How Mchinji Community Radio can meet the agricultural information needs of small-scale farmers of the Mchinji District in Malawi.

By

Blessing Chataira

A mini-dissertation submitted in partial fulfilment of the requirements for the degree Magister Artium Development Communication (coursework) in the Department of Information Science,

University of Pretoria.

Supervisor: Professor Archie L. Dick.

Abstract

This study investigates how community radio can meet the agricultural information needs of small-scale farmers. It focuses specifically on the Mchinji Community Radio, and explores the ways in which it can adapt its programming to meet the agricultural information needs of the small-scale farmers of the Mchinji district in Malawi. A literature review discusses the benefits and limitations of using radio as a medium to communicate information to small-scale farmers, and how community radio has been used to meet the agricultural information needs of small-scale farmers in developing countries.

An appropriate methodology extracted primary data on the special agricultural information needs and the special features of the information-seeking behaviour of the small-scale farmers in the Mchinji District. Twenty-five small-scale farmers from Gomani 2 Village in Mchinji district were interviewed, and open-ended interviews were conducted with four key staff members of the Mchinji Community Radio. Personal observation provided another source of data, and was used for triangulation purposes.

The key findings are that the majority of the small-scale farmers make little use of the latest ICTs, such as mobile phones, television, and the Internet. The most popular sources of agricultural information are the extension officers and the radio. Most of the farmers prefer agricultural information in the local Chichewa language, and only a few contribute their views, skills, and expertise to the radio station. They specifically need information on training, maize production, weather reports, current global agricultural affairs, and cultural programmes that involve agriculture.

The study proposes a strategy for the Mchinji Community Radio that combines programming and communication planning, partnerships, sustainability planning, and quality checks. The implementation of this strategy will ensure that Mchinji Community Radio meets the agricultural information needs of the small-scale farmers of Malawi's Mchinji district.

Declaration

I hereby declare that the dissertation entitled:

How Mchinji Community Radio can meet the agricultural information needs of small-scale farmers of the Mchinji District in Malawi

1. Is my own work.
2. Has not been submitted before for any degree or examination in another university.
3. All the sources consulted and quoted from have been acknowledged and referenced.

Blessing Chataira

April, 2014.

Acknowledgements

I thank all those who influenced the success of this study, and in particular the following:

My supervisor Professor Archie L. Dick, whose exceptional guidance, wisdom, patience and expertise I will continue to value and tap into as I make a footprint in my professional career.

My husband Phil and son Jeremy, who have been supportive, patient and loving – Thank you.

My colleagues and friends for their understanding and support.

I give God all the glory.

Blessing Chataira

April, 2014.

Table of Contents

List of Figures

<u>List of Tables</u>

List of Acronyms

AFRRI   - African Farm Radio Research Initiative

ARET   - Agricultural Research and Extension Trust

CIA   - Central Intelligence Agency

CRECOMM   - Creative Centre for Community Mobilisation

DBU   - Development Broadcasting Unit

FAO   - Food and Agriculture Organization

FAOSTAT   - Food and Agriculture Organization Statistics

HIV-AIDS   - Human Immunodeficiency Virus-Acquired Immunodeficiency Syndrome

ICTs   - Information and Communication Technologies

MBC   - Malawi Broadcasting Cooperation

MCR   - Mchinji Community Radio

MDGs   - Millennium Development Goals

NARS   - National Agriculture Research System

NCRF   - National Radio Community Forum

NEPAD   - New Partnership for Africa's Development

NGOs   - Non Governmental Organisations

NSO   - National Statistics Office

SABC   - South African Broadcasting Cooperation

SMS   - Short Message Service

TRF   - Tea Research Foundation

UN   - United Nations

UNESCO   - United Nations Educational, Scientific, and Cultural Organization

USAID   - United States Agency for International Development

ZBC   - Zimbabwe Broadcasting Cooperation

Chapter One – BACKGROUND OF THE STUDY

1.1 Introduction

Provision of information plays a central role in any industry, to ensure growth and development. Access to information is a foundational aspect of the livelihoods of many, as people become more information-literate and independent. For example, tackling developmental problems in both rural and urban communities is better enabled where communities get information that is relevant to their needs and interests. This enables the adoption of new ideas and improves the chances of success, provided the information is carefully captured, organised, and targeted (Mchombu & Cadbury, 2006).

One of the most important developments in the provision of information to large audiences was the advent of Information and Communication Technologies (ICTs). The use of ICTs can be very effective in disseminating information widely and in various forms. In many parts of the world, the use of ICTs for the dissemination of information has greatly improved communication and the quality of people's lives. This is affirmed by Thioune (2003: 52) who says that the use of ICTs, technology and globalisation has brought about a new 'global economy' strengthened by technology, propelled by information, and driven by knowledge. This is applicable to all levels of the economy.

One question, however, is whether all ICTs are applicable to all economic sectors and their development. The most productive approach is to have specific, customised ICTs for each specific industry, and for each specific target group. Media tools such as television, radio, compact disks and mobile phones are broadly categorised under the basic forms of ICTs. Manyozo (2011) states that ICTs and media play a central role in public communication and development by influencing positive behaviour change. This is summarised as media for development, which drives the process of communication for development. Media for development is an area that needs to be studied further, especially in the context of developing countries such as those found in Africa, and its role in the development of the agricultural sector.

The use of ICTs and media for development is particularly applicable to the agricultural sector, and especially for small-scale farmers in developing countries. Most small-scale farmers have valuable indigenous knowledge and share experiences in their everyday farming activities. However, they also need scientific, best-practice information to adjust to changing climatic, economic, and political environments. Nyareza (2010) argues that farmers need to have access to information. This increases their productivity and income as they adopt new and sustainable practices. There is therefore a need to better understand these farmers' information needs and information-seeking behaviour. This would enable stakeholders working in the agricultural and information industries to provide the most appropriate platform from which to deliver information to small-scale farmers. In a study carried out by Nandapurkar (1982) on the entrepreneurial behaviour of small-scale farmers, information-seeking behaviour played a key role in influencing the farmers to become entrepreneurs. Thus, there is a need to investigate which sources of information and what information-seeking behaviours such farmers would utilise to impact their farming methods and the types of outputs they produce. There is a parallel need to investigate how ICTs can enhance farmers' access to information in a timely and cheap manner.

Malawi depends heavily on its agricultural sector, which accounts for about 33% of GDP, 90% of exports, offers employment to about 90% of the people, and is one of the main income generating activities for the 80% of the total population living in rural areas (NSO, 2009; CIA, 2014); 30.38% of the country's land is arable and cultivated mostly by small-scale farmers (CIA, 2014). The main commercial agricultural crops are tobacco, tea and sugar cane. Maize is the staple food crop and retails at a high price, and the price continues to go up due to food insecurity (World Bank, 2013). The majority of people are poor, and live in rural areas. It is critical that rural growth through agricultural transformation be taken seriously as Malawi strives to reduce the number of its people who live in absolute poverty. The government is focused on empowering small-scale farmers by closing the gaps of market information and the illegal buying or selling of produce such as tobacco and cotton (FAOSTAT, 2010).

The Ministry of Agricultural and Food Security, through its research departments, is responsible for all agricultural information services in Malawi. Agricultural research on high value crops is

8

also conducted by the Tea Research Foundation (TRF), the Agricultural Research and Extension Trust (ARET), and the Illovo Sugar Company of Malawi. The main agricultural college, Bunda College, acts as another important source of reliable information (Nyali, 2008). There is, however, a need to supply Malawi's farmers with information more directly, especially the small-scale farmers who lack formal training in agriculture. There is an opportunity to address this challenge in the agricultural sector via the application of appropriate media tools. The leading ICT sector in Malawi is the broadcasting/media sector, with a number of broadcasting and media houses developing at a fast rate (Nyali, 2008).

Radio, as a form of ICT, plays a major role in the dissemination of information to a larger population with limited resources. It has many advantages, especially in rural areas where infrastructure is often inadequate and families live in a communal system. Nyareza and Dick (2012) note the significant shift to local radio broadcasting and production, which is overcoming language and dialect barriers. Radio is a medium of communication that has managed to survive, and still plays an integral role in development issues while other forms of communication have either failed or are less effective. Radio is recognised for being highly effective in communicating messages on training, information and technology opportunities in most rural areas.

The ever-growing and rapidly changing world of technology has seen the undermining of the importance of radio by other forms of ICTs, such as mobile phones and the Internet (Nassanga, Manyozo & Lopes, 2013). Newer forms of media used in farming communities, such as mobile phones, video recordings and digital hand-held gadgets, are advocated as preferable for the dissemination of information to small-scale farming communities. This is based on the recent uptake of mobile phones in sub-Saharan Africa, due the reduction of prices, extended coverage and ease of use (Acker & Mbiti, 2010). The notion that newer media is better is fuelled mainly by propagandists of the technology, rather than coming from the members of farming communities themselves. There is a need to have a more critical look at the most suitable media for small-scale farming communities in Malawi, which will enable not only the best delivery of information, but also improve its consumption, usability and usage.

Community radio is a useful media tool in developing countries, and potentially in Malawi. According to the Community Radio Association (1987:2-3), a community radio station comes into existence, and develops, in answer to the needs of a community, serving a geographically recognisable community or community of interest. Community radio stations are able to address the particular needs of the community that they serve and, given the geographical and demographical advantages, find it easier to interact with their listeners.

Community radio stations act as central information hubs that are more capable of providing targeted information than a general radio broadcast. Community radio stations tend to better meet specific expressed needs and to be transparent and accountable to communities through their participatory models (Nyareza & Dick, 2012). They shift from being mainly an entertainment medium to an information system (Berry, 1971), as they have evolved from the traditional provision of music or entertainment to the provision of a mixture of edutainment, news and specific informational programmes. A community radio seeks to encourage social progress, positive behavioural change and better conditions for its community (Fraser & Estrada, 2001). Radio, when used for development – as is the case for most community radio stations – places the community member at the centre of community engagement and has the potential to strengthen deliberative development and democracy (Manyozo, 2011). Moreover, community radio programmes form part of the daily activities of a community as community members plan their activities based on the information provided by the community radios. The communities that these radio stations serve are given a sense of identity and unity, which gives them space for linkages with community power structures and, more importantly, access to resources (Megwa, 2007).

Several studies have been done on the general use of radio. However, there are relatively few studies that evaluate community radio and the roles it plays in meeting the agricultural information needs of small-scale farmers. There are studies that focus on the influence of radio on groups of farmers, such as the one done by Wanyeki (2000) that focuses more on the use of radio as a mass communication media, its reach to a wider audience, and its virtues. This, however, seems to be a one-way process, as the farmers are not the main focus and their profile in terms of information-seeking behaviour is not matched to the medium.

This study will investigate how to improve the role that community radio can play in meeting the agricultural information needs of small-scale farmers in one of the districts of Malawi. In light of the fact that the literature recommends community radio to small-scale farmers to get the right kind of agricultural information, this study aims to investigate how Mchinji Community Radio can fulfil this role for the small-scale farmers of the Mchinji District in Malawi.

1.2 Main Research Question

The investigation will be guided by the following main question:

In which ways should Mchinji Community Radio adapt to meet the agricultural information needs of small-scale farmers in the Mchinji District in Malawi?

1.2.1 Research sub-questions

The following sub-questions are formulated in order to answer the main research question:

- What are the benefits and limitations of using radio as a medium to communicate information to small-scale farmers?
- How has community radio been used to meet the agricultural information needs of small-scale farmers in developing countries?
- What are the special agricultural information needs of small-scale farmers in the Mchinji District in Malawi, and what are the special features of their information-seeking behaviour?
- How can the Mchinji Community Radio adapt its programmes in order to meet the agricultural information needs of small-scale farmers in the Mchinji District in Malawi?

1.3 Research Methodology

The study makes use of both primary and secondary sources of information. In the case of secondary sources, the researcher observed that many are old, but every effort has been made to

11

add the most recent sources where relevant. The semi-structured interview guide and un-structured interview guide act as the primary sources, while the literature review will deal with the secondary sources. The literature review is guided by the topic of the study and is the foundation of the study. An exploration of related studies already available, the state of communication in Malawi, information-seeking behaviour, information needs, community radios, Millennium Development Goals (MDGs), and the latest information in the field of community radios will be covered. The literature review is discussed further in Chapter Two.

This study applies both qualitative and quantitative techniques in gathering and analysing the data. Using both approaches helped to ensure that the data collected was both valid and reliable. The quantitative approach was the most suitable for collecting information from the farmers in the community in a structured manner; the qualitative approach was applied for both the farmers and the community radio personnel by using open-ended questions, as presented in the interview schedule. The use of interviewing selected community members enabled interaction with the respondents and also helped to clarify any misunderstanding of the questions being asked. The study had two target groups, namely the small-scale farmers in the Mchinji District and the staff working at the Mchinji Community Radio station. Other aspects of the research methodology are discussed in full in Chapter Three.

1.4 Limitations of the Study

The limitations of this study are that:
- It does not evaluate the family structures of the farmers;
- It does not evaluate the skills of the community radio station staff;
- It does not compare this specific community radio to others in the country or region;
- It does not evaluate other factors, such as the economy of the country, political stability, culture or religion and how these influence the target groups addressed in the study.

1.5 Benefits of the Study

The benefits of the study are that:

- It will improve the understanding of the role and impact that community radio plays in meeting the agricultural information needs of small-scale farmers in Malawi.
- It may influence the support and position of community radio in Malawi's development sectors.
- The findings of this study could be applied to the use of ICTs to meet other kinds of information needs for the people of Malawi.

1.6 Key Terms used in the Study

These are the working definitions of key terms used in this study:

Community radio: In the Community Radio Handbook, Fraser and Estrada (2001) define community radio as a social process or event where community members come together in designing programmes, producing them and then airing them, thereby acting in shaping their destiny.

Development communication: Manyozo (2011: 142), a respected Malawian researcher in the field of development communication, uses the term 'communication for development', which is defined as "method-driven and theory-based public and community engagement strategy, constructed on participatory generation, sharing and utilization of knowledge towards the building of sustainable communities, livelihoods and a sustainable environment."

Information-seeking and information behaviour: Case (2002), an acknowledged expert, sums up information-seeking as strategies used by individuals in getting information, including source selection and channels in order to meet such needs and having a choice of messages depending on the subjects. Information behaviour includes information seeking and other passive or intentional behaviours.

Participatory communication: Participatory communication is defined as planned activities that have components of participatory processes, as well as media and interpersonal communication. These enable dialogue between various stakeholders – focused on a common development problem – aimed at developing and implementing activities to bring about a solution (Bessette, 2004). This is further defined as "a set of techniques to make people change their knowledge, attitudes, and practices that allow people to voluntarily engage in the activities related to natural resource management" (Kheerajit and Flor, 2013).

Small-scale farmers: Small-scale farmers in this study refer to farmers who produce mainly for subsistence and not for commercial purposes. They have been defined by the Dictionary of Agriculture (Günther & Gisela, 1986) as farmers of "petite exploitation".

1.7 Mini-Dissertation Outline

The mini-dissertation is structured as follows:

Chapter One is an introduction to the study, the main research question, sub-questions, benefits of the study, limitations of the study and highlights of the research methodology used.

Chapter Two explores the literature review, where the importance of information and communication for development is discussed. The importance of understanding information-seeking behaviour, as well as community radio as a medium for the dissemination of information, is also discussed.

Chapter Three discusses the research methodology. The elements of this chapter consist mainly of the research instruments, research design, and collection methods. The target groups are also described.

Chapter Four presents the collected data and data analysis.

14

Chapter Five develops a proposed strategy, based on the research data, for how community radio can be better suited to meet the information needs of their communities.

Chapter Six provides the findings, conclusions and recommendations.

The chapters are followed by a list of references consulted and appendices.

1.8 Conclusion

This chapter discussed the background, introduction and rationale for the research project. It discussed the role community radio plays in improving the communication of agricultural information to its community members. An exploration of community radio and its influence on information-seeking behaviour of the small-scale farmers is discussed in light of the Mchinji District in Malawi. A description of the research questions, research methods, limits of the study, benefits and definitions, is also provided. The next chapter will discuss the literature on the topic, with a specific focus on the main research question and secondary research questions.

Chapter Two - LITERATURE REVIEW

2.1 Introduction

The main goal of the literature review is to analyse sources relevant to the research sub-questions of the study. The research sub-questions are:

- What are the benefits and limitations of using radio as a medium to communicate information to small-scale farmers?
- How has community radio been used to meet the agricultural information needs of small-scale farmers in developing countries?
- What are the special agricultural information needs of small-scale farmers in the Mchinji District in Malawi, and what are the special features of their information-seeking behaviour?
- How can the Mchinji Community Radio adapt its programmes in order to meet the agricultural information needs of small-scale farmers in the Mchinji District in Malawi?

Some studies have been conducted on community radio, but not many studies have investigated how community radio plays a role in meeting the agricultural information needs of small-scale farmers.

The use of radio as a tool for delivering information, and its role as a feedback tool, will feature prominently in this review. The review includes literature on developing nations, but the main focus is Malawi and Africa. The way information is sought and subsequently delivered in various communities is explained in different information and communication theories.

2.2 Information and Information-Seeking Behaviour

Information and information-seeking behaviour are two terms that are used in various communication theories. They work together to map the way people are influenced by

information, as well as how their knowledge is formulated. There is a need to understand each term and how they are linked.

Sturges and Chimseu (1996) note that the existence of a structure influences information-seeking patterns and, indeed, perceptions of information need. Studies show that large proportions of the population cannot concretise their information needs, nor can they deny that they never experience the need for new information. Most of the research has focused on the information-seeking behaviour of students or academics rather than ordinary working-class people. There is, however, a need to understand ordinary people's information-seeking behaviour outside working environments or academic institutions (Case, 2002).

Sturges and Chimseu (1996) explain information-seeking behaviour as a "gap bridging process, where the individual makes moves, influenced by information in time and space, to reach desired outcomes". This 'gap bridging process' is influenced by many factors, including the environment, educational levels, culture, economics and technology. In most developing economies, many of these factors influence the information-seeking behaviour of individuals, with some playing a more prominent role than others. More significantly, radio is the technology that plays a prominent role in developing countries.

2.3 Radio as a Medium

Olorunnisola (1997:242) mentions that radio is often the only electronic device in many homesteads in rural Africa. Moreover, according to Bogue (1979:1), as cited in Olorunnisola (1997), radio is generally recognised as one of the best ways to reach marginalised or neglected communities since it can be found in many homes. Bogue (1979:1), as cited in Zeeman (2006), points out that if one has to inform large numbers of rural, semi-literate or illiterate people that are distributed over large areas, "radio has the ability to reach people who cannot or do not read, whom it would be difficult or expensive to visit personally, yet who urgently need to be informed and motivated to participate in programs that will bring about improvements in their personal lives, their communities, and their nations".

Rural radio is distinct from radio in urban areas because of factors such as language, distance and traditional knowledge. They are, however, still dependent on country-specific national broadcasting regulations (FRI, 2010). In his research on rural radio, Girard (2001:6), argues that "More than any other mass communication medium, radio speaks in the language and with the accent of its community." There is a need, therefore, to have a better understanding of radio as a medium and the attributes that make it so unique.

2.3.1 Characteristics of radio

Crisell (1994:3-16) points to many factors that can be seen as characteristic of the medium of radio:

- "It is blind;
- It relies on and stimulates imagination;
- It offers companionship;
- It is a listening experience;
- It has much in common with tribal folklore, where the speaker becomes the authority and the listeners are the recipients;
- It is a dualistic medium;
- It has a sense of immediacy and reality;
- It caters to different listener categories;
- It caters to listeners' lifestyles and ages (that dictate their listening habits);
- It relies mainly on talk and music for programming;
- It has a far greater reach and staying capability than other media; and
- It does not demand total attention."

These characteristics have evolved and improved with developments in the production and adoption of radio in various communities. The characteristics of radio have been influenced by its history and by the needs arising from listening communities.

2.3.2 Brief history of radio

The history of radio can be traced from periods and movements that characterised its development. Wanyeki (2000) contends that the impact of these movements in Africa is also reflected in the region's media, which, until the 1990s, had been largely owned and managed either by the ruling party or the government. This is especially true for commercial radio, which dominated broadcasting in comparison with community radio. The 1990s witnessed the birth of more independently owned and managed media.

Wanyeki (2000) adds that the 1990s saw the establishment and growth of media that were not publicly or strictly corporately owned or managed, and which were roughly grouped into two categories. Firstly, media that is independent and corporately owned and managed, with a community development orientation and produced with some level of community participation. Secondly, there are the communication initiatives from the development industry, which seek to incorporate community participation in their ownership, management and production. Sturges and Chimseu (1996) contend that this was done at three points: "in the agencies that create information packages for dissemination; amongst the intermediaries who actually do the dissemination; and with the inhabitants of the villages, whose needs the packages are intended to serve". The ownership of the media has a major influence on its models of information provision and the levels at which the community is engaged.

Zeeman (2006) notes that in Europe, Australia, and North and Latin America, for instance, community radio grew out of the repressive socio-political experiences of minority groups. Simmering *et al*, as cited by Olorunnisola (1997), highlights that community radios have traditionally evolved from experiences that were socially and politically repressive and therefore the evolution of community radios in Africa is not "peculiar".

2.3.3 Ownership of radio stations and forums

The radio stations that exist amongst African communities are owned by different entities, some private and some public. For example, the public broadcasters common in many sub-Saharan

19

countries include the South African Broadcasting Cooperation (SABC), the Zimbabwe Broadcasting Cooperation (ZBC), and the Malawi Broadcasting Cooperation (MBC), to name a few. With economic and social growth in mind, both private and public entities have decentralised the ownership of most radio stations to communities and to the regions, focusing on the developmental and social issues affecting those respective communities.

Wood (2009) suggests that if communities feel that they own a radio programme or a radio station, they are more likely to engage with its programmes and programme content. She further adds that developing a sense of community ownership of the radio station or the radio programme can be achieved through a number of mechanisms:

- "The naming of the programme by listeners (e.g. MBC listeners named the radio programme, Mudzi Obiwioloira);
- The involvement of the community in the development of the radio station or programme;
- The ability for listeners to provide feedback on the programme and influence future programming; and
- Participation in the programme production and the involvement of the community in the recording of programme content."

The varying differences and factors that determine the ownership of radio stations and forums is outlined by Wanyeki (2000), who highlights that the ownership and management patterns are diverse, even though they can be broadly defined as non-governmental and non-corporate. The levels of community participation are equally diverse. The aims are quite specifically different although, in general the aims are all for some aspect of community development. Wood (2009) purports that the ownership of radio stations and forums is also influenced by the origin and status of the radio station within the community, and by the production team. Further noted are: the efforts made by the programme producers to engage with the community; the outreach skills and experience of programme producers; and whether or not they are community members themselves. If communities work together to establish a community radio station, there tends to be a strong ownership of the radio station.

If listeners do not believe that a radio programme is relevant to them, then they will not listen. It is, therefore, vital that radio producers work hard to ensure that programme content is relevant to listeners and that listeners perceive that the content is relevant (Van Zyl, 2003). Ensuring that community voices are included in the programme content is one of the most effective methods of engaging the community because:

- It helps to reassure listeners that the programme content is relevant to them;
- Listeners are more likely to listen and learn from one of their own community members (through peer learning) than from experts; and
- Gathering interviews from listeners (either live or pre-recorded) allows the listeners to interact with producers, give feedback on previous programmes, and suggest ideas for the future.

These attributes help in distinguishing the two sectors of radio, commercial and community, as well as bringing out the importance of community radio as being more of a community-based form of media.

2.4 Community Media

In a report on communication for social change in 1999, the nature of community media is described as participatory, and the purpose of community media is seen as developmental (Gray-Felder & Deane, 1999). It is a process where both public and private entities are addressed, and where people expound on their identity, needs and desired means of provision.

Berrigan (1979) purports that within communities, community media seeks to foster debate about, reach consensus on and build solidarity in promoting and protecting human rights, and achieving sustainable development, including peace and reconciliation. Community media is about both access to and dissemination of information. They act as channels for the flow of information to and from local communities, on the one hand, and to and from the national and international levels, on the other hand. They provide access to necessary external information, as well as acting as advocacy platforms on issues of concern, with relevant policy-making levels informed by experiences at the community level and solutions generated therein. In a broader

sense, community media enable greater participation by communities in national and international affairs.

According to Wanyeki (2000), community participation is thus seen as both a means to an end and an end in itself. The processes of media production, management and ownership are in themselves empowering, imbuing critical analytic skills and confidence about interpretations reached and solutions found. The medium chosen must, therefore, be one that enables, enhances and sustains community participation.

Other issues to consider when establishing a community media initiative include:

- "The specific development aims and corresponding information needs of the community concerned, including those of distinct sectors of the community (the specific needs of women, for example);
- Existing communication structures and ways in which people learn, including traditional communication structures and learning institutions, and strategies to incorporate these in the proposed medium;
- The ability of existing structures to achieve the community's development aims and strategies to address any gaps;
- The ability of existing structures to sustain participation and strategies to deal with gaps; and
- The human, financial, technical and regulatory feasibility of the proposed medium." (Manyozo, 2005).

From the above considerations, it follows that the choice of media to be used in a local community is necessarily specific to that community. What works in one community may not work in another. For example, gender and age are factors to take into account, as these differ across communities. Literacy levels, access to media receivers in the community at large, familiarity with symbolism and other visual devices used in audio-visual media, are considerations that must be evaluated.

The choice of puppetry, theatre, local language newspapers, radio or video – or any combination thereof – is and should be dependent on both internal and external factors. Internally, the choice

should address the development aims of the community concerned and build on what forms of communication already exist, especially where the community concerned has a history or tradition of educational music and dance. And externally, the choice should ensure ease and effectiveness of impact on the national and international actors the community wishes to communicate with (Manyozo, 2005).

Madamombe (2005) believes that the broadcasters' association in community media should have a social agenda, and not be driven by purely commercial motivations:

> "They should involve community decision-making and participation. While the impact of local radio stations varies, they often give isolated villages – many of which are not reached by public broadcasting – a means of education, self-expression and communication, while also promoting the community's history, music and oral traditions."

Wanyeki (2000) purports that media initiatives should adopt the South African definition of a community as being either a geographic community or a community of interest. Ideally then, community media are media produced, managed and owned by a physical community or a group bound together by a common interest.

As a community medium, community radio should therefore exist where the communities participate as planners, producers and performers, and should be the means of expression for the community rather than for the country.

2.4.1 Community radio

Van Zyl (2003) points out that community radio should be broadcast 'by' and not 'for' the community. As such, the importance of community radio becomes relevant when addressing issues and problems that affect the communities directly. A community radio can be regarded as playing a role in providing and meeting the informational needs of its communities.

According to the Community Radio Association (1987:2-3), a community radio station comes into existence, and develops, in answer to the needs of a community, serving the geographically

23

recognisable community or community of interest. Community radio is able to address the particular needs of the community that it serves and, given the geographical and demographical advantages, finds it easier to interact with listeners. Community radio may also find it easier to reach its radio listening clubs in order to record interviews and gather feedback on programming. In his 2008 report on communicating via rural radio, Manyozo (2008) found that radio programmes created by communities attract high listener figures and, moreover, community produced radio programmes motivate communities to take development action (Wood, 2009).

The community radio is used as a means to bring together all the community members and acts as a central point that unites them. The community members are able to participate and help determine the flow of activities and scheduling done by the community radio. The role of the community radio in this case is central to the survival and development of the community. It acts as a uniting focus and a voice for all the community members. Experiences, ideas, perceptions and messages are easily exchanged and shared.

Wanyeki (2000) adds that radio broadcasting is used, where possible, to reach largely non-literate communities. The integration of short message service (sms) mobile phone technology in community radio makes this mode of communication more unique and more participatory for its listeners. The community is able to provide feedback by sending 'smses' to the radio station and, likewise, the station is also able to ask for feedback by sending message broadcasts relating to the programming of the radio schedule via sms to the community.

Members of the community are therefore not passive listeners but instead drive the channel of the community radio. This makes it more of a participatory project than a mere means of entertainment. Tadesse (2002) highlights that a community radio gives its members a 'voice' by providing members of the community with the platform to exchange ideas on matters that affect their lives.

Zeeman (2006) argues that in order for a community radio station to be sustainable it will need 'stakeholders'. Blair and Buesseler (1998), as cited by Collie (1999), describe these stakeholders

24

as any group with a common purpose or similarities. Van Zyl (2001) comments that community radios can transform communities, create employment, and relieve poverty if made sustainable. Wanyeki (2000) highlights that the 1996 regulatory framework for Community Broadcasting in Kenya purports that defining the role of traditional forms of communication should include issues such as preserving indigenous knowledge and achieving universal access to the means of information production and dissemination so as to close the information gaps.

One of the main objectives of community radio is to provide information and address issues affecting the relevant communities, including ordinary people. However, the main objective of providing this information is to influence the information-seeking behaviour of the communities. In the case of agricultural development, Wood (2009) suggests that the aim of many radio programmes is to encourage farmers to adopt better farming techniques, that is, to change their behaviour. For example, the African Farm Radio Research Initiative (AFRRI) campaign is encouraging farmers to improve their farming practices by planting Vetiver grass, by creating farm co-ops, or by using manure correctly.

The role of a community in influencing its community radio is key and it is critical to explore some of the benefits of community radio to its community.

2.4.2 Benefits of community radio

Radio as a means of communication is easily accessible and is one of the cheapest modes of communication. Radio receivers are diverse and seem more affordable than other media receivers. The largest advantage of radio is that most radio sets can be used in the absence of electricity, especially in remote and rural areas. Such receivers make use of batteries, battery wind technology or solar power (Gunner, Ligaga & Moyo, 2012).

The portability of radio receivers enables the medium of radio to have a wider audience, as it is more mobile. Radio sets can easily be shared in communities, where listeners are able to congregate in groups. Radio is more accessible and popular than other forms of media, especially

in developing nations. Gunner, Ligaga and Moyo, (2012) points to research that finds that radio is far more accessible than computers and mobile phones in sub-Saharan Africa.

Radio has been identified as one of the mediums most appropriate for rural emancipation programmes. It eliminates distances, and thus has immediate effect. It has been identified as the only medium of mass communication that the rural population is very familiar with (Kuponiyi, 2000). A radio set is cheap to obtain and is widely owned in the rural areas. This is made possible by the advent of the battery operated transistorised sets and the invention of the wind-up models of radio (Okwu, Kuku & Aba, 2007). Furthermore, radio is favoured as a medium of communication in rural communities because it transcends the barriers of illiteracy, and demands less intellectual exertion than the print media messages (Folarin, 1990).

Megwa (2007) contends that radio is a very important communication tool when compared with writing and others, because it reaches a wider population at one time. Although illiteracy levels are high, there is a low reading culture in developing nations. Radio is the best tool because it reaches out to the illiterate and non-readers, especially when programmes are packaged in the local language.

One of the main advantages, therefore, of community radio is its ability to deal immediately with the so-called 'trivial matters' that affect the community it serves, as well as the real relationship it is capable of having with its listeners (Crisell 1994:13; Crook 1996:67). When it comes to being aware of what is happening in a nearby neighbourhood, community radio seems to have the upper hand over commercial radio and the public broadcaster. Crisell (1994:13) notes that "the greatest achievement of local radio" may be its practical importance to the listener, which is further underscored by the fact that radio "is probably at its best when it is 'live' or reacting to an event happening 'now'" (Chantler & Harris 1997:4). For example, in the case of the disappearance of a local child, Zeeman (2006) highlights that a community radio station may, for instance, have important specific information on what the child was wearing, where they were last seen and so forth. It can provide important information which is specific to the community and which its audience can quickly relate to in comparison with national broadcasters.

With so many benefits, community radio stands out as playing a key role in developing communities. Although minimal, community radio does have some limitations, which need to be mitigated for it to thrive.

2.4.3 Limitations of community radio

The limitations that characterise radio broadcasting, especially in African communities, need to be addressed at a national level. Wanyeki (2000) notes that the choice of technologies for community media tends to be influenced by infrastructural considerations. This is a limitation for some community radio stations in sub-Saharan Africa in terms of electricity, Internet connectivity and buildings. However, Wanyeki (2000) also suggests solutions to some of these limitations. He explains that to achieve access to ICTs, a lack of electricity can be resolved by solar or generator power. In the case of South Africa, Collie (1999) points out that the most inhibiting factors regarding community radio stations are a lack of available funding, lack of support from advertising agencies, unnecessary rules and regulations by the previous and current regulators (the Independent Broadcasting Authority and Independent Communications Authority of South Africa, respectively), as well as licensing delays.

Zeeman (2006) argues that although a community radio station can be an important influence on and source of communication for its listeners, in Africa it is limited where the higher echelons of radio and government are concerned. Gunner, Ligaga and Moyo, (2012) add to this by contending that governments pay lip-service to community radio, which Zeeman (2006) supports, based on the fear that governments may have of the empowerment opportunity that radio offers to groups of people who previously had no voice.

Another obvious limitation to radio is the fact that, by its very definition, it is a blind medium. As Zeeman (2006) highlights, radio broadcasts cannot be seen in the same way as, for instance, a stage or television production. This may make some listeners doubt the authority of the person speaking if they cannot relate to them visually. Crisell (1994) adds that radio broadcast messages cannot be seen and only consist of noise and silence.

27

In order to find the best application and use of radio, various models are used globally. Those used most often in developing nations will be discussed.

2.4.4 Models of community radio services

There are several models used in developing community radio services in different communities. The models discussed here are those most applicable and useful to developing communities where small-scale farmers live.

2.4.4.1 Radio Farm Forum Model

Zeeman (2006) seeks to explain the functioning, aspirations and goals of community radio forums in the South African context. The National Radio Community Forum (NCRF) consists of a national association of community radio stations, where the radio station members are independent, non-profit, and community-based organisations. Zeeman (2006) adds that diverse local communities own and run the stations, and actively participate in developing programming activities for sustainable, non-discriminatory local development. The NCRF (NCRF (sa), 2011:1) strives towards the following aspirations and goals:

- "To endorse the principles, ideas and function of community radio, as an essential part of the broadcasting milieu of a democratic South Africa;
- To encourage the involvement of historically disadvantaged communities in all areas of community radio;
- To assist the organisation and growth of community radio stations all over the country;
- To promote collaboration between community radio stations;
- To support the role of community radio within organisations responsible for legislating and controlling broadcasting principles, as well as popularise the importance of community radio within the rebuilding and development of South Africa;
- To encourage the production of excellent and innovative programming from different sources to assist local programming objectives; and
- To encourage democracy, growth and employment of communities through community radio."

The Development Broadcasting Unit (DBU) in Malawi, as highlighted by Wood (2009), is an example of a Radio Farm Forum Model. The audience meets and discusses the issues programmed and sends in their feedback. However, this model has the drawback of not having any form of quality control or evaluation on the part of the listeners, and thus quickly dies out. The DBU aims to give community members a platform to air their needs on the state broadcaster, MBC. The DBU has three-weekly, 30-minute programmes on MBC, which vary in subject, such as access to water, deforestation, HIV-AIDS, climate change, good governance, and human rights. Each programme is followed by a 30-minute panel discussion (Wood, 2009; see 2.5.1).

2.4.4.2 Development Communication Radio Model

Boafo (2006) purports that a variety of development communication strategies and approaches have been employed in numerous development programmes and projects across the length and breadth of Africa. The Development Communication Radio Model seeks mainly to spearhead community development through community radio broadcasting. That is, it involves the ideas and views of, and is supported by its community.

Van Zyl (2003) explains the participatory environment characteristic in a community radio when he highlights that community radios allow for an 'open-door' approach that ensures that listeners can talk to the presenters, by phone, postcard or visiting the station.

According to Van Zyl (2003), community radios can change the conduct of the communities they serve and result in a 'growth of knowledge' on account of effective educational programmes. Panos (2010) observes that being informed allows members of the community to educate themselves, especially in areas with little access to newspapers or television.

Wanyeki (2000) contends that the development industry has increasingly striven to incorporate the principle of participation into its policy and project work, and to use it to assess the impact of that work. This requires greater recognition of the role of communication in development-communication, which is participatory. And thus communication for development implies two-way communication rather than the top-bottom communication approach used previously.

Critically, Wanyeki (2000) further establishes that participatory video is still not widely used in the region. Although there is a traditional use of video for development, this tradition has not been participatory. Part of the problem relates to the cost of independent film and video production.

Wanyeki (2000) highlights that community radio incentives focus on a broad range of community development issues, from education, to land use and management systems. Further, he adds that many of these initiatives are also keen to devise means of sharing information with one another, to learn how different communities address similar issues, and to develop their own community radio practice.

Boafo (2006) adds that a variety of development communication approaches and strategies have been used by international organisations, funding agencies, government departments, non-governmental organisations (NGOs) and civil groups. These are found in development-oriented programmes and projects designs. These have a mandate to: improve agricultural production; tackle environment problems; prevent and manage health problems and pandemics, such as malaria and HIV/AIDS; improve community welfare, the status of women and educational levels; promote or enhance democracy and good governance; and encourage local and endogenous cultural expressions and productions.

Community radio in Africa tends to represent aspects of both models. Such approaches, as well as others, are widely used in developing nations, more so in some sub-Saharan countries which share the same characteristics as Malawi.

2.4.5 Community radio in some African countries

There are many community radio stations that have been established on the African continent. Olorunnisola (1997) suggests that a community radio station must strive toward the empowerment of the community. This is supported by Madamombe (2005), who highlights that through community radio stations, listeners in remote rural areas can hear news, practical information and the views of their neighbours.

Wanyeki (2000) notes that outside of the so-called Great Lakes region and the Horn of Africa, as broadcasting regulations open up, community radio initiatives are increasing. The South African NCRF, an umbrella for community radio, groups together over 60 community radio initiatives. Community radio initiatives are found in almost every country in the region. Some examples of successful community radio initiatives across Africa include: Kenya's Mang'elete Community Radio, Malawi's New Women's Radio, Namibia's Katutura Community Radio, Tanzania's Simanjaro Community Radio, Uganda's Kagadi's Community Radio, and Zambia's Icengelo. A few of the successful community radios in some of the leading countries are described below.

2.4.5.1 Zambia

Madamombe (2005) notes that, across the continent, most community radios are funded primarily by external donor countries, church organisations, international development agencies, and some advertising. He further notes that in Zambia, "a community radio project funded by the United States Agency for International Development (USAID) is helping local communities adopt safer reproductive health care practices, and that the initiative is reaching as many as 600, 000 people through a popular radio programme called "Kumuzi Kwathu" ("In Our Village"). This example of a thriving community radio in Zambia is Radio Icengelo."

2.4.5.2 Zimbabwe

Wanyeki (2000) contends that radio listening groups are also prevalent in Zimbabwe. He adds that Zimbabwe's Development through Radio Project provides a model for participatory communication. Radio listening clubs made up of women's groups within distinct geographic communities share and learn from one another on a range of issues. "The model has been taken up by the Uganda Media Women's Association to address issues of gender and development, as well as by South Africa's Kwa-Zulu Natal Community Based Organisation Network to address issues of peace and reconciliation in an area where inter-political-party violence is rife." (Wanyeki, 2000).

At this point it becomes necessary to explain how all these discussions relate to Malawi as the focus of this study.

2.5 Malawi

A recent World Bank report (2013) reports that Malawi remains a low-income developing country, with a low gross national income per capita. It is ranked 170 out of 186 countries surveyed in the United Nations Human Development Index of 2012. The poverty headcount in Malawi has declined by less than 2% since 2004/05, to 50.7%. Although poverty in urban areas reduced from 25.4% in 2005 to 17.3% in 2011, this gain was counterbalanced by deterioration in rural poverty from 55.9% to 56.6%. Eighty five per cent of Malawi's population lives in rural areas on landholdings of diminishing size. It is dependent upon increasingly unpredictable rains to support subsistence farming on severely depleted soils in a deteriorating natural environment. However, through a national input subsidy programme, Malawi achieved a 53% food surplus in 2007, from a 43% national food deficit in 2005 (Malawi Government, 2008).

In 2002, United Nations member states set up the Millennium Development Goals (MDGs); (UN, 2007). These are used as a measurement of development, and developing countries partner with internal or external development partners to fight poverty. The World Bank report referred to above concludes that "the majority of the poor live in rural areas and rural growth through agricultural transformation is clearly critical as Malawi strives to reduce the number of its people who live in absolute poverty. Malawi is unlikely to meet the Millennium Development Goals on eradicating extreme poverty and hunger, achieving universal access to education, ensuring gender equality and empowering women, and improving maternal health." (World Bank, 2013). However, the success or failure of the MDGs in Malawi may be at least partly dependent on community radio stations due to the important influence and function that community radios play.

2.5.1 Broadcasting in Malawi

The Malawi Broadcasting Corporation (MBC) is Malawi's state broadcaster. It is the body that governs the production and publication of information via television and radio. The broadcaster has two main categories of radio: commercial radio and community radio. Radio in itself has no impact without the audience it seeks to serve. Wood (2009) highlights that radio producers in

32

Malawi have a strong appreciation of the importance of engaging their community, and use a variety of different strategies to engage their listeners, including:

- "The insertion of community voices on air, including pre-recorded interviews with community members and live phone-in programmes;

- Radio listening clubs;

- Participation in production; and

- Text alerts and call-outs to listeners."

These strategies presuppose a valuable role for radio, which necessitates a fuller discussion.

There has been considerable progress in the establishment of community radios in Malawi, spearheaded by the MBC. Wood (2009) discusses the case study of a successful community radio station in Malawi: Dzimwe Community Radio, based in the district of Mangochi in the southern region of Malawi, established in 1998 as Malawi's first community radio station and it works closely with listeners to facilitate community development. The radio station is staffed by volunteers who receive weekly allowances. Although there is a stable group of core staff at the station with significant experience, they regularly have to train new volunteers because of high staff turnover. The team is highly committed to Dzimwe Community Radio and believe that it fulfils an important role by enabling the community to raise issues that affect them directly. Dzimwe Community Radio works hard to cover the issues affecting the community. This is illustrated by the way that the station prioritises its news coverage, focusing first on local news, followed by national and then international news.

The case of the DBU in Malawi, as highlighted by Wood (2009) and outlined above, gives an example of a Radio Farm Forum Model that is being used in the country. Wood (2009) notes that the DBU engages communities using participatory approaches to encourage dialogue between communities and service providers. The radio listening clubs that DBU have established are encouraged to identify the challenges they face and prioritise their challenges. DBU trains the community to use microphones and recorders and the community records the programme material without professional support.

The community members interview each other to record their problems and then identify the service provider who is not delivering the necessary services. The community members articulate what they need from the service provider and a date is agreed for a meeting between the service provider and the community. At these meetings, the service providers usually agree to meet the community demands that are premised on their rights (to clean water, health provision, etc). The meeting and the commitments are recorded by the community, who give all the recordings to DBU to be edited into a radio programme that is broadcast on MBC (Wood, 2009). Rural audiences like to see tangible results and so the programmes need to explain the problem and the solution.

Van Zyl (2003) points out that community radio should be broadcast 'by' and not 'for' the community. As such, the importance of community radio becomes relevant when addressing issues and problems that affect the communities directly. Effects at national or governmental level alone cannot realize the attainment of the MDGs, and while international development partners do play their role in attaining these goals, locals in the developing countries also need to work at achieving the MDGs at the community level.

In this regard, community radio can be seen as playing a role in meeting the informational needs of their communities. In a 2007 United Nations (UN) report, it was noted that since 2000 the poverty rate in sub-Saharan Africa declined by nearly 6% in terms of the number of extremely poor people. The importance for a community radio station to 'satisfy' a need within the community is highlighted by Collie (1999) as being able to help in eradicating poverty.

Wood (2009) concurs that the development of a two-way dialogue between producers and listeners is very important. This can be achieved by encouraging feedback from listeners regarding how a programme is produced. Feedback can be gathered from radio listening clubs, through holding phone-in programmes and by encouraging listeners to sms the programme with their feedback. Such a view enables the specific needs of a community to be met, which helps achieve some of the MDGs. Malawi can shift its focus to supporting more community radios in order to achieve some of the MDGs. This view is reflected in more depth by the Community Radio Association (1987), which contends that a community radio station comes into existence

34

and develops "in answer to the needs of a community, serving the community of interest and run by the community in which it serves".

The role and developments being achieved by community radio therefore apply to the agricultural sector, specifically its impact on small-scale farmers.

2.5.2 ICTs in Malawi's agricultural sector

The use of Information and Communication Technologies (ICTs) in Malawi's broadcasting sphere is highlighted by Wood (2009), who contends that the Malawi Broadcasting Corporation (MBC) is working with the African Farm Radio Research Initiative (AFRRI) to explore how ICTs can be used to reach and encourage villagers to engage using farm radio programmes, as well as to maximize the number of listeners. Madamombe (2005) highlights the importance of the use of ICTs when he outlines the idea of accelerating development by using both older ICTs/media, such as radio, and newer ICTs that have gained momentum in Africa over the past decade. He adds that the continent's development blueprint – the New Partnership for Africa's Development (NEPAD) – places information technologies high among its priorities. The need to introduce ICTs is outlined by Wanyeki (2000:26), as follows:

> "the advent of new ICTs, coupled with concerns about the growing information gap between the North and the South, as well as between the urban and the rural populations within the South, only serve[s] to underline the importance of resolving [the] debates on media development. The issues [are] no longer solely those relating to protecting and promoting the freedoms of expressions, information and association."

Gunner, Ligaga and Moyo, (2012) points out that ICTs strengthen the position of radio, as well as its penetration into specific communities, specifically that "it will no longer be limited to linear and non-interactive transmission". This means that ICTs have opened opportunities for radio to be received on more varied media, such as television, mobile devices and newer technology platforms.

This potential role of ICTs, especially in radio, can be used to address the challenges found in Malawi's agricultural sector.

35

2.5.2.1 Agricultural information

Information is one of the resources required for the improvement of agricultural production. Case (2002) explains that information seeking should focus more on defining the need for information, than information use. Information is important for farmers in order to maintain their livelihood or to gain a competitive edge in a rapidly changing economic and productive environment, where traditional farming methods might be ineffective to meet new demands (Morton & Matthewman, 1996). Information is essential for facilitating agricultural and rural development, and bringing about social and economic change. Unfortunately, most African countries have not devoted enough attention to providing their citizens with access to information, including agricultural information, especially in rural areas where 70% to 80% of the African population lives (Youdeowei, Diallo & Spiff, 1996:114). Also, little is known about the information-seeking behaviour patterns of African small-scale farmers.

2.5.2.2 Agricultural information-seeking behaviour

The advancement of technology has shifted the way agricultural information is packaged and made accessible to small-scale farmers. Such changes have revolutionised the behaviour of small-scale farmers, as they have different and multiple options of accessing agricultural information. There is a need to understand how the repackaging of information and the advancement in technology has shaped the types of information sought and influenced the information-seeking behaviour of small-scale farmers.

2.5.3 Impact of community radio on agricultural development in Malawi

The impact of radio broadcasting in agricultural growth and development in Africa can be immense, considering that a large proportion of the population (about 80%) are resident in the rural areas and fully engaged in agricultural production. The illiteracy rate in Malawi is one of the highest in the world with an estimated literacy rate of 64% in adults between 2000 to 2004 as given by UNESCO (2006) and quoted by FA0 (2008). "People in the rural areas, whether literate or not, should have access to any kind of information which will help them to be more capable and productive in their occupations, discharge their social and political obligations efficiently

36

and to become better informed citizens generally" (Sturges & Chimseu, 1996: 3). This access is increasingly being made possible by community radios.

The importance of community radio broadcasting in agricultural development is underlined by the agricultural programmes that are aired on the community radio stations to improve knowledge and provide information to farmers in communal areas. Wood (2009) contends that the farm radio programmes that are relevant to the community's needs and interests are vital, and adds that it is important to ensure that the programme content is judged to be relevant, not only by the producers, but also by the listeners.

According to Van Zyl (2003), community radio has a high rate of success in educational programming because of its link with the community. Sturges and Chimseu (1996) highlight that Malawi's Ministry of Agriculture's Agricultural Communication Branch is the chief agency communicating with the rural population, and is geared to transmit research results to farmers in acceptable information packages. This mainly means short leaflets intended to brief extension agents, but also includes publications like the magazine *Za Achikumbi* (an unpretentious, illustrated collection of agriculture related articles) and the handbook guide to agricultural production in Malawi. The Branch provides the necessary writing and editing skills as well as print facilities to serve this purpose.

Sturges and Chimseu (1996) strongly recommended radio as an alternative or supplement to information received through the extension services. The information provided by radio is still considered to be useful, but not usually without the endorsement of some other trusted source, preferably one which has the capacity to respond to questions. Radio messages are often broadcast at unsuitable times of day and too few people have receivers for the medium to be truly effective. Official help, probably in the form of communal radio reception facilities, is useful.

2.5.4 Mchinji District and Mchinji Community Radio

The Mchinji District is located about 108 kilometres from of the capital city Lilongwe, in Malawi. The majority of the population comprises small-scale farmers in a district that is made

37

up of about 300 000 people. These farmers work on a piece of land averaging about 0.5 hectares (Bresci, Falciai & Banda, 2011). The Mchinji Community radio station was established in September 2006, under the 'in my village project' with funding from USAID and CRECOMM. The initial focus was on HIV prevention and food security. The project formed radio listening clubs throughout the Mchinji District and the subsequent positive impact led to the establishment of a full-time community radio for Mchinji.

There are a total of 14 staff members who are mostly volunteers, with only management being paid through CRECOMM. The station has a board with seven members from various industries. It is operational 24 hours a day, and live programmes are aired between 6am and 9pm, with music covering 9pm to 5am. The coverage is mostly the Mchinji District, although parts of Chisi, Dowa, Kasunga, Mozambique, Zambia and Lilongwe can receive some signal. This means the radio station can reach more than 500,000 people.

2.6 Conclusion

The important role and function that community radio plays in society at large are significant in the development of African communities. This is because community radios foster growth and development by providing information and expertise needed for growth in the agriculture sector. The aims and goals of community radios are significant as they seek not to make profit but exist for the benefit of the communities where they are found. However, community radios face challenges in terms of sustainability, which need to be addressed at a national and regional level. Many of these challenges are a cause for concern, such as financial and infrastructural limitations. There is a need to mitigate such challenges, and to learn from what has worked well with other community radios in similar environments. The role of community radio in agricultural development is especially relevant at grass roots levels, where small-scale farmers are in the majority. Chapter three will present an appropriate methodology for establishing the agricultural information needs and information seeking behaviour of the small-scale farmers in Malawi's Mchinji district.

Chapter Three - RESEARCH METHODOLOGY

3.1 Introduction

This chapter describes the research methodology and techniques used to carry out the study. It focuses on research design, target population, sampling methods, data collection tools, reliability, validity and an evaluation of the research methods.

3.1.1 Research methodologies

Research methodology and methods are two different terms. On the one hand, research methods refer to techniques linked to various purposes, which could be methods to evaluate the accuracy of results, or to collect data, or to establish statistical relationships between data (Blaxter, Hughes & Tight, 2006). Techniques used in research methods to gather data form a basis for the explanation, interpretation and prediction of the study (Cohen, Manion & Morrison, 2000).

Research methodology, on the other hand, encompasses research methods as well as the logic of methods used and the purpose of methods, such that findings are easily evaluated by the researcher or readers. It is a 'science of studying how research is done scientifically' (Kothari, 2004).

3.2 Research Design

Research design maps the action plan that connects the philosophical assumptions, inquiry strategies and specific methods (Creswell, 2003). This study will use a combination of both qualitative and quantitative research methods. While some researchers may prefer to separate these two methods, it has been established by many researchers that these two approaches to research are complementary and that using both offers an information-rich study (Creswell, 2003). Studying a phenomenon as a whole can be complex and triangulation is one way in which it could be made easier (Borg & Gall, 1989), and combining qualitative and quantitative approaches is another way of grasping complexity.

Quantitative research involves the use of statistical and numerical data in order to get information on a particular phenomena or issue. The quantitative method is quite rigid and focuses on the 'facts' and the cause-effect relationship (Welman, Kruger & Mitchel, 2005). Quantitative research can be easily replicated by another researcher as it is numerical. This means that it makes use of standard measures that fit perspectives and experiences into a limited number of predetermined and numbered categories (Denzin & Lincoln, 2005).

Qualitative research, on the other hand, involves the study of data in a holistic manner and it is usually flexible and not as easily replicable (Leedy & Ormrod, 2005). Qualitative research involves the researcher more as he/she engages with the audience to get more information (Mouton & Marais 1990). This research approach answers questions of a complex nature by describing and understanding a phenomenon from one's own view-point (Silverman, 2006). The description of small communities, groups and organisations lends itself to using the qualitative approach (Welman, Kruger & Mitchel, 2005).

Community radio studies that were carried out in Mozambique by Karyln (2001) have shown that the best way to approach its use in a rural African setting is to incorporate the use of both quantitative and qualitative research approaches. The quantitative approach will generate numerical data, which would be useful to policy makers and stakeholders in the running of community radio programs in Mchinji. The qualitative approach will complement the numerical data so that one can draw richer and more relevant findings (Bryman, 2006).

3.2.1 Selection of research site and target groups

A study group or population refers to the collection of units of analysis from which the researcher seeks to make conclusions (Welman, Kruger & Mitchel, 2005). In defining a population, the researcher specifies the sample group, geographical location and boundaries of the population being targeted (Neuman, 2006).

The study was carried out in Malawi, in the Mchinji District about 108 km from the capital Lilongwe. The majority of the population comprises small-scale farmers in a district which is made up of about 300 000 people. These farmers work on a piece of land averaging about 0.5

40

hectares (Bresci, Falciai & Banda, 2011). The major constraints and challenges faced by the farmers are: lack of credit and capital to buy farming implements and tools, seed and fertilizers; lack of good and improved seed-types; lack of marketing information; and lack of channels to market their produce. These farmers rely heavily on rainfall because of poor technology in the area (Falciai 1996).

The study was carried out at the main community meeting place for farmers found in the one of the district villages and close to the physical location of the Mchinji Community Radio. It was assumed by the researcher that the majority of people coming to the communal meeting place are representative of the target group of small-scale farmers needed for the study. One target group is therefore the small-scale farmers that frequently come to the communal meeting place in Gomani 2 village and who listen regularly to or know about the community radio. The village chief and extension officer helped with giving direction to the researcher as well as ringing the bell, an indication of a meeting approval. The chief and extension officer are not key informants to the research questions and were not included in the interviews. The other target group was the community radio staff of the Mchinji Community Radio station. The staff members are few and rotate such that required duties continue while the interviews take place. The staff members comprise of the station manager, producers and broadcasters who are key informants for the study.

3.2.2 Sampling procedures

Sampling describes a method of picking out part of a whole population because most times the population is too large to study as a whole (Kothari, 2004). There are many farmers in Mchinji, which makes it difficult to interview such a large population. The study therefore focussed on Gomani 2 village, which is more centrally located and easier to access. This study therefore aimed at a sample group of 30 farmers in order to describe aspects of the information-seeking behaviour and the agricultural information needs of the Mchinji small-scale farmers. It should be noted that this is a descriptive study and that the findings cannot be valid for all small-scale farmers in this village of the Mchinji District.

To get the sample for this research, the eligibility of the sample elements are that each has to possess similar characteristics (Babbie & Morton, 2001). In this case, the elements suitable for the study have to be small-scale farmers in Mchinji District who regularly listen to or know about the community radio.

A combination of non-probability sampling methods was used for this study and these are purposive, typical case, volunteer, and convenience. Purposive sampling is limited to specific types of individuals who are able to provide the desired information, or conform to a criterion set by the researcher (Teddlie & Yu, 2007). Purposive sampling aims at looking for cases that are representative or typical of a type or an area of interest (Teddlie & Tashakkori, 2009). In this study, thirty farmers were purposively approached to participate, using set criteria of those who come to the agricultural market and know about the Mchinji Community Radio.

In doing so, the researcher adopted the typical-case sampling approach, which considers those who are typical or representative of the target group. This technique enables study findings to be generalised to similar cases (Teddlie & Tashakkori, 2009). The farmers were approached as they arrived at or passed by the communal meeting place for farmers.

Volunteer sampling principles were also used. These focussed on the target group participating voluntarily (Du Plooy, 2001). The researcher explained to each farmer approached that participation was purely voluntary so that there were no expectations at the end of their participation in the study.

Convenience sampling was also applied since farmers were going to be interviewed according to their availability at the communal meeting place for farmers. In this method, respondents are selected according to accessibility and availability (Struwig & Stead, 2001). This is mainly because the researcher had limited time to stay in the district, as well as limited resources.

The team of five producers and broadcasters from the Mchinji Community Radio were chosen for the study using purposive sampling, as they are the key informants. However, four staff members were available during the data collection. They were interviewed voluntarily, as the

researcher would telephone and ask for those staff members available on the interview day. The Mchinji Community Radio station is small and only has these five main producers and broadcasters. The other members are volunteers who are not constantly at the station for long periods.

3.3 Data Collection Instruments and Procedure

A mixed-method data collection approach will be used in the study. This is when a single study collects quantitative and qualitative data (Teddlie & Tashakkori, 2009). The approach applied within this method is the "within strategy mixed-method", which collects a mixture of quantitative and qualitative data using a similar data-collection technique (Teddlie & Tashakkori, 2009).

The main instruments of data collection were face-to-face semi-structured and unstructured interview schedules. Interviews of this sort are less rigid compared with structured interviews where the interviewer only asks questions that are on the interview guide and does not ask any further questions (Leedy & Ormrod 2005). Unstructured interviews enable the interviewer to get more qualitative data, which complements the quantitative data. This upholds and helps in supporting any quantitative data provided in a study. Interviews give space for participants to openly share their views and opinions and to express their regard of situations (Cohen, Manion & Morrison, 2007).

3.3.1 Advantages and disadvantages of interviews.

The advantages of semi-structured interviews make them more suitable for this study. The flexibility of semi-structured interviews makes room for the yielding of information that the researcher may not have anticipated (Fontana & Frey, 2005). Such information may add value and give wider perspectives or ideas to the researcher. The physical presence of the interviewer reduces any misunderstandings. The interviewees have the chance to ask for clarity in cases where the question is not clear.

The semi-structured interview can be done even with people with no specialised skills. This is an advantage especially with a mainly illiterate target population. The physical presence of the

43

interviewer also enables observation of non-verbal signs and reactions (Payne & Payne, 2004). These enable the interviewer to make judgments on the response given to specific questions. The stimulation brought about by interviews helps in recalling memories or information potentially valuable for the interviewee (Fontana & Frey, 2005).

Semi-structured interviews also have disadvantages. The cost of interviews (time and money) is high, and interviewers may be biased (Creswell, 2003). If the interviewer has no people skills or is not familiar with the language of the target group, they may not be able to probe for details (Marshall & Rossman, 1999). The presence of the interviewer may influence the behaviour of respondents and introduce bias (Creswell, 2003).

These disadvantages should also be taken into consideration when choosing this data-collection method. In this study, the interviewer was aware of these disadvantages and tried to manage them as well as possible. This was achieved by having two translators who knew the vernacular; sourcing sufficient funds well ahead of the data collection period; establishing good rapport through a meeting with the village head and the village extension officer before data collection; and dressing in a way acceptable to the community.

3.3.2 Semi-structured interviews with small-scale farmers

Interviews were held with the small-scale farmers who agreed to take part to enable them to express their views, opinions and experiences about their information-seeking behaviour, their information needs and the Mchinji Community Radio. A good rapport was established with most of the farmers, which made it relatively easy to probe them for more answers and explanations. Semi-structured interviews are based on lists of questions required for a study in a certain order, although some unexpected questions may arise during the interviews (Pretty & Vodouhe, 1997). The interview schedule for the farmers has four sections (A-D), with each section focusing on the objectives of the study in order to answer the main research question *(see Appendix A)*.

As noted by Nyareza (2010), the interview questions are elements of a dialogue, which is the main purpose of the interview. This enables the interviewees to give more views and opinions in a more relaxing set-up, as good rapport would have been established.

3.3.3 Unstructured interviews with the community radio staff

In-depth interviews were conducted with five members of the Mchinji Community Radio using a list of predetermined questions. Room for further probing and more information was made possible, although the main interview was guided *(see Appendix B)*. The interviewer managed the interview by probing with questions that led the discussion back to the questions and topics in discussion. The interviewer also probed using questions based on some of the feedback provided by the small-scale farmers.

The five staff members of the community radio station included someone from the management and broadcasting section, disc jockeys, and members responsible for scheduling programmes. This mix generated diverse opinions and information which gave the researcher a better understanding of the community radio's strengths, weaknesses, challenges and opportunities to address the agriculture information needs of the Mchinji District's small-scale farmers.

3.4 Validity and Reliability

The establishment of truthfulness and the credibility of findings are based on validity and reliability (Gray, 2004). They are of great concern in data quality-control measures (Ndunguru, 2007). Reliability looks at the level to which stable and consistent results are measured. This indicates the level to which a measure is without bias (Sekaran, 2003). Reliability ensures that the same results are obtained if the same research is repeated in similar conditions (Babbie & Mouton, 2001; Powell 1985).

Validity mainly refers to the truthfulness of the data found in the study (Teddlie & Tashakkori, 2009). It is the extent to which findings truthfully represent the real situation. It tests whether the instrument measures what it is supposed to measure (Gray, 2004; Leedy & Ormrod, 2005; Neuman, 2006). To ensure validity and reliability, the researcher did the following:

- Triangulation results in a mixture that ensures complementary strengths (Johnson & Onwuegbuzie, 2004). It therefore helps in bridging issues related to validity and reliability (Silverman, 2006). The researcher used both quantitative and qualitative approaches in the semi-structured interviews.

45

- The researcher also submited the semi-structured and in-depth interview schedules to the Ethics Committee of the University of Pretoria's Faculty of Engineering, Built Environment and Information Technology for approval by an expert panel.
- Validity was also ensured by making sure that the content of the data collection instruments was linked to the research objectives (Gray, 2004).

3.5 Limitations of the Methodology

The limitations of the methodology are that:

- Generalisation in qualitative research can lead to the transferring of findings from different contexts to more general or abstract relations (Flick, 2006). The findings of this study are not easily applicable to other studies in the same field as various contexts may differ from each other.
- The location of the study area is remote and the target groups are members of an under-developed, close-knit community with limited exposure to those outside their district. The target groups may be biased against people coming from outside their area.
- This study uses descriptive statistics, and the findings cannot be generalised to other districts of Malawi, although they may offer general insights.

3.6 Ethical Considerations

A researcher has the obligation to be ethical in every aspect of his/her study. Ethical issues are of particular importance when involving humans (Powell and Connaway, 2007). There has to be a balance between the researcher's need for knowledge and the rights of the target population (Neuman, 2006). Several factors were considered in practicing good ethics in this investigation, namely:

- It is vital to always obtain the consent of a participant. All the participants in this study were given a brief explanation of the purpose and objectives of the study;
- Permission to carry out the study was granted by the University of Pretoria;
- The subjects of the study were never exposed to any harm or risk;
- The data gathered was stored privately and was not easily accessible to those not permitted to view it. All data was filed and stored in a safe place;

46

- The participants were assured of confidentiality and the researcher aimed to ensure that the research was carried out in a private and comfortable place; and

- The study adhered to the University of Pretoria's ethics policy.

These ethical considerations were taken with high regard and promote good information ethics.

3.7 Conclusion

This chapter explained the research design, target study population, sampling methods, data collection procedure and instruments, validity, reliability, ethical considerations and an evaluation of the methodology. These were discussed in relation to how they can elicit relevant data on how that the Mchinji Community Radio can be adapted to meet the information needs of the small-scale farmers in its community. The next chapter will present, analyse and interpret the data.

Chapter Four - DATA ANALYSIS AND INTERPRETATION

4.1 Introduction

The aim of this chapter is to represent and analyse the raw data obtained from the fieldwork and to interpret the data meaningfully. The data presented in this chapter is obtained from semi-structured interviews with 25 small-scale farmers and unstructured interviews with four key personnel from the Mchinji Community Radio (*see 4.3*). Data that addresses a particular theme are presented together. The results are presented in verbal description form, as well as symbolic representations in the form of graphs and tables.

4.2 Analysis and Interpretation of Semi-Structured Interviews

Twenty-five small-scale communal farmers were interviewed *(see Appendix A)*. The researcher had anticipated interviewing 30 small-scale farmers. However, those interviewed are those that came to the village meeting place. These small-scale farmers are from Gomani 2 village, which is in the Mchinji District in Malawi. The interviews were conducted in the village, at the central meeting place, as had been pre-approved by the village chief and area extension officer.

The sequence of data presentation aims:

1. To identify the demographic make-up of the small-scale farmers;
2. To determine their main source of income;
3. To study the farmers' information-seeking behaviour;
4. To identify their agricultural information needs; and
5. To determine the use and roles of the Mchinji Community Radio.

4.2.1 Gender and education levels of respondents

The majority of the respondents were male with 56% (n=14) representation; the females had a representation of 44% (n=11). While travelling in the district, the researcher observed that most of the fields were tilled by women rather than men. This may have been the reason why mostly men gathered at the agricultural meeting place when summoned by the village bell, as some women may have still have been in distant fields.

48

Figure 1: Gender of respondents
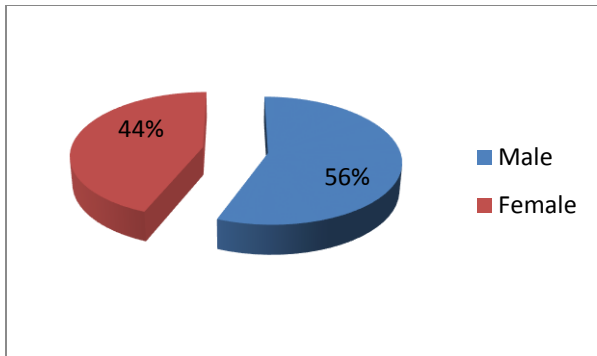
The majority of the female small-scale farmers do not have any formal education (32%, n=8), in comparison to the majority of the male small-scale farmers who had completed standard 8 (36%, n=9). A few women small-scale farmers indicated that they have some formal education at levels of form 4 (8%, n=2) and standard 8 (4%, n=1). A few men had no formal education (12%, n=3). It is worth noting that none of the farmers indicated that they had received any form of tertiary level qualification.

Table 1: Education levels by gender

	Female		**Male**		**Total**	
Formal Education	No.	%	No.	%	No.	%
Standard 8	1	4%	9	36%	10	40%
Form 2	0	0%	1	4%	1	4%
Form 4	2	8%	1	4%	3	12%
Tertiary level	0	0%	0	0%	0	0%
None	8	32%	3	12%	11	44%

The low level of education amongst the small-scale farmers has an influence on their information seeking behaviour. They are less likely to rely on information documented in text or do their own research using centres such as libraries.

4.2.2 Source of income and surplus produce of the farmers

When asked what their main source of income was, 100% of the farmers confirmed that it was farming. Of the total number of farmers, 96% practice maize production and only 4% practice animal husbandry.

The small-scale famers were also asked how much surplus produce they sold in the previous year, 2012. The majority of the respondents (34%) did not sell any surplus bags in 2012, with 29% of the farmers having sold between one and five bags, 25% having sold between six and ten bags, 4% having sold between eleven and fifteen bags, and only 8% having sold more than fifteen bags of surplus produce. The remaining 4% who practice animal husbandry did not sell any surplus animals in the previous year. Figure 2 below represents the surplus produce in number of bags for those who practice maize production.

Figure 2: Number of surplus bags of produce sold in 2012
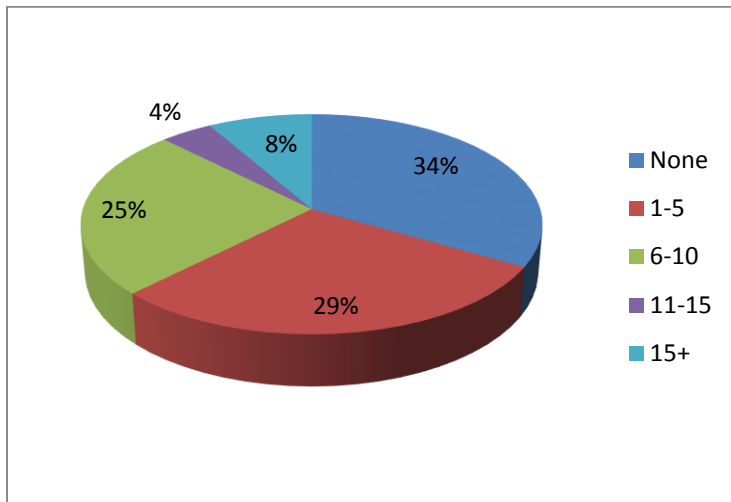
This confirms that the respondents are mainly subsistence small-scale farmers. A lack of surplus may be due to various reasons, ranging from lack of proper information on farming methods that produce high yields, to lack of land or finances to support the farming. This may give an indication of some of the special agricultural information needs of these small-scale farmers namely, that of increasing harvest and market information for selling produce at competitive rates.

50

4.2.3 Information-seeking behaviour of farmers

It was essential to establish the accessibility of various sources of information in order to determine the respondents' information-seeking behaviour. Table 2 shows the accessibility of the sources of information, with the Extension Officer receiving a perfect score (100%, n=25), followed by radio (92%, n=23). The least accessible source of information was the television, with 4% (n=1). None of the farmers had access to the Internet. It is worth noting that the accessibility of radio and extension workers is almost the same, with an 8% (n=2) difference in scoring. The two ranked high, and there is a huge gap between them and the next source of information that is accessible to the small-scale farmers. This shows that these two sources of information play a major role in influencing the small-scale farmers' decisions as they rely on the information provided.

Table 2: Information sources and their accessibility to the farmers

Source of Information	Have Access		No Access	
	No.	%	No	%
Radio	23	92	2	8
Newspapers	2	8	23	92
Television	1	4	24	96
Mobile phones	7	28	18	72
Extension officers	25	100	0	0
Internet	0	0	25	100

It was also worth investigating how often these information sources were actually utilised for farming purposes, as access does not necessarily mean that one is making use of the source. The most utilised source of information for farming purposes was the Extension officer (60%, n=15) followed by the radio (52%, n=13). A few of the farmers indicated that they make use of mobile phones as a source of information for farming purposes (16%, n=4). The least utilised sources of information were newspapers and the television, with both having the same indication (4%, n=1). Figure 3 below shows the utilisation rates of the various sources of information.

Figure 3: Utilisation of information sources for farming purposes
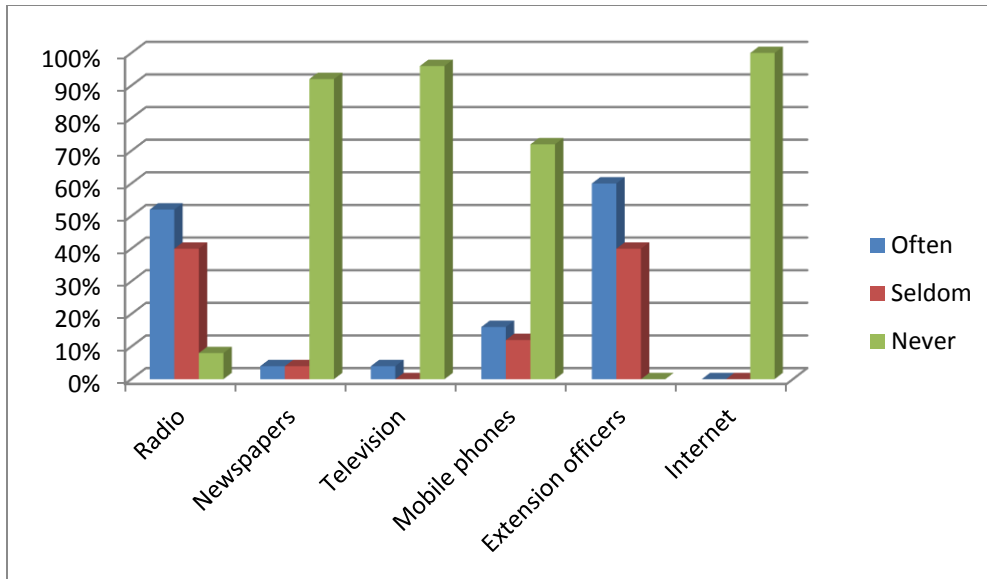
The farmers were also asked to note how satisfied they are with the accessibility of the various sources and tools. It is worth noting that, again, the Extension officer was indicated as the most satisfying (88%, n=22), followed by radio (84%, =21). The least satisfying sources of information were mobile phones (8%, n=2) and newspapers (4%, n=1). Figure 4 below shows the levels of satisfaction of the farmers in terms of the accessibility of various sources and tools. Radio is rated high in accessibility and this confirms some of the benefits of radio as discussed in Chapter Two.

Figure 4: Satisfaction of farmers with accessibility of the various sources
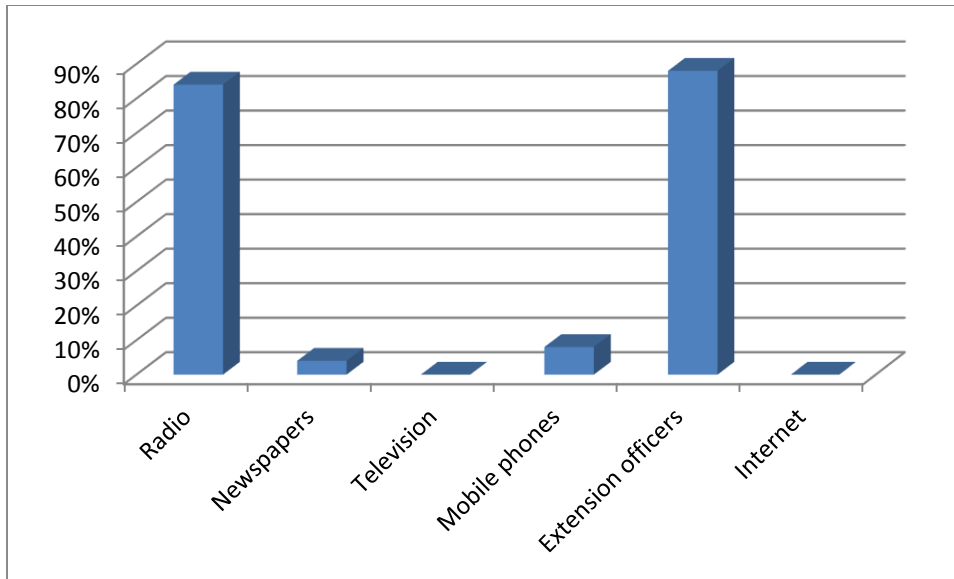
4.2.4 Information needs of small-scale farmers

It is essential to know the agricultural information needs of farmers instead of making assumptions. The small-scale farmers were asked to indicate and rate the type of information needs for their farming areas or specialties. Table 3 below shows their indicated types of information and the ratings.

Table 3: Information needs of farmers

Type of Information	Very Necessary		Necessary		Not Necessary	
	No.	%	No.	%	No.	%
Weather updates	23	92	2	8	-	-
Market information	22	88	3	12	-	-
Crop production	24	96	1	4	-	-
Animal production	22	88	3	12	-	-
Agricultural funding opportunities	23	92	1	4	1	4
Agricultural projects in other Malawian communities	22	88	1	4	2	8
Training opportunities	21	84	2	8	2	8

53

The most-needed types of information were crop production (96%), weather updates (92%), agricultural funding opportunities (92%), market information (88%), animal production (88%), and agricultural projects in other Malawian communities (88%). The least necessary type of information was on training opportunities (84%). Although 'training opportunities' was the category least selected for the type of information needed, one key informant from the radio staff indicated that training information is a key need for small-scale farmers *(see 4.3.4* for a fuller discussion).

These information gaps provide a good opportunity for radio to be the lead provider of these types of information, as almost all of them need researched and up-to-date information sources. This should be taken note of in light of the low educational levels of the farmers, as highlighted in section 4.2. This may have an impact on their preference for sources of agricultural information, as they may have limitations using modern technology such as the Internet, or low literacy levels that affect their reading abilities.

The farmers were also asked to indicate the difficulties they face in obtaining the information they need. The majority of the respondents indicated that they did not know if the information needed exists (52%), followed by those who did not know where to obtain information (48%), and those who indicated that information-seeking is expensive (40%). A lower number of respondents indicated that they faced a challenge in obtaining information from different sources because the information is of poor quality (28%). Figure 5 below shows the challenges faced by the small-scale famers in obtaining information.

Figure 5: Difficulties faced in obtaining information from sources or tools

48%

28%

40%

52%

- Do not know where to obtain information
- Do not know if the information needed exists
- Information seeking is expensive
- Information is of poor quality
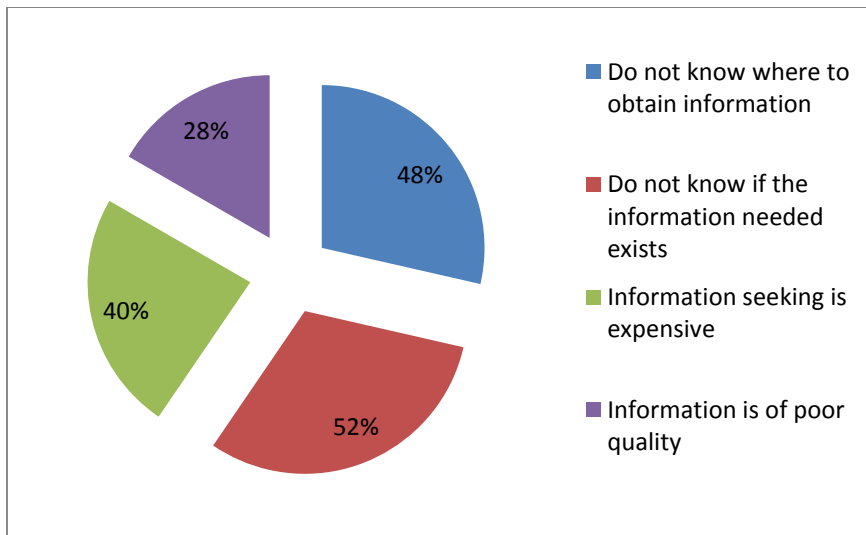
The Mchinji Community Radio has an opportunity to act as the main provider of agricultural information, such that the small-scale farmers in this community will be left without doubts as to where to find the agricultural information they need. The adaptation of varied agricultural programmes by the Mchinji Community Radio can ensure that small-scale farmers know that the information they need does exist, is of good quality and is relatively affordable.

Most small-scale farmers who live in rural villages tend to use oral tradition more than other forms of communication. This has a large influence on their information-seeking behaviour. The farmers were asked to indicate the type of information they seek from their neighbours or from community members. The top-ranking types of information sought in this manner are: market information (92%, n=23); crop production (88%, n=22); animal production (88%, n=22); and agriculture funding opportunities (84%, n=21). Information on agriculture projects in other Malawian communities ranked low (76%, n=19), with the least sought being information on weather updates (56%, n=14) and training opportunities (56%, n=14).

This shows that there is a gap to be filled, and there is a need for specific information such as 'agriculture funding opportunities'. Such types of information can be heavily distorted in an environment of prominently oral knowledge exchange. Such specialised information is distributed at district, provincial, national and international levels. There is a need for a more formal, reliable, informed platform that can be used by the small-scale farmers for the exchange

of agricultural knowledge. The knowledge being circulated in the villages contains several inaccuracies and errors that can be rectified by using the right tool or source of information. The Mchinji Community Radio is such a tool and can be used to meet the agricultural information needs of the small-scale farmers in its district.

Figure 6 below shows the distribution of information sought from neighbours or communities.

Figure 6: Type of information sought from neighbours or community members
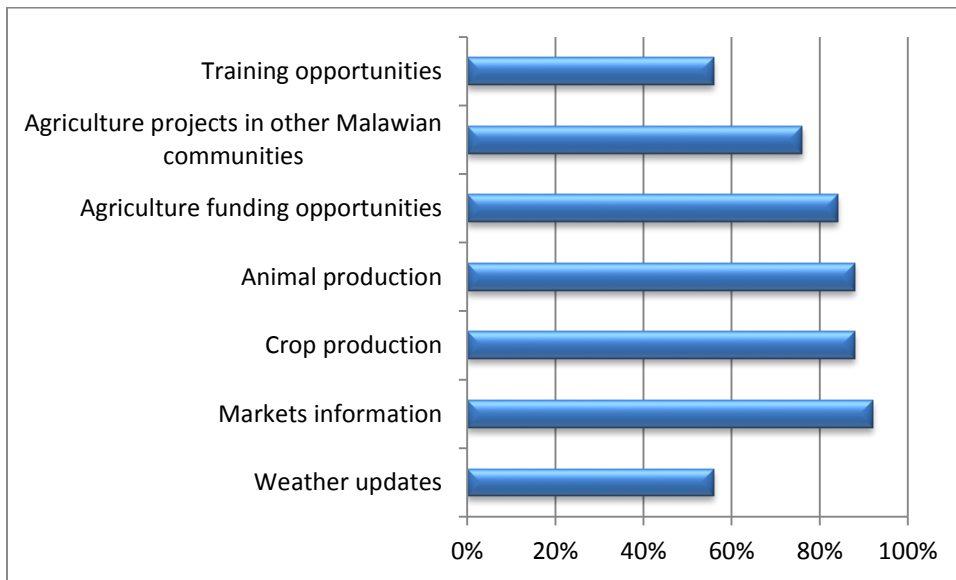
Language is a major factor in determining the successful communication of information for any audience. The small-scale farmers were asked to indicate the language in which they receive agricultural information from the information providers. The majority of small-scale farmers indicated that they receive the information in Chichewa (88%, n=22), and a few said that they receive the information in English (12%, n=3).

The small-scale farmers were then asked to choose a preferred language in which they would like to receive agriculture information. The majority of the small-scale farmers (92%, n=23) said they would like to receive information on agriculture in Chichewa. Only a few of the small-scale farmers said they would prefer to receive the information in English (8%, n=2). This is another benefit of community radio, as highlighted in Chapter Two. The community radio can air the majority of agricultural information in 'Chichewa'. This would mean that the Mchinji

Community Radio needs to adapt its programmes to broadcast mainly in 'Chichewa' in order to meet the agricultural information needs of the small-scale farmers.

4.2.5 Use and roles of the community radio

The small-scale farmers were asked if community radio is an important source of information. The majority of the small-scale farmers were in agreement that it is an important source of information (88%, n=22), whilst a few felt that radio is not an important source of information (12%, n=3). The question was asked in general and not specific to any subject. This, however, enables us to know that a majority of small-scale farmers have a high regard for the importance of radio.

When asked if they had access to a radio set, the majority of the farmers said they do have access (92%, n=23), and only a few do not have access to a radio set (8%, n=2). This may be mainly attributable to the inherent advantages of radio, such as it being low cost, portable, having no need for electricity, and its ability to be used by more than one person at the same time (see Chapter Two). This is an opportunity for Mchinji Community Radio to target small-scale farmers, as the majority of them have access to radio.

Ownership of a radio set is important to establish, as this may influence the utilisation of the radio and the information it provides. The farmers were asked whose radio set they have access to and the majority of them access a neighbour's radio set (44%, n=11). A significant number have a radio set in their own home (40%, n=10). No one (0%) selected having access to a radio through the local shops or at the local businesses. The remaining farmers said they have access to their father's radio (4%, n=1), or access radio through radio clubs (4%, n=1). Most farmers access their neighbour's radio or have their own radio set in their homes. These high figures show the benefit of affordability attributable to radio sets *(see Chapter Two)*. Figure 7 below shows where the farmers access radio.

57

Figure 7: Whose radio farmers have access to.
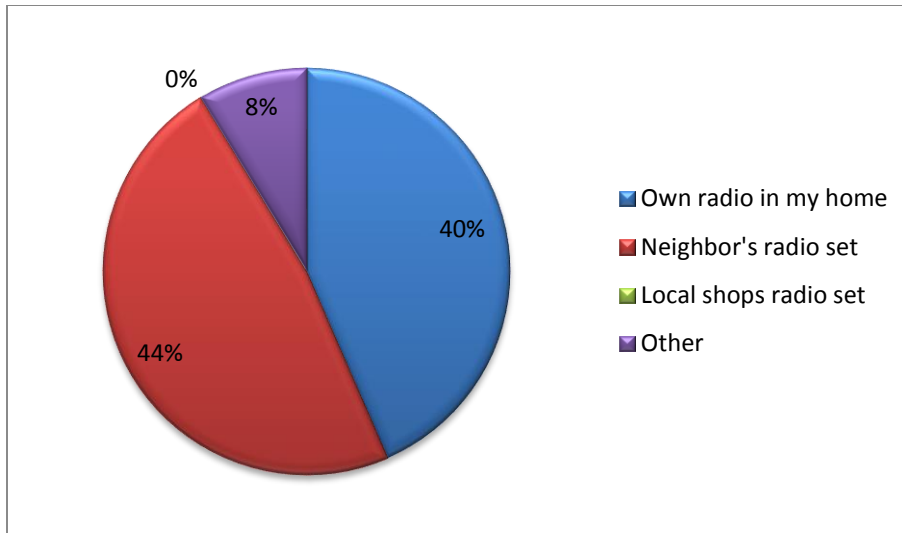
The farmers who indicated that they had access to a radio set (92%, n=23) were then asked if they listened to Mchinji Community Radio station. All of them said that they do listen to the Mchinji Community Radio station. They were also asked to indicate if the Mchinji Community Radio could be improved by providing them with agricultural information. A majority of the farmers said that it could be greatly improved (88%, n=22) and the remaining said it was could be moderately improved (4%, n=1).

The farmers were asked to note some of their favourite programmes aired on the Mchinji Community Radio. Table 4 below lists, in no particular order, the programmes that were said to be some of the farmers' favourite programs. It is worth noting that the majority of programmes identified are non-agricultural.

Table 4: Favourite programs aired on Mchinji Community Radio (in no particular order)

| Farming	Agriculture
Katani Kambwili	Health
Nyimbo (Songs)	News
Kalata (morning letters)	Sports
Family planning	Culture
Religion	Youth programmes
Weather updates	Environment updates

58

Community radio often relies on feedback and communication from its community members. This will help in making sure that some local content is aired, which the community members can easily relate to as they recognise names as well as contextual issues. When asked if community members in the Mchinji District contribute information, knowledge or their experience of agriculture to the Mchinji Community Radio programmes, the majority of the farmers said they contribute (80%, n=20) and a few said that they do not (12%, n=3). Although the majority of the farmers indicated that they do contribute to the content, the extent to which they actually contribute to the radio station is minimal. This was verified by the Mchinji Community Radio's head of presentations and producer of agricultural programmes, who notes that due to limited resources, the radio does not go frequently to the community to collect feedback nor does the community send in their own feedback frequently (*see 4.3.1*).

The ways in which the farmers contribute information, knowledge or experience to the radio's programmes were also explored. This helps establish if there is a relationship that exists between the community and the radio station. It also helps to give an understanding of the channels of communication between the two, and helps evaluate or understand their effectiveness. The farmers were asked to indicate the ways in which they contribute information to the Mchinji Community Radio station, especially for those who had agreed that they contribute to the programmes aired by the radio station.

The majority of farmers said that they contribute information to Mchinji Community Radio station through visits to the radio stations and interviews by the radio station staff (72%, n=18); and a significant number said they contribute through the radio's listening clubs (24%, n=6). Phoning in to the radio station was indicated as a contribution by a few farmers (12%, n=3); sms service on mobile phones (8%, n=2) and writing to the radio station (8%, n=2) had the lowest scores. Although these ways of contributing were noted, this carries very little weight as the radio's head of presentations and producer of agricultural programmes mentions contributions of information by farmers as one of the radio's weaknesses (*see 4.3.1*). This is because Mchinji Community Radio has limited financial and human resources, which hinders them from going out to the community to get feedback. The small-scale farmers have low levels of education, which could be a reason for the limited number of letters received by the radio station. The

59

majority of the small-scale farmers do not sell any surplus produce, which may indicate poor financial resources that may also limit them from phoning in to the radio station or sending smses to the radio station (see 4.2.1 and 4.2.2).

Figure 8: Ways of contributing information to Mchinji Community Radio
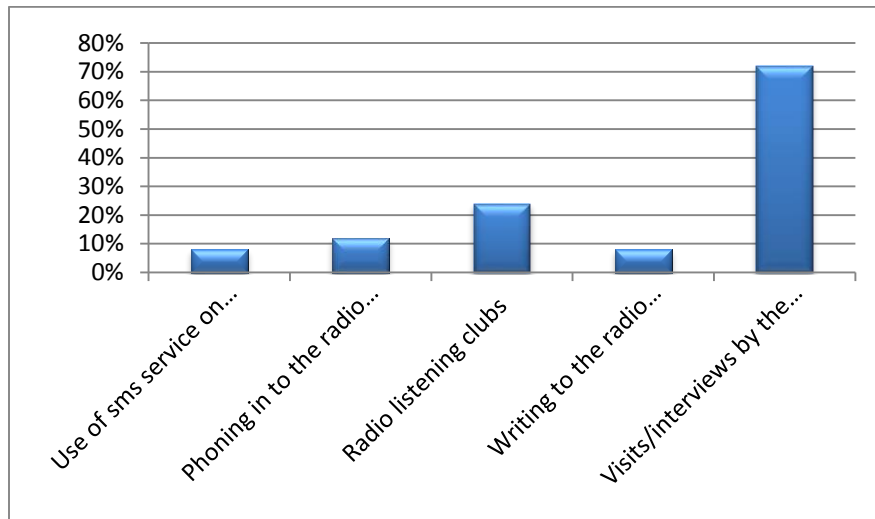
The small-scale farmers were asked to comment on any other ways they think Mchinji Community Radio can better meet their agricultural information needs. They indicated the following:

- Provide more opportunities to contribute to the radio;
- Agricultural programmes to be aired more frequently;
- More information on maize production;
- More visits by the radio staff to the village;
- Training information;
- Current affairs in agriculture;
- Cultural programmes that affect agriculture; and
- General information on agriculture

This feedback is crucial for the Mchinji Community Radio staff to receive as it enables them to better understand the information needs of the small-scale farmers. The feedback shapes the radio's programing and can even be used to advocate for funding.

4.3 Analysis and Interpretation of Unstructured Interviews with Radio Staff

The station manager provided a brief background to the radio station, as well as other general administrative issues. The station was established in September 2006, under the 'in my village project' with funding from USAID and CRECOMM. The initial focus was on HIV prevention and food security. The project formed radio listening clubs throughout the Mchinji District and the subsequent positive impact led to the establishment of a full-time community radio for Mchinji.

There are a total of 14 staff members who are mostly volunteers, with only management being paid through CRECOMM. The station has a board with seven members from various industries. It is operational 24 hours a day, and live programmes are aired between 6am and 9pm, with music covering 9pm to 5am. The coverage is mostly the Mchinji District, although parts of Chisi, Dowa, Kasunga, Mozambique, Zambia and Lilongwe can receive some signal. This means the radio station can reach more than 500,000 people.

Unstructured interviews are open-ended interviews and enable one to get information that might be missed if using a structured guide. The researcher intended to interview five staff members. However, a total of four interviews were conducted with key staff members of the Mchinji Community Radio who were available. The interviews were key in triangulating data provided by the farmers, and generating new data relevant to the research questions. The key staff members were made up of:

- the radio station manager;
- head producer of agricultural programmes, who was also acting as head of the presentation department;
- a presenter who is also a producer; and
- a station journalist who is also a presenter.

Each interview took an average of 30 minutes and all the interviews were done on the same day at the radio station premises. The order of interviews was dependent on the staff member who was available as some had to be on air during the visit.

The following themes were mainly used to guide the flow of the interview:

1. The successes and challenges of the community radio in providing agricultural information to the small-scale farmers of the Mchinji District.
2. The participation of the community in shaping the programming of the radio station.
3. Scheduling programmes on agricultural information at convenient times for the farmers.
4. The agricultural information needs of the Mchinji District and how they are ascertained.
5. Innovations in the exchange of information with small-scale farmers.

It is important to note that the interviewees confirmed some answers given by their colleagues, and these will not be repeated in the analysis. Each interviewee was asked to comment on the five topics, but other follow-up questions helped in probing for more details. The analysis will present each question, accompanied by the responses given by each staff member. The responses will be triangulated with those given by the small-scale farmers and also with each response provided by the four key staff members interviewed. Similar responses will only be reported where they add weight, and in most cases will not be repeated.

4.3.1 The successes and challenges of the community radio in providing agricultural information to the small-scale farmers of the Mchinji District

The station manager highlighted the following as some of the successes of the community radio in providing information to small-scale farmers in Mchinji:

- Some of the farmers have been able to learn and master the agricultural farming calendar through the information aired on the radio station;
- The small-scale farmers practice evidenced-based farming when they get the information. She gave the example of their use of some modern technology, as well as farming methods, subsequent to programmes aired and said this has led to higher yields; and
- The station manager said that one of their mandates is to focus on food security for the Mchinji District.

The low surplus produce from the small-scale farmers, however, contradicts the claim that the small-scale farmers are using evidence-based farming and are producing higher yields *(see 4.2.2).*

The producer of agricultural programmes (head of the presentation department) is one of the volunteers and said he has a passion for his work. When asked to comment on the successes of the community radio in providing agricultural information to the small-scale farmers he had the following feedback:

- The station is able to provide the right information at the right time, for example the weather updates because the weather station is located in the Mchinji District.
- The farmers are able to interact with the extension workers who work with the radio. They can send 'smses' or phone in with information requests to the radio station. The radio then looks for the information from the district agriculture office or from the Ministry of Agriculture.
- Some of the radio listening clubs send reports to the community radio, especially those formed under the radio project, as each club was given a radio set.

The station journalist and presenter mostly agreed with what had been said by the first two interviewees. However, he also focused on the success of participatory communication and added that even the limited feedback received from the farmers improves the quality of programming.

When asked for feedback on this topic, the presenter who is also a producer said that the radio station had been successful in helping establish the radio listening clubs. This confirms the information provided by the producer of agricultural programmes. Some of her other feedback has been captured already.

The station manager was asked to comment on the challenges, and she had the following to say:

- It is not easy to visit farmers more frequently due to resource limitations. This is because the initial funding that started the station has since been exhausted and the station has to find other means of fundraising, which is proving to be difficult;
- The station has challenges in finding agricultural experts who can come to the station to review the agricultural information they research for airing on the radio;
- They also lack experts who can come on air to give their expert advice to the community.

It is interesting to note that some small-scale farmers indicated that they faced a challenge in obtaining information from different sources because the information is of poor quality *(see*

4.2.4). This is confirmed by the station managers' response on challenges faced by the community radio in providing agricultural information to the small-scale farmers of the Mchinji District.

The challenge of limited financial resources, which have reduced visits to the small-scale farmers, was also highlighted. This contradicts the majority of responses from the small-scale farmers, who said they contribute information and knowledge to the radio station through visits and interviews by the radio staff *(see 4.2.5)*. The community radio also faces challenges of limited agricultural expertise. There is a need for the small-scale farmers to have confidence in the agricultural information they receive, and this calls for improvements within the Mchinji Community Radio, such as sourcing agricultural experts *(see 5.2).*

Comments from the producer of agricultural programmes on the challenges facing the station mostly confirmed those provided by the station manager, although he provided some more views:

- Sometimes the Ministry of Agriculture does not provide the current agriculture information. This prevents the station from airing the most up-to-date information, or to answer some of the questions sent in by the community.
- Access to quality agricultural information is not easy.
- Limited financial and human resources, as well as transport, means that the radio staff cannot go out into the district as often to collect feedback or collect farmers to come and participate in some of the live programmes.
- Some farmers are shy during interviews when they come into the radio station and are on air.

The presenter who is also a producer confirmed the challenge of lack of transport or a station vehicle for the staff members to go out and meet farmers more frequently. She also talked of the power cuts that make the radio go off-air. These could be fixed if the radio had adequate funding. The feedback from her on the remaining topics was mostly a repetition of what the first three interviewees had talked about.

4.3.2 The participation of the community in shaping the programming of the radio station

The station manager expressed the view that the staff endeavour to get as much participation from the community as possible. They receive letters with queries from community members, which they respond to on air. She also went on to talk about their short message service (sms) software that they use to send out short messages on various topics to the community members for whom they have contact numbers. The small-scale farmers reported that they have limited access to and use of mobile phones. This may indicate that the community radio receives more communication from other community members via sms compared with the number they receive from small-scale farmers *(see 4.2.3).*

When asked to comment on this topic, the producer of agricultural programmes repeated much of what was said by the station manager. The additional point he made, however, was that farmers in particular can request recorders from the radio station. These are small, portable hand-held recorders called Sansa, and are provided through the station's work with Farmer Voice Radio International. A station staff member shows the lead farmers how to use the recorders and they give them permission to use the recorders for a certain period. The farmers then record themselves doing various agricultural projects or using various methods. The recordings are then brought back to the station where they are programmed for airing. These messages are then aired for other farmers across the district to learn from and discover what neighbouring farmers are doing. This is mostly popular with radio listening clubs.

4.3.3 Scheduling programmes on agricultural information at convenient times for the farmers

It was reported that farmers suggest time-slots. The station manager gave the example of slots on Tuesdays and Thursdays at 1pm, which were suggested by the farmers. It was also noted that the station at times increases the duration of a programme based on the demand and suggestions sent in by the farmers. At the moment, the main dedicated agricultural interactive programmes get about two hours a week, which is split into 30-minute slots over the days. The pre-recorded information from the Ministry of Agriculture is also aired, and the length of each programme is dependent on the amount of information sent.

The station runs 5 to 10 minutes of agricultural tips a day. When asked about ways in which the Mchinji Community Radio can better meet their agricultural information needs, the small-scale farmers expressed a need for airing agricultural programmes more frequently *(see 4.2.5)*.

4.3.4 Agricultural information needs of the Mchinji District and how they are ascertained

A station staff member goes out into communities to conduct interviews with the community members, including the farmers. This is how the station gets feedback on the programmes aired by the radio station. The sms software that the station has allows the community members to send in short messages with their information needs to the station. Letters sent by the small-scale farmers and other members of the community to the radio station have additional information needs specified by the community.

The station then aims to find and broadcast information that covers the most common needs identified through these processes. The discussion above *(see 4.3.1-4.3.3)*, however, shows that the small-scale farmers have limited education and may not be sending in a significant number of letters. It also confirms that mobile phones are not readily accessible and that the financial challenges faced by the station limit them from going into the farming villages to conduct interviews with the small-scale farmers.

It was nonetheless felt that probing the station journalist further would give more insight into his views. The most important message he emphasised was to give the farmers training on how to, for example, capture messages correctly on the recorders as well as other relevant training.
It should be noted that the small-scale farmers themselves rated training as one of the types of information they need the least *(see 4.2.4)*. However, the Mchinji Community Radio station journalist and presenter emphasised the need for training the farmers.

4.3.5 Innovations in the exchange of information with the small-scale farmers

The main innovation in the exchange of information with the farmers noted by the station manager, as well as the other three staff members, was sms software called Frontline. It carries two numbers and this helps in managing congestion when the community members send in their short messages through this service. The producer of agricultural programmes (head of

presentations) made similar remarks on the station's innovations in the exchange of information with small-scale farmers. However, he also added that the community radio had been innovative in not only providing information on markets to the farmers, but also going the extra step of linking them, for example, with a company called Bugo Investments that provides investment opportunities and loan facilities.

He also said that they were innovative in that they invite organisations who want to work with small-scale farmers to come to the community radio, where they firstly sensitise the farmers on air before the organisations go out to meet the farmers. The extent to which invited organisations or experts consult with the radio and then go and meet small-scale farmers may be limited. This is interesting to know, as the station manager pointed out that they have a challenge in getting experts to work with in the district.

4.4 Conclusion

The analysis and interpretation of the data gives considerable insight into the answers for the main question. The data analysed shows that the farmers have a major dependence on and trust in the community radio and the information that they receive. It also shows that the radio has a focus on food security for the district, and makes an effort to provide agricultural information. This, however, is not always tailored to meet the precise information needs of the farmers, and limited time is given to the airing of programmes based on a participatory communication model. Several challenges face the radio station and most of them centre on financial resources, which hinders radio staff from fully meeting the agricultural information needs of the small-scale farmers.

The next chapter presents a proposed strategy that can be used by the Mchinji Community Radio to ensure that radio staff understand and meet the information needs of small-scale farmers. It clarifies the key steps that a community radio should take, as well as focussing on areas to prevent oversights in the provision of agricultural information to small-scale farmers.

Chapter Five – PROPOSED STRATEGY FOR MCHINJI COMMUNITY RADIO TO MEET THE INFORMATION NEEDS OF SMALL-SCALE FARMERS

5.1 Introduction

This chapter outlines a recommended strategy for the Mchinji Community Radio, which would enable it to meet the information needs of small-scale farmers. Although this strategy is aimed specifically at the Mchinji radio station, it could be adapted by other community radios to meet the information needs of their small-scale farmers. The proposed strategy is based on the data analysis done in Chapter Four. Personal observations made during the field visit and lessons from the literature review are also added where they are helpful. The strategy and its components are presented as a graphic model *(see Figure 9 below)*.

5.2 Community Radio Strategy

A community radio that seeks to meet the information needs of a targeted audience in an effective way needs to have a strategy to ensure that this is achieved. In this case, the strategy is focused on the Mchinji Community Radio. The community radio needs to have a holistic strategy that enables it to function at maximum capacity, ensuring that its goals and targets are achieved. This strategy proposes elements that need to be well coordinated and that are linked to ensure an efficient community radio that functions well in meeting the information needs of its target audience.

The strategy combines programming and communication planning, partnerships, sustainability planning, and quality checks at all levels. This strategy shows how such elements are linked and how they influence the success of the community radio. These elements are discussed in detail below and show how they should be coordinated.

5.2.1 Programming and communication plan

The programming of Mchinji Community Radio should be planned and have guidelines written down as part of the operations manual and policy. It should not be compromised by conditions at any given time, such as the Department of Agriculture not having sent the radio presenter a script

68

of information. The programming plan should include guides on dates of submission of information and an alternative disaster management solution for each planned programme. When this is in place, it ensures that there is focused programming that is guided or influenced by the needs of the target audience, as these needs are well-known ahead of time and scheduled properly. Community members in a community radio often play an important role in the radio's programming success or failure. When asked if community members in the Mchinji District contribute information, knowledge or their experience of agriculture to Mchinji Community Radio programmes, a majority of the farmers said they do contribute (80%, n=20; *see 4.2.5)*. It is therefore important to use indigenous knowledge, and to ensure ownership by the community.

A good communication plan should be based on a two-way model with each stakeholder sending information and also getting feedback. The communication plan should be participatory in nature to ensure the buy-in of stakeholders at various levels. The communication plan influences the programming of the radio station as it involves all the stakeholders who shape the community radio *(see 4.3.2)*. The stakeholders include the target audience, who in this case are the small-scale farmers, further broken down into clusters of village heads, women farmers, radio listening clubs and youth farmers. Although this group is the intended beneficiary of the information from the community radio, they need to be involved at all stages in order to help ascertain their information needs, challenges and seeking behaviours. They also need to feed back to the radio station the logic of the programming, the quality, the quantity and the gaps in the programming of the community radio.

Other important stakeholders include the partners who can further be divided into information provision partners and financial partners.

5.2.2 Partnerships

It is necessary for any entity to have partnerships in order to thrive. The Mchinji Community Radio's strategy should consider various levels of partnerships. These are needed to help ensure the success of the community radio and to help narrow gaps at each stage. In this strategy, partnerships are considered at three main levels namely: information, financial, and users. These

levels need two-way communication to and from the community radio to ensure their buy-in, and support of the mandates of the community radio.

5.2.2.1 Informational partners

The informational partners serve mainly as specialists in the provision of required information by the community radio and its audience. These range from the government Department of Agriculture to the national research institutions, tertiary research institutions and non-governmental organisations. These partners are the core specialists in providing evidence-based information in agriculture, which ensures that best practices are then implemented at the community level. The Mchinji Community Radio faces the challenges of having limited information sent to them as well as not having access to the specialists who can respond to the needs of their audience *(see 4.3.1)*. It is therefore essential to ensure that if the radio station intends to meet the agricultural information needs of small-scale farmers, it should prioritise the forging of partnerships at this level.

The more diverse the information partners, the better, as the levels of specialisation, turnaround time to farmer queries and levels of input will be different. The work that these partners do with the community radio can ensure working with the farmers directly in doing research, for example, and the farmers can benefit from having practical sessions with the specialists in their own farms or communities. In most cases, information partners such as tertiary institutions and national research stations are eager to work with real communities as this enables them to do practical research that can be used as case studies.

5.2.2.2 Financial partners

The financial partners are equally important, as these are needed to ensure the financial viability of the community radio. The main operational costs of the community radio are dependent on the availability of finances. The financial partners can range from non-governmental, governmental, project partners to the commercial industry. In most cases, the governmental partners may have limited funding to cover a specified area within the operations of the community radio, but may support in other forms. A good example is the government subsidy of payments of licenses or airtime of a community radio.

70

Non-governmental and project partners are good financial partners for community radios. They offer long-term or short-term financial support depending on the approach used by the community radio when seeking funds. Long-term support can be up to ten years or more and can be useful in meeting the operational expenses of the community radio. Most non-governmental organisations or projects may have a niche area of support that is in line with their vision. A community radio seeking to meet the information needs of small-scale farmers will need to work with such organisations or with projects that have an agricultural orientation. This will enable the organisations to have a more focused interest in the community radios that are in line with their vision or mission. The Mchinji Community Radio was established through a non-governmental organisation and the salaries of remunerated staff members are paid for by that non-governmental organisation. The radio staff's main concern was the lack of finances, which hinders them from carrying out some key tasks *(see 4.3)*.

5.2.2.3 Small-scale farmers as partners

The users of the community radio are key to its success or failure. The users, or the audience, of the community radio should not be viewed as mainly passive users of the information they receive, but rather as active contributors who help shape the future of the community radio. Because the small-scale farmers use the information they receive, they are the best to give feedback to the community radio on its usefulness, their high-priority agricultural information needs, and can help in lobbying for the survival of the community radio.

In this study, the users of the community radio were asked to comment on any other ways they think Mchinji Community Radio can better meet their agricultural information needs *(see Table 5)*. Such feedback from the users has implications for the community radio's programming, management, financial support, and in justifying its role in the community. A community radio, by virtue of its name, is there to serve the community and to be driven or supported by its targeted community. It is therefore essential to have the buy-in of the community for it to serve as a distinctive community radio. Ensuring a well-founded partnership with the users of the community radio enables the distinction of a community radio from other types of radios. It also

sets the prioritisation by the community members, which can be used for financial support and other key partnerships.
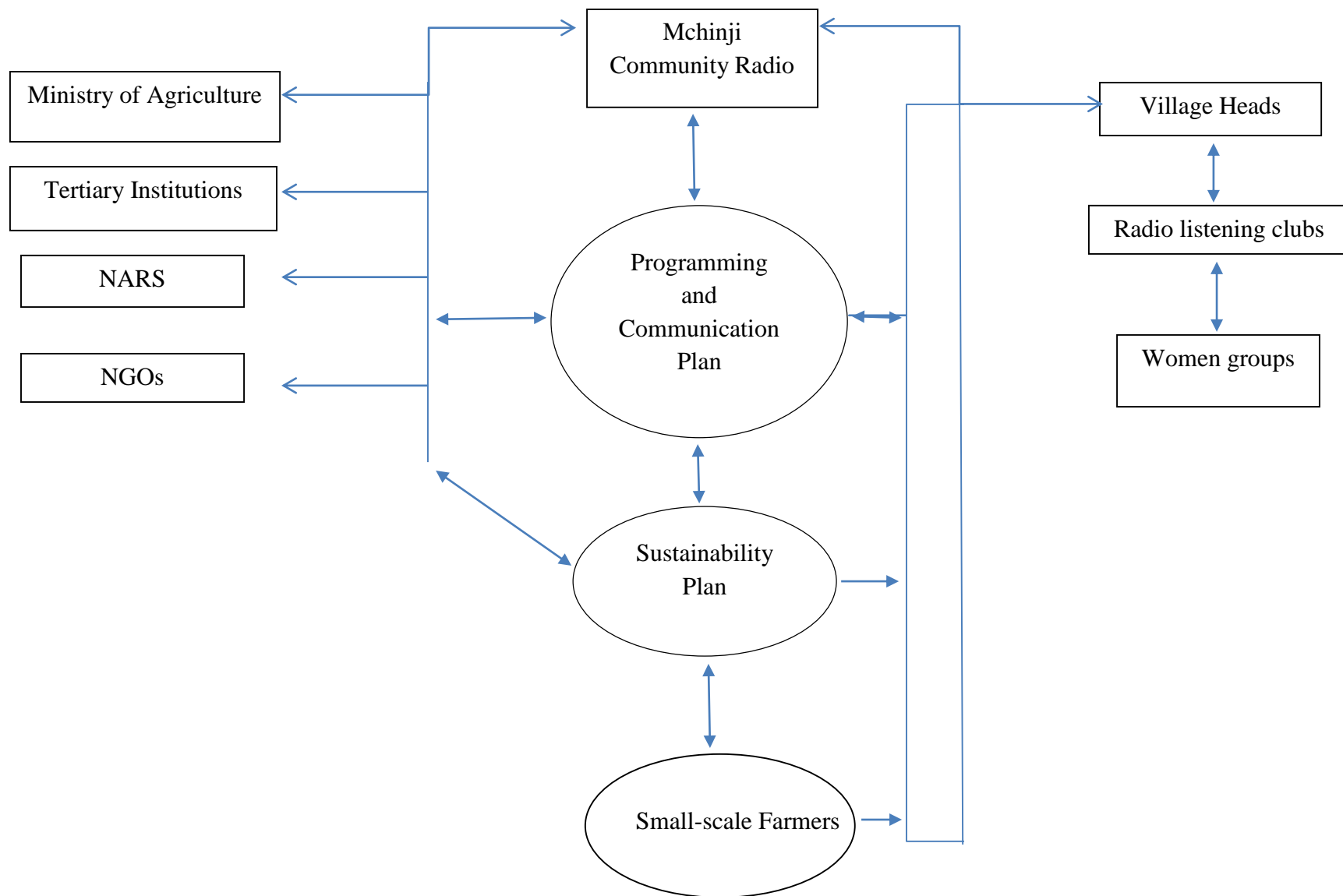
5.2.3 Sustainability planning

The strategy of a community radio needs to include a sustainability plan to ensure its continuity. Sustainability planning should not only be focused on financial sustainability but also on human resources, programming and the sustainability of its main objectives. These elements frame the continuity of the community radio and should be monitored to ensure that the Mchinji Community Radio meets its main mandate.

Financial sustainability is required for operational and implementation purposes. It should be included in the sustainability planning, but should not overwhelm other elements that are included in the planning. It is essential to have a plan set out for the financial arm of the community radio as this will impact on the goals that can be achieved. Daily operational expenses such as electricity, water, salaries, transport and maintenance of equipment rely on the financial muscle of the community radio. The sustainability plan should be one of the main roles of the management of the community radio. The board members need to ensure that there is a concrete plan for the financial sustainability of the community radio.

The human resources of the community radio need to be skilled and specialised in their various portfolios. They also need to have a relationship with the audience they serve, as the community tends to build trust with specific staff members, such as presenters or those who go into their villages for interviews or who work with radio clubs. It is essential that the human resource sustainability planning takes into consideration not only the skills needed but also a plan on retaining the human resources it has for as long as possible. The Mchinji Community Radio's station manager emphasized that there is a high turnover of staff and this needs to be addressed, as it is one of the main limitations of the radio (see 4.3).

72

Figure 9: A Proposed Strategy for Mchinji Community Radio

The Mchinji Community Radio has no human resources sustainability plan, and as such has a high turnover. They are dependent on volunteers and lack specific skills needed in the different departments of the community *(see 4.3)*.

The sustainability planning also needs to take into consideration the programming of the community radio. This is linked directly to the main goals, vision and mission of the community radio. Influences such as financial support or politics may easily influence the programming or vision of the community radio. As such, these issues should be explicit in the sustainability planning to ensure that the Mchinji Community Radio continues not only to abide by the guides of its programming but also that such programming is sustained through its goals, vision and mission.

5.2.4 Quality checks

The strategy of the community radio must incorporate quality checks at all levels of the strategy itself. These checks must ensure its competitiveness in the quality of information delivery, services, programming, human resources, financial strength and the relationships it has with the various partners of the community radio. This ensures that the community radio keeps up with current community radio trends and builds its image into one that the community can trust for their informational needs.

Quality checks should be based on guidelines specific to community radios, mass media or information communication technologies. There also need to be guided agreements with the core partners of the community radio. These must be done periodically as agreed by the board or the partners of the community radio. There should be internal quality control checks that can be performed at managerial level as well as at departmental levels. External quality checks need to be done by an independent party to reduce any bias and to help the community radio stay up to standard.

The checks need to be incorporated at all levels of the strategy and plans made to meet challenges or fill gaps where noticed. These will enable the Mchinji Community Radio to be distinct and focussed on meeting its main goals, vision and mission.

74

The model, presented in Figure 9, shows three main components: the programming plan, the communication plan, and the sustainability plan. These are guided by stakeholders such as the small-scale farmers, women's groups, radio listening clubs, and village heads. These stakeholders act as the main consumers of the agricultural information but are useful in providing feedback to the radio on areas that need improvement. The other set of stakeholders in the model include NGOs, the National Agricultural Research System (NARS), tertiary institutions, and the Ministry of Agriculture. These can be regarded as the producers of the information, but also consumers of information about the agriculture information needs of the small-scale farmers. They can, however, improve the use of the Mchinji Community Radio, as they are able to communicate directly to specialists.

The Mchinji Community Radio can ensure a working participatory model that functions well in order to meet the agricultural information needs of small-scale farmers by making use of the strategy. The strategy ensures that there is an efficient knowledge flow from the community radio and its knowledge stakeholders (who include the small-scale farmers) to the targeted group of small-scale farmers. The flow loops back to the community radio in the form of feedback and more input, making the model more participatory. This is depicted in Figure 10 below.

75

Figure 10: How to ensure a participatory model at Mchinji Community Radio
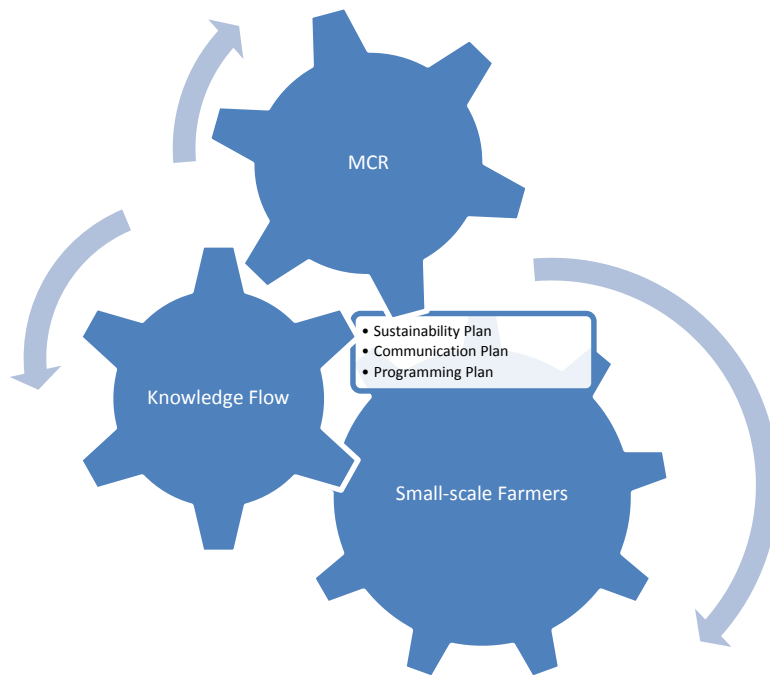
Figure 10 above represents a functional participatory model based on an effective community radio strategy. This model represents a community radio that can adapt to ensure that it meets the information needs of its target audience. The Mchinji Community Radio can make use of the strategy and the proposed model to ensure that they meet the agricultural information needs of the small-scale farmers of Mchinji District, Malawi.

5.3 Conclusion

The strategy and participatory model focuses on enabling the Mchinji Community Radio to thrive and focus on achieving its main goals, vision and mission. This is done in a manner that is sustainable, participatory and with a large buy-in from its various stakeholders, but with the small-scale farmers as the key target audience. It represents a holistic approach, which maintains high standards and ensures a permanent place for the radio in the community. This strategy, if adopted by the Mchinji Community Radio, will enable it to succeed in meeting the agricultural information needs of the small-scale farmers of the Mchinji community.

Chapter Six - FINDINGS, RECOMMENDATIONS AND CONCLUSIONS

6.1 Introduction

It is essential to consolidate the research findings, come to evidence-based conclusions, and suggest recommendations based on such evidence. The findings based on the research evidence are made with guidance from the main research questions and sub-questions of the research. This chapter gives a summary of the research findings using the literature review in Chapter Two, as well as the data and analysis in Chapter Four. The data interpretation, its subsequent analysis and the strategy proposed for a community radio in Chapter Five influence the recommendations given.

6.2 Findings for the Research Sub-Questions

The study's main research question intended to find ways in which the Mchinji Community Radio needs to adapt to meet the agricultural information needs of small-scale farmers in the Mchinji District in Malawi. This main question was guided by sub-questions, and the findings are discussed for each sub-question.

6.2.1 What are the benefits and limitations of using radio as a medium to communicate agricultural information to small-scale farmers?

The review of the literature in Chapter Two evaluated the benefits and limitations of radio as a medium to communicate agricultural information. The findings from the data and its analysis are in line with most of the literature reviewed. The majority of the famers have access to radio and use it more in comparison to other sources of agricultural information. Most of the farmers own a radio set or have access to a neighbour's set.

The local community radio broadcasts in the local Chichewa language. This seems fitting as the majority of the small-scale farmers have no formal education, as well as low understanding of international languages such as English (*see 4.2.1*). The use of the local language ensures that the

77

agricultural information broadcasted is easily understood by the small-scale farmers. The farmers are limited to contributing to the radio using various simple methods such as interviews with radio staff during field visits, smses, letters and phoning in to the radio station. The contribution is at a low level due to various challenges with the community radio, most of which are economic (*see 4.3.1*).

One of the main limitations of radio that the study found is that it is dependent on getting its agricultural programming information from various sources that have their flaws and limitations. This hampers its ability to provide current agricultural information or respond to questions timeously (*see 4.3.1*).

From all the evidence gathered, the benefits clearly outweigh the limitations and explains why radio is so widely used in Africa, and in this case in Malawi.

6.2.2 How has community radio been used to meet the agricultural information needs of small-scale farmers in developing countries?

The study focused on a community radio based in a developing country and that targeted a community of small-scale farmers. The study found that community radios have the best opportunity to provide agricultural information that meets the needs of small-scale farmers in developing countries.

The community radio has partnered with the local government's agricultural department office and the Ministry of Agriculture to receive updated agricultural information that is applicable to its own population. It has also partnered with the local weather department to get current reports for the community farmers. The information partners are, however, not always available or dependable in providing up-to-date agricultural information (*see 4.3.1*). The study recommended a strategy that addresses this challenge.

The farmers are able to express themselves in their local language and can ask specific questions that pertain to their community. This is not the case with national radio stations or media, for example.

The community's extension workers work with the small-scale farmers and are the most used and the most accessible sources of information (*see 4.2.3*). The extension workers have the opportunity to use the Mchinji Community Radio to reach out to a wider audience at the same time, by having a slot on air for a specific programme and should partner with them.

6.2.3 What are the special agricultural information needs of small-scale farmers in the Mchinji District in Malawi, and what are the special features of their information-seeking behaviour?

The information needs of the small-scale farmers are mostly centred around agricultural matters. The study shows that although the Mchinji Community Radio provides some agricultural information, but that the farming community still needs more specialised agricultural information that should be broadcast more frequently. There is a need for specific time slots and additional time to be allocated to agricultural programmes than is currently provided.

The study also identified other specific areas of information needs that were highlighted by the small-scale farmers and radio staff, which include: training information, maize production information, current global affairs in agriculture, and cultural programmes that may affect agriculture (*see 4.2.5*). The small-scale farmers need other information that they seek from each other – such as information on weather reports and crop production – which implies that the information supplied by the community radio is not enough.

The information-seeking behaviour patterns of the small-scale farmers are influenced by various elements such as education, language, culture and age, amongst others. The majority of the small-scale farmers of the Mchinji community have no formal education and are illiterate. They rely mostly on oral information as opposed to seeking out written information. As such, the farmers make use of the extension officers as well as the radio to a large degree (*see 4.2.3*). The common link being that they both provide oral information.

Another finding is that the majority of the farmers prefer receiving information in the local Chichewa language rather than in English. This might be influenced by the low levels of formal

79

education among the farmers. As such, information provided in English might not be sought after or well understood by such farmers.

The farmers rely on each other as sources of information. This might be influenced by the fact that some farmers turn to older farmers in the community due to their wisdom from years of experience. This information-seeking behaviour has the limitation that some of the information may be erroneous, and means that old farming practices remain in place and preventing modern practices that are better for the small-scale farmers (*see 4.2.4*).

The farmers do not use modern ICTs such as mobile phones, television and the Internet to seek agricultural information. This means packaging information using these media would not work for these small-scale farmers (*see 4.2.3*).

6.2.4 How can the Mchinji Community Radio adapt its programmes in order to meet the agricultural information needs of small-scale farmers in the Mchinji District in Malawi?

The effectiveness of a community radio is at its peak when it can meet the needs of its targeted audience. Mchinji Community Radio needs to adapt its programmes in order to meet fully the information needs of the small-scale farmers of its community. There is a need to increase the scheduled agricultural programmes so that there is a programme aimed at farmers every day. The findings show that agricultural programmes have a maximum of two hours of air each week, split into 30-minute segments over about four days (*see 4.3.3*). This implies low frequency as well as a small quantity of agricultural information.

The scheduled time for the agricultural programmes is influenced by the small-scale farmers to a lesser extent. However, there is a need to have a regular time for airing agricultural programmes each day, so that the small-scale farmers have a common and set time for the agricultural programmes. This will ensure that the small-scale famers will not miss the agricultural programmes.

The community radio can also record a show and repeat the same programme at other set times on the same day. For example, if a programme is aired at 1pm, it can be recorded and aired again

at 8pm to ensure that the small-scale farmers who were engaged in other farming activities in the afternoon can receive the same information in the evening (*see 5.2.1*).

The agricultural programmes aired by Mchinji Community Radio are mostly influenced by the local department of agriculture as well as the Ministry of Agriculture. The radio station needs to partner with more stakeholders such as the University of Malawi, Bunda College of Agriculture, private agricultural research institutions, non-governmental organisations, and other agriculture-related institutions (*see 5.2.2.1*). This will ensure that there are more sources of high quality evidence-based information, and will reduce the delays in getting feedback for questions posed by the small-scale farmers. Access to current research practices and methods is also enabled with a wider pool of partners.

The high illiteracy rates of the farming community in Mchinji and their low access to and use of ICTs such as television, mobile phones and the Internet should be taken into consideration. The sms system that the radio uses to sensitise its community is a good initiative, but it is not appropriate for the farming community. The radio should repeat on air whatever they send out via sms to enable the farmers to receive that information. These messages can be repeated during an agricultural programme.

The study shows that the small-scale farmers would like the community radio to conduct more field visits. This has a major influence on the programming, as the radio staff can get more up-to-date feedback and can do field-aired programmes that might be more interesting for the small-scale farmers. The field visits are a good way of getting feedback and contributions from the small-scale farmers, which can be scheduled for programming. The field visits can be recorded and played back later at the radio station or shared with partners of the radio station.

6.3 Finding for the Main Research Question

The main research question asked how the Mchinji Community Radio can meet the agricultural information needs of small-scale farmers in the Mchinji District in Malawi. This was guided by the sub-questions, which have been discussed above *(see 6.2.1 – 6.2.4)*.
The data collected, its analysis and subsequent interpretation is discussed in full in Chapter Four,

81

which led to the proposed strategy for the Mchinji community radio in Chapter Five, aimed at ensuring that it meets the agricultural information needs of small-scale farmers in a developing country scenario. The proposed strategy is based on the reviewed literature and the analysed data of the study.

The strategy is focused on the Mchinji Community Radio. The community radio needs to have a holistic strategy that enables it to function optimally and at maximum capacity, ensuring that its goals and targets are achieved. This strategy incorporates elements that need to be well coordinated and that are integrally linked. This will ensure an effective and efficient community radio that functions well in meeting the agricultural information needs of its target audience, who in this study are the small-scale farmers.

The elements that the strategy combines are programming and communication planning, partnerships, sustainability planning, and quality checks at all levels. This strategy shows how such elements are linked and how they influence the success of the Mchinji community radio (*See 5.2*).

6.4 Summary of other findings

The majority of the small-scale farmers do not have any formal education, and tertiary education within the target group is non-existent. The majority of the small-scale farmers are women, who have the lowest levels of education and highest levels of illiteracy. This has implications for their bilingual abilities, especially with international languages such as English. The low levels of formal education (*see 4.2.1*) also imply low exposure to technology and national and international developments in agriculture.

Commercialisation of the small-scale farmers' produce, even on a small scale, is very low. The small-scale farmers who have some surplus to sell are those practicing crop husbandry, with those practicing animal husbandry having no surplus sales (*see 4.2.2*). This implies that the majority of these small-scale farmers are still at subsistence levels of farming.

There is still minimal usage of some of the popular and current ICTs, such as mobile phones, televisions and the Internet. The majority of the small-scale farmers do not have access to these technologies, and the few that have access do not use them mainly for informational purposes, but for entertainment or communication purposes (*see 4.2.3*).

The most popular sources of agricultural information used are the extension officers and the radio. These also have the highest accessibility rating for the majority of the small-scale farmers. The least-used and accessed sources of agricultural information are television and the Internet. This could be influenced by the low levels of formal education and low commercialisation of the farmers' produce, which reduces the affordability of such sources of information.

The majority of the farmers who access and use radios have access to their own radio set or a neighbour's radio set. A few have access through a radio listening club.

Most of the farmers receive agricultural information in the local Chichewa language. In terms of preference of language, the majority of the farmers still prefer receiving agricultural information in Chichewa. A few prefer to receive agricultural information in English.

Although it is not well supported, those who use and access the community radio are able to contribute to the station with their views, skills and expertise. If the Mchinji Community Radio had enough funds, small-scale farmers could contribute by interacting with the community radio staff when they do field visits in the villages (*see 4.3.1*). A few contribute by phoning into the station, writing letters and by sending short messages via the short message system on their mobile phones.

6.5 Recommendations

The following recommendations are based on the reviewed literature, analysed data and the findings:

83

- Community radio stations should consider their programming carefully in order to ensure that it has a high impact on the targeted audience. A community radio that seeks to meet the agricultural information needs of small-scale farmers must understand their information-seeking behaviour and appreciate the potential impact of the information they air to such audiences. The proposed strategy in Chapter Five should be implemented by community radio staff in collaboration with farming communities.

- The role of the community radio needs to shift from being solely a provider of information about specific farming practices to small-scale farmers, to that of a developmental approach so that these small-scale farmers have the opportunity to progress from subsistence farming to commercial farming. This will influence many aspects of community development such as employment, industry and even health. This can be achieved by the radio focusing on entrepreneurial programmes working with farmers in a participatory way to ensure that they apply evidence-based practices in their farming. The farmers should have a sense of ownership of the community radio and buy-in will also ensure the long-term continuity of the radio station.

- Community radios need to have a sustainability strategy that enables them to operate at maximum capacity. The Mchinji community radio studied, was started as a result of a project with donor funding and this is typical of most community radio stations. A sustainability strategy needs to take into consideration the financial strength of the radio station, which could be from grants, fundraising strategies, fundraising through partnerships and other models. Such a strategy will enable the radio station to retain staff, acquire the right equipment and licenses, and to fully engage with its community, thus meeting its information needs more effectively.

6.6 Suggestions for Further Research

Further research can be done in the following areas:
- There is a need to investigate how community radios can engage with communal projects to ensure that the theoretical and practical skills needed by small-scale farmers are identified and provided to them.

84

- The sustainability of community radios in an era of advancing ICTs as well as competition with national radio stations.
- The role that community radios can play in influencing agricultural policy from the perspective of the voice of the voiceless small-scale farmers.
- How modern technologies can be incorporated into community radios to target specific audiences in the community.

6.7 Conclusion

The study aimed to analyse the role of a community radio station in meeting the agricultural information needs of small-scale farmers in Malawi. Specifically, it aimed at exploring the ways in which the Mchinji Community Radio needed to adapt to meet the agricultural information needs of small-scale farmers in the Mchinji District in Malawi. The aims of the study were achieved and, an innovative strategy was developed and proposed.

In conclusion, there is a need for the Mchinji Community Radio station to understand more fully the information-seeking behaviour of the small-scale farmers in its community and to consider the ways they can adapt to match these information-seeking patterns. The community radio needs to re-strategise its programming to ensure that it fully meets the needs of the small-scale farmers of the Mchinji District. The Mchinji Community Radio is still held in high regard by the small-scale farmers in its community. The small-scale farmers' lives can be either developed to a higher level of commercialisation or they can remain at subsistence level. The influence of the Mchinji Community Radio's agricultural information strategy will be a significant factor in this matter.

REFERENCES

1. Acker, J.C. & Mbiti, I.M. (2010) Mobile Phones and Economic Development in Africa. CGD Working Paper 211. Washington, D.C.: Center for Global Development.

2. Babbie, E. & Morton, J. (2001) *The Practice of Social Research*. Cape Town: Oxford University Press.

3. Berrigan, F.J. (1979) *Community Communications: The Role of Community Media in Development*. New York: UNIPUB.

4. Berry, R. (1971) *Communication through the Mass Media: A Reader in Communications*. London: Edward Arnold Publishers.

5. Bessette, G. (2004) *Facilitating Community Participation*. Peinang, Southbound and Ottawa: International Development Research Centre.

6. Blaxter, L., Hughes, C. & Tight, M. (2006) *How to Research*. 3rd ed. New York: Open University Press.

7. Boafo, K.S.T. (2006) Participatory development communication: an African perspective. In Bessette, G. (ed.). *Facilitating Community Participation*. Peinang, Southbound and Ottawa: International Development Research Centre.

8. Borg, W.R. & Gall, M.D. (1989) *Educational Research: An Introduction*. 5th ed. New York: Longman.

9. Bresci, E., Falciai, M. & Banda, L.B. (2011) *Diagnostic Analysis of the Madzi Smallholder Irrigation Scheme (Malawi)*. Lilongwe, Malawi: Ministry of Irrigation and Water Development.

10. Bryman, A. (2006) Integrating quantitative and qualitative research: how is it done? In Bryman, A. (ed.). *Mixed Methods*. Volume II. London: Sage Publications.

11. Case, D.O. (2002) *Looking for Information: A Survey of Research on Information Seeking Needs and Behavior*. Amsterdam: Academic Press.

12. Central Intelligence Agency (CIA). (2014) The World Factbook. [Online] Available from: https://www.cia.gov/library/publications/the-world-factbook/ [Accessed 10 April 2014].

13. Chantler, P. & Harris, S. (1997) *Local Radio Journalism*. 2nd ed. Oxford: Focal Press.

14. Cohen, L. Manion, L. & Morrison, K. (2000) *Research Methods in Education*. 5th ed. London: Routledge Falmer.

86

15. Cohen, L. Manion, L. & Morrison, K. (2007) *Research Methods in Education*. 6th ed. London: Routledge Falmer.

16. Collie, N.G. (1999) Stakeholder Perceptions of the Viability of Community Radio. Unpublished dissertation. Johannesburg: University of the Witwatersrand.

17. Community Radio Association (1987) *Community Radio: An Open Door to Media Access*. 2nd ed. Bristol: Community Radio Association.

18. Creswell, J.W. (2003) *Research Design: Qualitative, Quantitative and Mixed Methods Approaches*. 2nd ed. Thousands Oaks: Sage publications.

19. Crisell, A. (1994) *Understanding Radio*. 2nd ed. London: Routledge.

20. Crook, T. (1996) *Radio Drama: Theory and Practice*. London: Routledge.

21. Denzin, N.K. & Lincoln, Y.S. (2005) Introduction: The Discipline and Practice of Qualitative Research. In Denzin, N.K. & Lincoln, Y.S. (eds.). *The Sage Handbook of Qualitative Research*. 3rd ed. Thousands Oaks: Sage.

22. Du Plooy, G.M. (2001) *Communication Research – Techniques, Methods and Applications*. Lansdowne: Juta.

23. Falciai, M. (1996) Diagnostic Analysis of Farmer Managed Irrigation: Nectar Program (water, UE DGV111). Module 1. Florence: University of Florence.

24. FAO, (2008). Malawi Nutrition Profile – Nutrition and Consumer Protection Division. [Online] Available from: http://www.fao.org/docrep/017/ap841e/ap841e.pdf [Accessed 8 April 2014].

25. FAOSTAT (2010) [Online] Available from: http://www.countrystat.org/country/MWI/contents/docs/mwi_nl_sept_2010.pdf [Accessed: 23 January 2014].

26. Farm Radio International. (2010) Annual Report 2010-2011. [Online] Available from: http://farmradio.wpengine.netdna-cdn.com/wp-content/uploads/2010-2011_e4.pdf [Accessed 3 April 2013].

27. Flick, U. (2006) An Introduction to Qualitative Research. 3rd ed. London: Sage.

28. Folarin, B. (1990) Broadcasting for Rural Development. In Oso, L. & Adebayo, L. (eds.). *Communication and Rural development in Nigeria*. Abeokuta: Millennium Investment.

29. Fontana, A. & Frey, J.H. (2005) The interview: from neutral stance to political involvement. In Denzin, N.K. & Lincoln, Y.S. (eds.). *The Sage Handbook of Qualitative Research*. 3rd ed. Thousands Oaks: Sage.

30. Fraser, C. & Estrada, S.R. (2001) *Community Radio Handbook*. UNESCO.

87

31. Girard, B. (2001) The challenges of ICTs and rural radio. In *First International Workshop on Farm Radio Broadcasting*. Rome, 19–22 February 2001.

32. Gray, D.E. (2004) *Doing Research in the Real World*. London: Sage.

33. Gray-Felder, D. & Deane, J. (1999) *Communication for Social Change: A position Paper and Conference Report.* London: Panos Institute.

34. Gunner, L., Ligaga, D. & Moyo, D. (2012) *Radio in Africa: Publics, Cultures, Communities*. Johannesburg: Wits University Press.

35. Günther H. & Gisela, H. A. (1986) Dictionary of Agriculture: in six languages, German, English, French, Spanish, Italian, Russian : systematical and alphabetical. New York: Elsevier.

36. Johnson, R.B. & Onwuegbuzie, A.J. (2004) Mixed methods research: a research paradigm whose time has come. *Educational Researcher,* 33 (7): 14–26.

37. Karyln, A.S. (2001) The Impact of a Targeted Radio Campaign to Prevent STIs and HIV/AIDS in Mozambique. *AIDS Education and Prevention*, 13 (5): 438-451.

38. Kheerajit, C. & Flor, A.G. (2013) Participatory Development Communication for Natural Resources Management in Ratchaburi Province, Thailand. *Procedia - Social and Behavioral Sciences,* 103: 703-709.

39. Kothari, C.R. (2004) *Research Methodology: Methods and Techniques*. 2nd ed. New Delhi: New Age International.

40. Kuponiyi, F.A. (2000) Mass Media in Agricultural Development: The use of Radio by Farmers of Akinyele Local Government Area of Oyo State, Nigeria. *Journal of Nigerian Agricultural Development Studies*, 1(1): 26-32.

41. Leedy, P.D & Ormrod, J.E. (2005) *Practical Research: Planning and Design*. 7th ed. New Jersey: Pearson Educational International and Prentice Hall.

42. Madamombe, I. (2005) Community radio: a voice for the poor. Better local communications can boost development, democracy. *Africa Renewal*, 19 (2): 4. [Online] Available from: http://hqweb.unep.org/training/programmes/Instructor%20Version/Part_2/Activities/Interest_Groups/Public_Awareness/Strategies/Community_Radio_A_Voice_for_the_Poor.pdf [Accessed 26 August 2010].

43. Malawi Government. (2008) *Millennium Development Goals Report*. Lilongwe, Malawi: Ministry of Economic Planning and Development.

44. Manyozo, L. (2005) The practice of participation in broadcasting for development in post-independent Malawi. *Journal of Social Development in Africa*, 20 (1): 77-105.

45. Manyozo, L. (2008) Communicating with Radio: What do we Know? *Findings from selected rural effectiveness evaluations African Farm Radio Research Initiative (AFRRI).* Ottawa, Canada: Farm Radio International.

46. Manyozo, L. (2011) *People's Radio: Communicating Change across Africa.* Penany: Southbound Penang.

47. Marshall, C. & Rossman, G.B. (1999) Designing Qualitative Research. 3rd ed. Thousands Oaks: Sage.

48. Mchombu, K. & Cadbury, N. (2006) *Libraries, Literacy and Poverty Reduction: A Key to African Development*. London: BAI – Commonwealth Foundation.

49. Megwa, E.R. (2007) Community Radio Stations as Community Technology Centres: An Evaluation of the Development Impact of Technological Hybridization on Stakeholder Communities in South Africa. *Journal of Radio Studies,* 14 (1): 49-66.

50. Morton, J. & Matthewman, R. (1996) Improving livestock products through extension: information needs institutions and opportunities. Natural Resource Perspective, 12: 1-8. London: Overseas Resource Development Institute.

51. Mouton, J. & Marais, H.C. (1990) *Basic Concepts in the Methodology of the Social Sciences*. Pretoria: HSRC Publishers.

52. Nandapurkar, G.G. (1982) *Small Farmers – A study on their Entrepreneurial Behavior*. New Delhi: Metropolitan Book Co.

53. Nassanga, G.L., Manyozo, L. & Lopes, C. (2013) ICTs and radio in Africa: How the uptake of ICT has influenced the newsroom culture among community radio journalists. *Telematics and Informatics*, 30 (3): 258–266.

54. National Statistical Office (2009) *2008 Population and Housing Census*. Malawi: National Statistical Office.

55. National Community Radio Forum. [Online] Available from: http://www.ncrf.org.za/ [Accessed 16 October 2011].

56. Ndunguru, P.C. (2007) *Lectures on research methodology for social sciences*. Morogoro: Mzumbe University.

57. Neuman, W.L. (2006) *Social Research Methods: Qualitative and Quantitative Approaches*. 6th ed. Boston: Pearson.

58. Nyali, G.L. (2008) *Assessment of Agricultural Information Needs in African, Caribbean and Pacific (ACP) states: Southern Africa, Malawi*. Wageningen: Technical Centre for Agricultural and Rural Cooperation.

59. Nyareza, E. (2010) *The use of radio in extension service programmes to communicate agricultural information to peasant farmers in the Buhera South Constituency of Zimbabwe*. Unpublished dissertation. Pretoria: University of Pretoria.

60. Nyareza, S. & Dick, A.L. (2012) Use of community radio to communicate agricultural information to Zimbabwe's peasant farmers. *Aslib Proceedings*, 64 (5): 494 – 508.

61. Okwu, O.J., Kuku, A.A. & Aba, J.I. (2007) An assessment of use of radio in agricultural information dissemination: a case study of radio Benue in Nigeria. *African Journal of Agricultural Research*, 2 (1): 014-018.

62. Olorunnisola, A.A. (1997) Radio and African Rural Communities: Structural Strategies for Social Mobilization. *Journal of Radio Studies*, 4: 242-257.

63. Panos East Africa. (2010) The Rural Radio Debate: Increasing meaningful participation of rural communities in the democratic process. [Online] Available from: http://www.panosea.org/resources/publications/DDP%20STATUS%20REPORT%20May%20%202010.pdf [Accessed 20 November 2011].

64. Payne, G. & Payne, J. (2004) *Key Concepts in Social Research*. London: Sage.

65. Powell, R. R. (1985) *Basic Research Methods for Librarians*. 3rd ed. New Jersey: Ablex Publishing Corporation.

66. Powell, R.R. & Connaway, L.S. (2007) *Basic Research Methods for Librarians*. 4th ed. Westport: Libraries unlimited.

67. Pretty, J.N. & Vodouhe, S.D. (1997) Using rapid and participatory rural appraisal. In Swanson, B.E., Bentz, R.P. & Sofranko, A.J. (eds.). *Improving Agricultural Extension: A Reference Manual*. Rome: Food and Agriculture Organization.

68. Sekaran, U. (2003) *Research Methods for Business: A Skill-Building Approach*. 4th ed. New York: John Wiley and Sons.

90

69. Silverman, D. (2006) *Interpreting Qualitative Data: Methods for Analyzing Talk, Text and Interaction*. 3rd ed. London: Sage.

70. Struwig, F.W. & Stead, G.B. (2001) *Planning, Designing and Reporting Research*. Cape Town: Maskew Miller Longman.

71. Sturges, P. & Chimseu, G. (1996) The chain of information provision in the village of Malawi: a rapid rural appraisal. *International Information and Library Review*. 28: 135-156.

72. Tadesse, E. (2002) Benefits of Community Radio in the Horn Stressed. *Irin News* [Online]. Available from: http://www.irinnews.org/report.aspx?reportid=29709 [Accessed 20 November 2011].

73. Teddlie, C. & Tashakkori, A. (2009) *Foundation of Mixed Methods Research: Integrating Quantitative and Qualitative Approaches in the Social and Behavioural Sciences*. Thousands Oaks, CA: Sage.

74. Teddlie, C. & Yu, F. (2007) Mixed methods sampling: a typology with examples. *Journal of Mixed Methods Research*, 1 (1): 77-100.

75. Thioune, R.M. (ed.). (2003) *Information and Communication Technologies for Development in Africa: Opportunities and Challenges for Community Development*. Volume 1. Ottawa: International Development Research Centre.

76. UNESCO. 2006. Education for all - Global Monitoring Report 2007. United Nations Educational, Scientific and Cultural Organization. Paris. [Online]. Available from: http://unesdoc.unesco.org/images/0014/001477/147794E.pdf [Accessed 8 April 2014].

77. United Nations. (2007) *The Millenium Development Goals Report 2007*. New York: United Nations.

78. Van Zyl, J. (2001) The use of community radio to develop community-based tourism projects. In *International Conference on Tourism as a Catalyst for Community-Based Development*. Pretoria, 1-3 October 2001: University of Pretoria.

79. Van Zyl, J. (2003) Why human rights are essential. In Hoad, Z. & Holt, A. (eds.). *Community Radio: The People's Voice*. Johannesburg: Sharp Sharp Media.

80. Wanyeki, L.M. (2000) The development of Community Media in East and Southern Africa. In Boafo, S.T.K. (ed.). *Promoting Community Media in Africa.* Paris: UNESCO.

81. Welman, C., Kruger, F. & Mitchell, B. (2005) *Research Methodology*. 3rd ed. Cape Town: Oxford University Press.

82. Wood, C.E. (2009) *Engaging Communities with Farm Radio in Malawi*. Malawi: DFID.

83. World Bank Report. (2013). [Online] Available from: http://www.worldbank.org/en/country/malawi/overview [Accessed 24 January 2014].

84. Youdeowei, A., Diallo, A. & Spiff, E.D. (1996) Synthesis of regional studies of agricultural information needs of African countries. In *The role of information for rural development in ACP countries: review and perspectives. Proceedings of an international seminar*. Montpellier, France, 12–16 June 1995. Wageningen, Netherlands: Technical Centre for Agricultural and Rural Cooperation.

85. Zeeman, E. (2006) *The development of a communication radio station for a national game park*. Unpublished dissertation. Pretoria: University of Pretoria.

APPENDIX A: Semi-structured interview guide for the small-scale farmers

<u>Schedule of semi-structured interview with small-scale farmers</u>

How Mchinji Community Radio can meet the agricultural information needs of small-scale farmers of the Mchinji District in Malawi.

<u>SECTION A: Demographic information and income state of the small-scale farmers.</u>

1. Gender:
    - o Male
    - o Female

2. What is your age group: (optional)
    - o 20-29
    - o 30-39
    - o 40-49
    - o 50-59
    - o 60+

3. What is your highest level of education attained: (optional)
    - o Standard 8
    - o Form 2
    - o Form 4
    - o Tertiary level (certificate, diploma or degree)

4. What is your main source of income:
    - o Farming
    - o Crafts
    - o Supported
    - o Other

5. What type of farming do you practice:
   o Maize production
   o Sorghum
   o Vegetables
   o Animal husbandry
   o Other (Please specify)

6. How many bags of surplus produce did you sell last year? (If in animal husbandry move to next question)
   o None
   o 1-5
   o 6-10
   o 11-15
   o 15+

7. How many surplus animals did you sell last year?
   o None
   o 1-5
   o 6-10
   o 11-15
   o 15+

SECTION B: Information seeking behaviour of small-scale farmers

8. Which of the following sources of information do you have access to?

Source of information	Have access	No Access
a) Radio		
b) Newspapers		
c) Television		

d) Mobile phones		
e) Extension officers		
f) Internet		

9. How often do you utilise the following information sources for farming purposes?

Source of information	Often	Seldom	Never
a) Radio			
b) Newspapers			
c) Television			
d) Mobile phones			
e) Extension officers			
f) Other (Please specify)			

10. How satisfied are you with the accessibility of these various information sources?

Source of information	Highly Satisfied	Satisfied	Not Satisfied
a) Radio			
b) Newspapers			
c) Television			
d) Mobile phones			
e) Extension officers			
f) Internet			

95

SECTION C: Information needs of small-scale farmers

11. Please indicate and rate the type of information needs in your farming area.

Type of information	Very Necessary	Necessary	Not Necessary
a) Weather updates			
b) Markets information			
c) Crop production			
d) Animal production			
e) Agriculture funding opportunities			
f) Agriculture projects in other Malawian communities			
g) Training opportunities			

12. What are the difficulties that you face in obtaining agricultural information from the different sources or tools? Tick all that apply.

a) Do not know where to obtain information	
b) Do not know if the information needed exists	
c) Information seeking is expensive	
d) Information is of poor quality	

13. What type of information do you seek from your neighbours and community members? Tick all that apply.

Type of information	
a) Weather updates	
b) Markets information	
c) Crop production	
d) Animal production	
e) Agriculture funding opportunities	
f) Agriculture projects in other Malawian communities	
g) Training opportunities	

14. In what language do you receive agriculture information from the information providers?

a) English

b) Chichewa

c) Other (please specify)

15. What is your preferred language for receiving this information?

a) English

b) Chichewa

c) Other (please specify)

SECTION D: Use and roles of the community radio – Mchinji Community Radio

16. Do you think radio is an important source of information?

a) Yes

b) No

17. Do you have access to a radio set?

    a) Yes

    b) No

18. Whose radio set do you have access to?

Own radio in my home	
Neighbors' radio set	
Local shops radio set	
Other (Please Specify)	

19. Do you listen to the Mchinji Community Radio Station? (If yes proceed to question 20)

    a) Yes

    b) No

    If No, why not? (Proceed to question 24)

      i.   I do not know about the station

      ii.   I do not enjoy the station

      iii.   The programmes schedule conflicts with my farming work

20. Do you think the Mchinji Radio could be improved in providing you with agricultural information?

Greatly Improved	
Moderately Improved	

21. What are some of your favorite programmes aired on the Mchinji radio?

22. Do community members in this Mchinji district contribute information, knowledge or experience of agriculture to the Mchinji radio?

a) Yes

b) No

23. How do the members of Mchinji district contribute to the Mchinji radio? Tick all that apply.

Use of sms service on mobile phones	
Phoning in to the radio station	
Radio listening clubs	
Writing to the radio station	
Visits/interviews at the radio station	
Other (Please specify):	

24. In what other ways do you think the Mchinji radio can better meet your agricultural information needs?

Notes:

………

………

APPENDIX B: Structured interview guide for the community radio staff

Schedule of topics for in-depth interviews with Mchinji Community Radio staff

How Mchinji Community Radio can meet the agricultural information needs of small-scale farmers of the Mchinji District in Malawi.

Interview topics:

1. The successes and challenges of the community radio in providing agricultural information to the small-scale farmers of the Mchinji District.

2. The participation of the community in shaping the programming of the radio station.

3. Scheduling programmes on agricultural information at convenient times for the farmers.

4. The agricultural information needs of the Mchinji District and how they are ascertained.

5. Innovations in the exchange of information with small-scale farmers.

Notes: ………………………………………………………………………………..
………………………………………………………………………………………………
………………………………………………………………………………………………
………………………………………………………………………………………………

Thank you for your time.