, radio and mobile phones are in common use, and have potential to be effective channels for the delivery of various climate information services. Results show that radio is trusted and preferred as a mechanism for accessing such services. Farmers enjoy and trust radio shows which represent their needs and allow them to be heard.

At the moment, our data shows farmers are not receiving or using climate information services in a systematic manner. Respondents noted that daily and seasonal weather services would be welcomed, with a particular focus on predicting and advising on rainfall patterns. In general, farmers would trust climate information received via their preferred radio stations to the extent that they would use it in decision-making on their farms.

A detailed summary of key points per country is presented.

8.1 MALAWI:

- women have less access to radios, and listen less than men. They also have less access to and spend less on mobile phones.
- radio listening is common practice
- access to mobile phones is relatively high and they are in common use.
- few listening groups exist. Other types of groups exist and there is interest in listening groups.
- two radio stations stood out as most popular and trusted, MBC Radio1 and ZBS.
- farmers prefer radio shows which are relevant to their needs and include interviews with farmers. They will also tune in to hear specific shows.
- farmers are used to hearing weather forecasts on the radio but do not appear to listen in or use them in any systematic way as yet
- respondents would welcome daily weather services
- key information requested, whether daily, weekly or seasonally, is regarding the rain and the temperature. Respondents would also welcome warning about extreme events.
- radio programs were the most preferred method for receiving weather information
- farmers express that they would use weather information from the radio to help them make decisions on their farms.
- two thirds of respondents classified themselves as “risk-takers”

8.2 TANZANIA:

- women have less access to radios, and listen less than men. They also have less access to and spend less on mobile phones.
- radio listening is common practice
- access to mobile phones is high and they are in common use.
- few, if any, listening groups exist. Other types of groups exist and there is interest in joining listening groups.
- two radio stations stood out as most popular and trusted, TBC 1 and Radio Free Africa.

- farmers prefer radio shows which are relevant to their needs and include interviews with farmers. They will also tune in if the signal is strong.
- farmers are used to hearing weather forecasts on the radio but it is not common to listen in or use them in any systematic way as yet
- respondents would welcome daily weather services, with a focus on information about rainfall
- key information requested, whether daily, weekly or seasonally, is regarding the rain. Respondents would also welcome warning about extreme events.
- radio programs were the most preferred method for receiving weather information
- farmers express that they would use weather information from the radio to help them make decisions on their farms, but are less likely to use information received via mobile phone in this way.