



FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative



**COMMUNICATIONS FOR AGRICULTURE
ASSESSMENT FOR THE FEED THE FUTURE
SOUTH SUDAN FOOD, AGRIBUSINESS, AND
RURAL MARKETS (FARM) II PROJECT**

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Communications for Agriculture Assessment for the Feed the Future South Sudan Food, Agribusiness, and Rural Markets (FARM) II Project

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Acronyms and Definitions

AMWISS	Association of Media Women in South Sudan
Boma	Administrative sub-division of a Payam
CES	Central Equatoria State
CRN	Catholic Radio Network
DRC	Democratic Republic of Congo
EAC	East Africa Community
EBC	Equator Broadcasting Corporation
EES	Eastern Equatoria State
FARM	Food, Agribusiness and Rural Markets Project
FARM II	Food, Agribusiness and Rural Markets Project II
FBO	Farmer-based Organisation
FtF	Feed the Future
GESS	Girls Education in South Sudan
IVR	Interactive Voice Recognition
M&E	Monitoring and Evaluation
MOU	Memorandum of Understanding
MSA	Maridi Service Agency
MTN	Mobile telecommunications company
NGO	Non-governmental Organisation
NTC	Nehemiah Trumpet Call
Payam	Administrative sub-division of county
PSA	Public Service Announcement
SMS	Short Message Service
SPLM	Sudan People's Liberation Movement
SSMD	South Sudan Meteorological Department
UNMISS	UN Mission in South Sudan
USAID	United States Agency for International Development
USD	United States Dollar
VoEES	Voice of Eastern Equatoria State
VSAT	Very-small-aperture terminal

WES	Western Equatoria State
WFP	World Food Programme
WMO	World Meteorology Organisation

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I. Executive Summary

Abt Associates is the prime contractor for the Feed the Future South Sudan Food, Agribusiness, and Rural Markets (FARM) II project. This is a United States Agency for International Development (USAID)-funded six-year program to promote agricultural development in the Greenbelt region of South Sudan. The current FARM II project is a one-year follow-on contract to of the original five-year project which ended in April 2015. FARM II is due to run until April 15, 2016.

The project aims to help small-scale farmers increase the production of staple food commodities and improve their marketing of surplus produce. The project seeks to boost the income of approximately 20,000 small-scale farmers in 36 payams (local government districts) and nine counties across the Greenbelt region. These farmers are grouped in more than 666 village farmers' associations known as Farmer-based Organizations (FBOs).

BBC Media Action, a UK-based media development non-governmental organization (NGO) that has a country office in South Sudan, is currently managing three projects in the country:

- Life in Lulu, a 15-minute weekly radio drama on peace and reconciliation in a fictitious village affected by conflict
- Girls Education in South Sudan (GESS), a fortnightly 15-minute program of interviews with teachers, girls and parents to promote girls' education
- Our Tukul, a 25-minute weekly magazine program on reproductive health and the health of pregnant women, new mothers, and infants.

Abt Associates asked BBC Media Action to provide consultation on its current FARM II communication activities. This includes recommendations that will strengthen the outputs of FARM II and improve the flow of timely, relevant, and user-friendly information to farmers, especially via radio and mobile telecoms network.

A BBC Media Action consultant, a specialist in resilience and emergency response communications, was commissioned to undertake a field assessment in South Sudan between July 23 and August 14 2015 and provide recommendations. This document is a summary of the field assessment findings and provides recommendations on the basis of these findings. The main recommendation of the report is implementation of a short but intense communications initiative during the six-month period October, 2015 to March, 2016. This will consist of:

- Broadcast of a series of short programs containing useful information for farmers on eight to 12 local radio stations in the Green Belt
- Direct distribution of local market prices and other useful information to more than 666 FBOs via short message service (SMS).

These recommendations intend:

- Reduce post-harvest losses
- Increase crop yields and overall production
- Raise the average wholesale price received by farmers through improved crop marketing.

Suggested outputs that will be produced and disseminated for radio include:

- Fifteen one-minute public service announcements (PSAs). Each will be broadcasted several times per day for a period of two to four weeks on each partner station.
- Eight five-minute mini-dramas. Each will be broadcasted four times during the peak evening listening period on each station, each mini-drama will discuss and develop the key messages contained in two or more of the PSAs. When possible, one repeat of each mini-drama will be followed by a phone-in program to discuss the issues raised. The phone-ins will feature a local agricultural expert provided by FARM II as a studio guest to answer listeners' questions.
- A series of two-minute weekly market price bulletins. The bulletins will report the wholesale price of eight staple food commodities in at least 16 reference markets across the Greenbelt region. The radio stations will broadcast price bulletins from two to four local markets used regularly by listeners. Each bulletin will broadcast during the evening of the market day concerned and will be repeated the following day.

We recommend that from October to December 2015 the radio outputs support post-harvest activities, such as crop drying, crop processing, and crop storage. Between January and March 2016, we further suggest that radio output focus switch to land preparation ahead of the April through October 2016 rainy season. The key messages disseminated during this period also will focus on crop planting techniques that will maximize harvest yields.

When possible, broadcasts will be in the predominant local language; however, Juba Arabic will be used on radio stations broadcasting from Torit and Maridi and to the surrounding areas which are linguistically diverse. The PSAs and mini-dramas will be produced and recorded in Juba in Juba Arabic, Bari, Zande, Acholi and Madi. These outputs will be transferred to CDs and distributed via bus and plane to partner radio stations for broadcast.

As a parallel effort, same-day price information from selected agricultural markets will be disseminated to Greenbelt farmers by radio and SMS. The market information will help farmers improve marketing of their crop surpluses and obtain more favourable prices.

The FARM II project already collects, stores, and analyses the wholesale price of eight agricultural commodities from about 30 reference markets across the Greenbelt. Also, FARM II monitors maize, sorghum, groundnuts, cassava, beans, finger miller, sesame (sim-sim), and rice crops. However, to date, this information has not been shared with farmers or traders.

Partner radio stations will receive template scripts for the market reports. They will receive via SMS, on a weekly basis, on the same day the latest price information for each market. Partner station presenters

will read the market reports live in local languages. Also, partner stations will broadcast the market price bulletins and mini-dramas between 19.00 and 20.00, the peak radio listening time for farmers in the Greenbelt. They will broadcast some PSAs in the early morning peak listening period between 06.00 and 08.00, but most should be aired during the expanded 18.00 to 21.00 evening peak period.

As channels of communication, radio and SMS complement each other, the combination of radio and SMS has the potential to reach the overwhelming majority of FBOs. Radio broadcasts will reach many areas which do not have mobile network coverage. Meanwhile, SMS will reach some areas that are beyond the broadcast range of a local radio station.

The project has a very short and tightly defined window of opportunity to implement this report's recommendations in time to support farmers during the six-month period of October 2015 through March 2016. Any media campaign of less than six months is unlikely to have a significant impact in terms of raising awareness among farmers and promoting behaviour change. We urge that the first radio programming on post-harvest activities be aired at the start of the post-harvest phase of farm activities during the first week of October at the latest.

3. Objectives

The report presents recommendations that will support three key objectives of the FARM II program through a limited selection of short-term communication initiatives. Program broadcast by local radio stations and SMS exchanges between the FARM II project and farmers' associations will be used to:

- **Reduce post-harvest losses** by promoting better drying, crop processing and storage; post-harvest losses caused by rot, insect and rodent attack can amount to 40 percent of the harvested crop.
- **Increase crop yields and overall production** by promoting better land preparation and crop planting techniques.
- **Raise the average wholesale price received by farmers through improved crop marketing.** This will be done by supplying real-time market information to farmers and helping to match farmers' associations with wholesale buyers of their surplus production.

4. Field Assessment Findings

4.1 Challenges

Radio ownership in many rural areas of the Greenbelt is low. In Eastern Equatoria State, only 34% of people have access to a radio.¹ Radio ownership is higher in the more developed Central Equatoria State, at around 50% of the population. In Western Equatoria, 63% of the population have access to a working radio, but telephone interviews with farmers suggest that the level of radio and mobile phone ownership is low among these particular groups).

There is tremendous appetite for radio programming on how to improve agricultural practices among the rural population. Many farmers interviewed for this assessment who do not regularly listen to radio said they would do so if there were programs about agriculture.

Many radio stations in South Sudan go off-air for long periods as a result of technical problems which they cannot afford to remedy quickly. Such shutdowns often last for several months. This makes it difficult to ensure continuity of sponsored broadcast outputs.

The easiest and most effective short-term solution to this problem is to sponsor the transmission of agricultural programming on two popular local radio stations serving each area, rather than just one. If one station goes off-air for several weeks or months, the other is likely to continue broadcasting.

¹ Media access figures are drawn from the BBC Media Action Girls' Education Survey conducted in June / July 2014. This survey was conducted in all three states in the Greenbelt and is representative of the accessible areas in those states.

Phone ownership rates in the farmers' groups visited varied. Our own quantitative data suggests phone ownership rates are highest in Western Equatoria (45%) and Central Equatoria (38%). On the plus side, mobile network coverage throughout the Greenbelt is good. Most areas can receive a signal from at least one of South Sudan's four mobile networks. Field research showed there were generally more mobile phones than radios in each farmers' group.

With the exception of youth in Central Equatoria State, the rural population of South Sudan largely does not listen to FM radio stations on mobile phones. Literacy rates in rural areas of Eastern Equatoria State are low. However, in Central Equatoria State the rate is higher, especially among the farmer groups visited. Most literate farmers reported finding it easier to read and write in their own tribal language than in English.

Very few people reported communicating using SMS messages. For the purposes of FARM II communications initiatives, the use of abbreviations and technical terms in SMS messages will need to be strictly limited in order to facilitate comprehension. Hence, in some areas, SMS messages written in Juba Arabic, Bari, or Zande may be easier for the FBO members. Realistically, the expectation is that a few farmers in each FBO who are literate will receive communication by SMS and will relay messages by word of mouth to other members of the group.

Farmers in the Greenbelt speak a variety of different languages, and their fluency in Simple Arabic, the main lingua franca of South Sudan, is limited. Wherever possible, radio programming on agricultural issues must therefore be aired in the local language spoken by the majority of the radio station's audience in order to achieve maximum comprehension, awareness, and impact on personal behaviour. A substantial amount of work will be required to reversion all PSAs and other recorded programming into five different languages.

The proposed communications initiatives, while not complex, are unsustainable without deliberate identification and preparation of local institutions. The Ministry of Agriculture currently lacks the capacity and the financial resources necessary to maintain the broadcast of regular agricultural program on local radio stations. It also lacks the technical capacity as well as the financial and logistical resources necessary to continue collecting prices from the markets monitored by FARM II and disseminating them rapidly to farmers. Sustainability of these initiatives is achievable with the development and preparation of local institutions to assume responsibility over time.

4.2 What Information Do Farmers Want?

A series of meetings with eight farmers' groups in both Eastern and Central Equatoria States revealed a strong demand for the following types of information:

- **Wholesale market prices for agricultural commodities in local markets.** Farmers in Magwi County also wanted Juba prices since many of them club together to hire trucks to sell produce directly in the capital at much higher prices than they can get from local buyers. The

most widely used measure for selling produce to merchants is the basin. This is a volume, not a weight measurement. For example, one basin of maize works out to be approximately 15kg.

- **Reminders of advice on best farming practices.** During face-to-face training with extension workers, farmers received planting and cultivation techniques and tips. They, in particular, are interested in refresher training in these two areas along with post-harvest crop processing and storage.
- **Timely advice on pest control.** Maize stock borers, rats, snails, and termites were mentioned as common problems.
- **Information about traders.** Farmers want to be connected with potential buyers for their crops. They want information about the identity of such traders, where and when they intend to buy and at what price.
- **Weather forecasts.** During the time of this assessment, Eastern Equatoria State was suffering a drought, and farmers want to know when it is likely to rain. They particularly want long-range forecasts ahead of each cropping season and weekly rainfall forecasts during the rainy season.
- **Availability and distribution of certified seed.** They were also keen to know which seed types were available and which of these were best to plant in light of local conditions.
- **New crops to grow.** Wanted information on new crops to grow for market purposes.
- **Access to credit.** The farmers wanted to learn how to obtain credit to expand their farming activities.

Farmers were displeased with a perception that they were being cheated by traders who paid for what they bought by volume (basins and buckets) rather than by weight measurement in kilograms.

4.3 How Do Farmers Wish To Receive Information?

Farmers across the Greenbelt said they want to receive more information and advice by radio, even in rural areas where radio ownership is very low. Radio was their preferred channel of communication. Many farmers in Eastern Equatoria State said they would buy radios if there were useful farming program to listen to. The most popular radio formats were:

- Market price bulletins
- Talks shows on topical agricultural issues with phone-ins
- Music and songs
- Radio dramas.

Farmers mainly listen to radio in the evening between 19.00 and 21.00. The peak listening period is from 19.00 to 20.00. Many work until sunset and go to bed early. Farmers in Central Equatoria State said they did not have time to listen to radio in the morning when they get up. However some farmers in Eastern Equatoria said they often listen in the morning between 06.00 and 08.00 before they leave home.

Local radio stations which broadcast mainly in local languages are overwhelmingly preferred to national radio stations. This is because the local stations broadcast extensively in the farmers' own mother

tongue and focus on issues which affect the farmers' own community. However for national news, many farmers also listen to Eye Radio and Miraya broadcast in Simple Arabic when these two stations are available.

Very few farmers reported listening to radio on mobile phones with ear buds. As mentioned earlier, in Central Equatoria, which is relatively more developed than most other areas in the Greenbelt, farmers said some young people in rural areas do listen to radio via mobile phone. More farmers in the groups own mobile phones than radios. Farmers also are interested in receiving information by mobile phone. They like the idea of information being sent by SMS to a member of their village farmers' group who could read and write so that this person could then share this information by word of mouth with their neighbours. They particularly want to receive market prices by SMS.

4.4 Potential Radio Partners In The Greenbelt

An assessment of all the South Sudan radio stations serving audiences in the Greenbelt is attached to this document as an annex. We recommend the following 12 stations as broadcast partners for radio programming aimed at small-scale farmers in the Greenbelt. As well, we note in brackets the suggested language for agricultural programming for each station.

Torit

- First choice—Voice of Eastern Equatoria State (Simple Arabic)
- Back-up second choice—Radio Emmanuel (Simple Arabic)

Magwi

- Voice of Freedom (for Acholi speaking areas) (Acholi)
- Nehemiah Trumpet Call (for Madi speaking areas) (Madi)

Yei

- First choice—Spirit FM (Bari)
- Back-up second choice—Radio Easter (Bari)

Morobo

- Morobo FM (Bari)

Kajo Keji

- First choice—Voice of Kajo Keji (Bari)
- Backup second choice—Grace FM (Bari)

Yambio

- First choice—Yambio FM (Zande)
- Back-up second choice—Radio Anisa (Juba Arabic)

Maridi

- Maridi FM (Juba Arabic)

These recommendations take into account:

- estimated broadcast reach of the available stations
- popularity among farmers (as expressed in meetings with FBOs)
- difficulties experienced by many stations in broadcasting continuously without experiencing long periods off-air as a result of technical problems
- capacity of these radio stations to produce and broadcast appropriate programming.

5. Recommendations

5.1 Communication Initiative Outline

It is recommended that radio programs and SMS messages be disseminated to farmers over a six-month period between October 2015 and March 2016. The content of all information outputs will have to be closely synchronized with the farming cycle of the Greenbelt.

In July and August 2015, at the time of this assessment, many farmers were still planting their second crop of the July–October rainy season. This will be harvested between October and December.

Ground preparation for the first crop of 2016 will begin in January. Planting will begin in March at around the time that FARM II activities in the field are due to end. The recommendation to communicate timely, relevant and user-friendly information to farmers supported by FARM II therefore focuses on the following phases of the agricultural calendar:

- **Post-harvest activities**, such as crop drying, processing, storage and marketing (October to December)
- **Pre-planting activities**, such as land preparation, crop selection, seed procurement, planting technique and the timing of crop sowing (January to March).

There is a very short and tightly defined window of opportunity for BBC Media Action to develop and broadcast radio programs to support farmers during the six-month period between October 2015 and March 2016.

It will be essential for the first radio programming on post-harvest activities to be aired at the start of the post-harvest phase of farm activities during the first week of October at the latest.

The most appropriate channels of rapid communication to use during the proposed six-month will be:

- Local radio stations which broadcast in local languages and carry a high level of local news and community affairs content in their programming. Wherever these radio stations exist, farmers prefer them to national radio stations.
- Exchange of SMS messages with a literate member of each FBO who owns a mobile phone. This person will share information received by SMS with other members of the group by word of mouth.

The deployment of Interactive Voice Recognition (IVR) systems, which use recorded voice messages that can be accessed by telephone, was considered, but rejected as being inappropriate for the short period of time available. The IVR will be too expensive, too time consuming and too complicated to set up and popularize during the six-month period available. The IVR also will require a massive marketing campaign to make farmers aware of the service. Even then, few farmers would likely use the system unless the calls were toll-free. Furthermore, IVR systems which contain a wide selection of messages rely on the ability of the caller to select the messages which he or she wishes to hear by selecting number options on the keypad of his or her phone. Small-scale farmers in South Sudan are not familiar with such systems and will have difficulty in adapting to them quickly.

An IVR system will not be as cost-effective as the distribution of SMS messages to literate communications focal point in each FBO. A significant advantage of SMS messages is that they arrive automatically and in writing on the recipients' phone. The information can be consulted repeatedly and passed on by word of mouth to others in the community. SMS messages are therefore likely to reach and influence more people than an IVR system which relies on individuals taking the initiative to make frequent phone calls to a familiar number to listen to spoken messages.

The project should partner with eight to twelve local radio stations in the main areas where FARM II operates to broadcast the following outputs for small farmers:

- Fifteen one-minute PSAs. Each announcement will broadcast several times per day for a period of two to four weeks on each partner station.
- Eight five-minute mini-dramas. Each mini-drama will discuss and develop the key messages contained in two or more of the PSAs. Each mini-drama will broadcast four times on each station during the peak evening listening period. Wherever possible, one repeat of each mini-drama will be followed by a phone-in program to discuss the issues raised. Each phone-in will feature a local agricultural expert as a studio guest to answer listeners' questions.
- A series of two-minute weekly market price bulletins reporting the wholesale price of staple food commodities in at least 16 reference markets across the Greenbelt. Each radio station will broadcast price bulletins from between two and four local markets used regularly by its listeners. Each bulletin will broadcast on the evening of the market day concerned. It will be repeated the following day.

The market price bulletins and mini-dramas should always be broadcasted between 19.00 and 20.00, the peak radio listening time for farmers. Some PSAs could be broadcasted in the early morning peak

listening period (06.00 to 08.00), but most should be aired during the broader and more significant 18.00 to 21.00 evening peak period.

BBC Media Action will design all the radio programming with technical advice from FARM II agricultural experts. BBC Media Action will also produce and record all the PSAs and mini-dramas at its studios in Juba. These outputs will be recorded on CDs, and distributed to partner radio stations by plane or bus. The market reports will be produced and broadcasted by the partner radio stations, using template scripts and real time information sent to them by BBC Media Action. In turn the Farm II project will supply BBC Media Action and partner stations with the relevant market price information by SMS.²

The radio partners will transfer data from the fixed format SMS messages onto script templates devised by BBC Media Action. A local presenter will then read out the bulletin. FARM II will communicate the same market prices and other important information directly to a communications focal point in each of the 666 or more FBOs which it supports via SMS. The communications focal point in each FBO will be a farmer who already has a mobile phone and who can read and write in English, Juba Arabic (transcribed into Latin script) or a local language. The focal points will pass on the information received from FARM II to other members of their group by word of mouth. They also will send information by SMS to FARM II on behalf of their FBO.

FARM II will establish a separate FrontlineSMS network in each of the three states where it operates. These SMS communication hubs will be located in the project's state offices in Torit, Yei and Yambio. The project will use FrontlineSMS to:

- Disseminate weekly market reports based on information gathered through FARM II's existing Textit system. (The information will have to be reformatted before dissemination. In many cases it also will have to be translated from English into the local language or Simple Arabic).
- Organise operational activities, such as training sessions and field visits to FBOs by FARM II staff.
- Facilitate deal matching between farmers and large traders seeking to buy produce in a particular area.
- Conduct simple surveys to support monitoring and evaluation of work.

The radio broadcasts will not reach FBOs in the Mundri area of Western Equatoria State, which is not served by any local radio station. (However Yambio FM, the radio station owned by the government of Western Equatoria State, has plans to establish an FM relay station in Mundri soon).

In all other areas, the overwhelming majority of farmers supported by FARM II live within range of at least one local FM station. Similarly, most but not all FBOs are located within a mobile network coverage area or in close proximity to a mobile hotspot.

² Using FrontlineSMS software <http://www.frontlinesms.com/> FrontlineSMS is a free software program which enables a computer to send and receive text messages via a SIM card inserted into a USB modem stick that is plugged into the computer. The system enables an ordinary laptop computer to automatically send the same SMS message to contact groups of up to 300 people. FrontlineSMS does not require internet access to function.

Local radio and SMS will complement each other as communication channels. Radio broadcasts will reach many areas which do not enjoy mobile network coverage. The SMS messages meanwhile will reach many areas which are beyond the broadcast range of a local radio station. Between them, radio and SMS have the potential to reach the overwhelming majority of FBOs, probably more than 90 percent. The radio programs also will reach tens of thousands of other Greenbelt farmers who are not directly supported by the FARM II project. These two channels of communication also supplement each other because they function differently.

Radio will make information available to anyone who listens into the program for farmers at the appropriate time. SMS will meanwhile ensure that information in written form reaches every FBO supported by FARM II automatically. Additional measures which could be considered if adequate funding were available could include the following:

- Distribution of solar/wind-up radios with an SD card playback function to 30 FARM II extension agricultural extension officers, such as the Freeplay Encore Player, to enable them to play recordings of the radio outputs. In particular the mini-dramas and PSAs to farmers' groups during face-to-face training sessions.
- Design and distribution of high visibility roadside signboards to FBOs, advertising their products available for sale and their price and giving a mobile number to contact. Such signs will attract more passing traders to buy and will increase competition between them, enabling FBOs to optimise the price received from farm gate buyers.
- Solar wind-up radios also could also be distributed to each of the 600 plus FBOs, which will then act as listening groups. This will address the problem of low radio ownership in many rural communities by providing direct access to the radio to households which do not own a set at present.

5.2 Radio Outputs

BBC Media Action will produce three main radio outputs to support FARM II:

- **Fifteen PSAs** to remind farmers of best practice in post-harvest and land preparation and planting activities. Each PSA will be played six times per day for a period of two to four weeks by each partner station. The PSAs and mini-dramas will be produced and recorded by BBC Media Action in Juba Arabic, Bari, Zande, Acholi and Madi. These outputs will be distributed, using the same modality that BBC Media Action currently uses. The PSAs and mini-dramas will promote a series of 15 key messages on post-harvest and land preparation and planting activities which have already been researched and defined by FARM II. These messages urge farmers to adopt simple techniques at different stages of the farming cycle that lead to:
 - Better drying and storage of crops
 - Improved land preparation before sowing
 - Better planting techniques that result in higher yields.

The PSAs will be voiced by characters in the mini-drama to which they were linked. This will create an automatic link between the two types of radio output in the listener's mind.

- **Eight stand-alone five-minute mini dramas** to stimulate discussion of the key messages articulated by the PSAs. Each mini-drama will be broadcasted four times over a two to four-week period at peak audience times. Each mini-drama will be aired over the same time period as the PSAs conveying the same key messages. Wherever possible, one of the repeats will be followed by a phone-in show to discuss the topics raised in the mini-drama. This interactive program has proved successful with current BBC Media Action programming. FARM II, in partnership with the Ministry of Agriculture and other NGOs engaged in agricultural development in the Greenbelt, will make available an agricultural expert as a studio guest to answer questions from listeners during each phone-in. The mini-dramas ideally will have versions in each of the five languages chosen for broadcast.³
- **Weekly market reports** focusing on the price of eight agricultural commodities in at least 16 reference markets in the Greenbelt. These two-minute bulletins will report the wholesale price of staple foodstuffs widely grown and sold by small farmers using measurements that are appropriate to the audience.⁴ The reports will use price information which is already being collected by FARM II agricultural extension officers. Each report will broadcast on the evening of the market day and repeated the following morning (or evening), during peak listening times. The timely dissemination of prices from selected markets by local radio stations will help farmers to determine the most appropriate time to sell their stored crop surpluses and the markets where they would be most likely to get the best price. The initiative also will empower farmers to negotiate more favourable prices with traders who visit villages to buy from the farm gate. BBC Media Action will set up and manage a FrontlineSMS hub for distributing the market price bulletins rapidly to partner stations, for onward broadcasting within the script template. As noted, the operation of Frontline SMS will be run in close collaboration with the FARM II team. FARM II currently monitors the wholesale price of the following commodities in 14 markets in the Greenbelt:
 - Maize
 - Sorghum
 - Shelled groundnuts
 - Cassava
 - Beans
 - Sesame
 - Finger millet
 - Rice

³ If there are budgetary, human resource and time constraints, Acholi and Madi could be dropped, replaced by Juba Arabic. Not the PSAs

⁴ Prices would be given per basin, not per kg. The basin is a volume measure that is widely used in the Greenbelt. For maize, it works out to be about 15 kg. Small-scale farmers seldom work on the basis of the price per kg.

All the radio programming will be produced, distributed and aired according to a tight schedule over a 26-week period between early October 2015 and late March 2016. It will be aired by a total of 12 stations, two serving each of the following districts:

- Torit/Ikotos
- Magwi
- Pageri (the Madi speaking area of Magwi county)
- Yei
- Morobo
- Kajo-Keji
- Yambio
- Maridi

Mundri, as noted, remains media black at this time but may have access through an extension of Yambio FM. These 12 stations are identified in order to achieve a continuity of broadcast outputs.

Most of the radio outputs will broadcast in local languages so as to facilitate comprehension, with Juba Arabic being used for program aired to multilingual audiences.

The Canadian NGO World Renew has been airing a 12-minute weekly radio program on the two main radio stations in Yei: Spirit FM and Radio Easter since 2010. They support 20 farmer's associations in Yei County with training and extension activities. Each of these programs feature price reports from seven local markets and an extension message giving topical advice about best practice in crop cultivation, crop processing and storage. The show also features songs about farming and local music. These programs are extremely popular with farmers.

As a result, any radio broadcasts undertaken by FARM and BBC Media Action in Yei will be closely coordinated with those of World Renew. For example, market price information will be shared with this local partner in agricultural development.

The FARM II extension workers in each state and county office will check that partner radio stations were broadcasting all the agricultural programming which they were contracted to air in the agreed slots on a regular basis. They will inform BBC Media Action immediately if any partner radio station went off air or stopped broadcasting the PSAs, mini-dramas and market reports or failed to air them in the agreed slots.

Population Reach of Agricultural Programming

The 2008 South Sudan census and subsequent population estimates indicate a total population of about two million people in the Greenbelt. Eighty percent or more of these people depend on agriculture as their main livelihood. Around half of the population of South Sudan is under 15. Therefore, there is youth and adult population of about one million people each in the Greenbelt.

5.3 SMS Programming

FARM II will use FrontlineSMS to exchange information directly with representatives of each FBO supported by the project. The SMS messages will be sent to a communications focal point in each FBO with access to a mobile phone and network coverage. The price messages also will be sent to FARM II field staff. FARM and BBC Media Action will have to collaborate closely to synchronise radio broadcasts and SMS messages containing the same information.

The FARM II project will seek to establish FrontlineSMS hubs in:

- Yambio to communicate with FBOs and FARM staff in Western Equatoria
- Yei to communicate with FBOs and FARM staff in Central Equatoria
- Torit to communicate with FBOs and FARM staff in Eastern Equatoria.

The FARM-operated FrontlineSMS hubs will do much more than disseminate market reports and practical advice that mirror BBC Media Action's radio outputs. They also will use Frontline SMS to exchange service messages with FBOs and undertake deal matching activities between farmers and large-scale wholesale buyers.

Key members of both the FARM II and BBC Media Action teams will require training in the use of FrontlineSMS and expert help in establishing the modality. SMS messaging can also be used to promote the broadcast times for mini-dramas. Principle information disseminated by SMS, in addition to market prices, could be:

- SMS versions of the PSAs
- Advisory messages on topical issues such as seed distribution ahead of the planting season and the treatment of common plant diseases that are prevalent during the cultivation period
- Tenders for the purchase of crops by WFP and private sector traders
- Service messages announcing the time and date of visits to FBOs by FARM II field officers and invitations to FBO members to attend meetings
- SMS polls to support monitoring and evaluation activities
- Crop progress reports
- Reports about agricultural surpluses available for sale and an indication of the price sought (for deal matching with large-scale buyers)
- Reports of crop damage from disease and other causes
- Information about road or security conditions which could affect the movement of FARM II staff
- Questions, requests and complaints
- Responses to questions posed by FARM II's Monitoring and Evaluation Department

FARM II will ensure that its weekly collection of market prices is robust, ensuring that each market is monitored consistently (by September 2015) and that extension officers were submitting the prices via forms in a timely manner. An unreliable product will rapidly lose interest and thus this action has to

remain strong for the whole operation to remain viable. The whole process relies on up-to-date contact lists for the FBOs and a three-hour turnaround time for price collection to timely transmit accurate pricing information by 5pm every day.

Other possible communication initiatives

Communal listening is known to promote group discussion of program content and reinforce messaging. It is also possible that follow-up visits to FBOs could facilitate a listener group as well, replaying broadcasts and promoting debate and learning. At this time, wide-spread radio distribution will be hard to carry out but focused listening groups may be more viable in terms of the current availability of resources.

5.4 Monitoring and Evaluation

Qualitative data from the field research conducted by BBC Media Action consultant in July and August 2015 will be used as baseline research data. Endline research and evaluation will be undertaken by FARM II's Monitoring and Evaluation Unit in Juba as part of its overall final reporting on the FARM II project.

FARM II and BBC Media Action will discuss and agree on the methodologies and actions that will be used in evaluating the impact of the communications program on smallholder farmers and on other implementation elements of the program.

6. Communications Initiative Costs

6.1 Communications Program Cost

The main costs associated with this initiative are as follows:

- **FARM II Staff**

Seven days' hire of an international consultant is needed to train 10 people—eight FARM II staff and two BBC Media Action staff— on how to operate FrontlineSMS. The consultant also will help devise templates for regular reports and a list of key definitions and abbreviations to be used in these messages.

The cost of bringing six people—two from each FARM II state office—to Juba for four days of FrontlineSMS training in September 2015 and the cost of accommodating them in the capital are needed. Ideally the trainees will be the head of extension activities and the senior extension officer in each state FARM II office. The other two FARM II participants in the training will be Juba-based personnel, ideally the field security officer and the head of extension activities.

Also needed is the hire of a training room in Juba for four days (or use of the FARM II conference room as a training venue).

- **FBOs**

Resources are needed for one day's training in how to read and interpret market price reports and respond to deal matching proposals circulated by FARM II for 660 FBOs. This training will be delivered in the field by FARM II extension workers and focus on how to:

- Interpret the market reports and use the information appropriately
- Use the explanatory laminated sheets to interpret key terms and abbreviations used in the SMS messages
- Interpret and respond to deal matching messages
- Sensitize farmers about why farm gate prices are invariably lower than the wholesale prices paid by buyers when farmers take their produce to a market
- Explain why large wholesale buyers might pay a higher price for produce purchased than the cash price available in the market, provided the seller is prepared to accept a delay of several weeks in settlement.

- **Equipment**

Fifteen USB modem sticks compatible with FrontlineSMS which are not locked into a particular mobile network are requested.

Equipment needs also include the printing and lamination of 750 A4 sheets that explain the key terms and abbreviations used in the market price reports and other regular messages from FARM. One of these sheets will be given to the communications focal point of each FBO.

- **Staff Costs**

Operation of the three FrontlineSMS hubs will be a part-time job for three officers based in Torit, Yei, and Yambio offices of the FARM II project. Operation of the FrontlineSMS hubs will require the equivalent of 50 percent of the employment cost of three senior extension officers for a period of six months.

The task of editing and distributing of market price messages and managing deal matching operations by SMS will be a part-time activity shared by two senior members of staff in each FARM II state office. If one is absent, the other will take over the task. In many cases, FARM II staff will be required to work on weekends to disseminate price bulletins from markets monitored on Saturdays and Sundays.

- **SMS Costs**

Costs associated with approximately 20,000 SMS messages per month are anticipated. It will require about 10,000 SMS messages per month to distribute the price reports from 30 local markets to the communications focal points of 660 FBOs. It will be reasonable to allow a further 10,000 SMS messages per month for other types of communication with the FBOs. SMS messages can be purchased in bulk at a discounted rate from Vivacell, the mobile operator with which FARM II has contractual arrangements.

It should be noted that SMS messages will have to be sent to numbers belonging to all four networks in South Sudan, not just Vivacell subscribers.

- **Market Data Collection Costs**

All costs related to ensuring that the collection of market prices functions take place regularly and consistently in a timely manner will be covered by the existing budget for market monitoring activities.

The cost of forwarding the price information from 30 weekly markets in the Greenbelt by SMS from the United States to about 20 recipients in FARM II and BBC Media Action in South Sudan will be minimal.

- **Other Optional Items**

Optional but justifiable are 30 solar/wind up radios with SD cards for FARM II agricultural extension workers to use in face-to-face training. Also justifiable are 600 high visibility roadside signs for FBOs, announcing the commodities they have available for sale, the price sought and a mobile contact number.

6.2 BBC Media Action Costs

In order to deliver the proposed radio outputs, BBC Media Action will need to utilize the following human resources (some are likely already on board and some will need to be recruited):

- **Staffing Costs**
 - Activity Director (September to March). This person will probably be hired as an international consultant, perhaps for an initial period of three months. This procedure will ensure rapid recruitment. Alternatively, a suitable person could be seconded for seven months from a BBC Media Action office in another country.
 - Activity Assistant (September to March). Local hire.
 - Logistics Assistant (September to March) to ensure the timely dispatch of recorded program to partner radio stations and the distribution of market price bulletins by FrontlineSMS (Optional).

- Script writers (2) (September to February) to script and produce the mini-dramas and PSAs. Local hires.
- Radio drama consultant (September). A known international consultant will spend one week in Juba helping the project team to design the mini-dramas and define their characters. The consultant will provide seven days of remote support thereafter.
- FrontlineSMS consultant (September). This international consultant will train two BBC Media Action and eight FARM II staff together in Juba. The consultant will also help BBC Media Action and FARM II to design templates for regular SMS messages.
- Freelance actors and translators local staff known already and used for the PSAs and mini-dramas (September to February). Twenty-five actors assume the use of five different actors to voice PSAs and mini-dramas in each of the five languages used.
- Country Management Team, a proportional cost of these key staff (September to March) including the research staff to cover time spent on checking the broadcast of agreed radio outputs by partner stations and time spent agreeing the shape of endline research activities with the FARM II Monitoring and Evaluation team.
- Studio and production staff, a proportion of these staff in Juba.

- **Equipment Requirements**

Four new laptop computers—one for each member of the project staff—and three unlocked Huawei or Alcatel USB modem sticks housing a GSM SIM card for use with FrontlineSMS are needed.

Other equipment needs are four additional desks and chairs and six new mobile phones equipped with BBC Media Action software for partner stations to report to the R&L team on the broadcast of agreed radio outputs.

The project team will be accommodated at no additional cost in the new and much larger BBC Media Action office in Juba, which is due to become operational in August.

The project will use the office's existing studio and equipment to record and duplicate CDs at no extra cost.

- **Travel and Communication Costs**

Five-day visits are necessary to each to the following locations to liaise with the FARM II field teams, visit partner radio stations and train partner stations in the broadcasting of market reports:

- Torit, Magwi and Pageri
- Yei, Morobo and Kajo Keji
- Yambio and Maridi

Mobile credit is also needed for voice calls and FrontlineSMS use, and per capita share of office Internet access expenses.

- **Radio Program Distribution and Radio Air Time Costs**

Twenty-six weekly distributions of CDs by plane and bus to Yambio, Maridi, Yei, Morobo, Kajo Keji, Magwi and Nimule (Pageri) between September and February are anticipated. Also, included are approximately 19,546 minutes (326 hours) of sponsored air time costs payable to 12 partner radio stations. This is comprised as follows:

- PSAs—15,120 minutes (1 minute duration x 15 different messages x 6 broadcast per day x 14 days per PSA x 12 radio stations)
- Mini-dramas—1,920 minutes (5 minutes duration x 8 mini-dramas x 12 radio stations x 4 broadcasts of each program)
- Market price bulletins—2,496 minutes (2 minutes duration x 2 markets per station x 12 radio stations x 2 broadcasts of each bulletin x 26 weeks)

7. Field Assessment Itinerary

- July 23 Arrival in Juba by air from UK
- July 24 Meetings with BBC Media Action and FARM staff in Juba
- July 25 Meetings with representative from South Sudan Meteorological Department (SSMD) and representative from East Africa Representative of World Meteorology Organization (WMO)
- July 26 Meetings with BBC Media Action staff in Juba, drafting documents
- July 27 Meetings with FARM II staff in Juba, drafting documents
- July 28 Drafting documents in Juba
- July 29 Meeting with senior staff of Central Equatoria State Ministry of Agriculture in Juba, overland travel to Torit
- July 30 Meetings with government officials from Eastern Equatoria State and two farmers' groups in Torit County, visits to Radio Emmanuel and Voice of Eastern Equatoria State radio stations
- July 31 Visit to Grace FM (Torit), meeting with Eastern Equatoria State Minister, overland travel to Magwi, visit to Voice of Freedom radio station, meetings with two farmers' groups in Magwi County
- Aug 1 Meeting with farmers' group in Pageri, visits to Pageri Cooperative Union and Nehemiah Trumpet Call radio station in Borongole, overland travel to Juba
- Aug 2 Drafting documents in Juba.
- Aug 3 Drafting documents and meetings with FARM II staff in Juba
- Aug 4 Flight Juba-Yei. Meetings with staff of FARM II Central Equatoria State office Yei county government officials, visit to Radio Easter
- Aug 5 Visit to Spirit FM, meeting with farmers' group in Yei County, meeting with World Renew staff in Yei

- Aug 6 Meeting with representative of NGO that runs Maridi FM (Maridi), overland visit to Morobo County, meetings with Morobo County government officials, visit to Morobo FM, meeting with farmers' group in Morobo County
- Aug 7 Visit to Liberty FM (Yei). Meeting with second farmers' group in Yei County
- Aug 8 Flight Yei-Juba. Drafting documents
- Aug 9 Drafting documents in Juba
- Aug 10 Meetings with FARM staff in Juba, drafting documents
- Aug 11 Meeting with USAID staff in Juba, telephone interviews with farmers in Yambio County, representative from Agriculture of Yambio County and managers of Voice of Kajo-Keji (Kajo-Keji), Hope FM (Kajo-Keji), Yambio FM (Yambio) and Radio Anisa (Yambio)
- Aug 12 Drafting documents in Juba, telephone interview with representative of Grace FM (Kajo-Keji)
- Aug 13 Presentations of findings to FARM II and BBC Media Action teams in Juba
- Aug 14 Final meeting with representative from SSMD, departure from Juba by air for UK

Annex I

FM Radio Stations Broadcasting to the Greenbelt Region of South Sudan

This assessment is based on desk research followed by field visits to the southern parts of Eastern Equatoria State and Central Equatoria State in July and August 2015. The following radio stations (and sites of formerly functioning radio stations) were visited:

Torit

- Radio Emmanuel
- Voice of Eastern Equatoria State
- Grace FM

Magwi

- Voice of Freedom
- Radio Magwi

Borongole

- Nehemiah Trumpet Call (NTC)

Yei

- Radio Easter
- Spirit FM
- Liberty FM

Morobo

- Morobo FM

It was not possible to reach Western Equatoria State in the time available, but the director of Maridi Service Agency, the local NGO which runs **Maridi FM**, was interviewed in Yei and provided up-to-date information for that station.

Radio stations based in Juba were not visited because field research showed that Greenbelt farmers only listened to them occasionally for national news. The farmers consistently preferred listening to local stations that broadcast in the predominant local language for local news information and entertainment.

Assessment of Individual Radio Stations

AI.1 *National Radio Stations*

A1.1.1 Juba—Eye Radio 98.6 FM

This USAID-funded independent radio station has a 2,000 watt transmitter in Juba and a relay transmitter in Torit (98.8 FM), which opened in April 2015. Another FM relay transmitter is planned soon for Yambio.

Eye Radio broadcasts in English and Simple Arabic. It also carries occasional programs in seven local languages. Where Eye Radio is available in Eastern Equatoria State, it has replaced the Miraya as the preferred source of national news.

Eye Radio can be received clearly in Torit and Magwi counties. However, it does not yet reach Yei or Morobo counties in the Greenbelt areas of Central Equatoria State. Neither does it reach Yambio or Maridi in Western Equatoria State.

USAID said in April 2015 that Internews would soon distribute 50,000 solar/wind-up radios to people in areas with poor radio access.

Extract from Internews radio audience survey of South Sudan—September 2013

Eye Radio was established in March 2011. It is based in Juba, broadcasts 24-hours per day, and operates in partnership with Eye Media, a local media development NGO which plans to eventually own and operate Eye Radio. The station broadcasts on FM in English, Arabic, and Simple Arabic. It also offers some programs in local languages. Eye Radio ranks fourth in listenership among radio stations that broadcast in Juba.

Social-Demographic Profile of Respondents

The booster sample associated with Eye Radio included a total of 541 respondents aged 16 years and above in Juba (56% male and 44% female). The breakdown of respondents in terms of age cohorts included: 16-25 year-old (37%), 26-35 year-old (31%), 36-45 year-old (16%), and aged 46 and above.

The primary languages among those surveyed in Juba, included Juba Arabic (39%) and Bari (32%). All other languages, including English and Classical Arabic, were identified as primary by only 5% or fewer of respondents.

When asked which languages they are able to speak and understand well, respondents identified Juba Arabic (71%), Bari (43%), and English (43%). With respect to the three main languages broadcast by Eye Radio (Juba Arabic, Classical Arabic, and English), males were much more likely to report an ability to speak and understand them well (especially Classical Arabic and English).

Education

Among booster respondents in Juba, 26 percent of respondents reported having no formal education. Among those, there were twice as many females than males (36% versus 18% respectively). In general, males were more likely to have received higher levels of education than females.

Respondents from older age groups were less likely to have received any formal education. Approximately 42 percent of respondents from the 36-45 age cohort and 40 percent of those aged 46 and above, reported having no formal education. These percentages can be compared to 25 percent from the 26-35 age cohort and 12 percent from the 16-25 age cohort. The 26-35 age cohort had the highest completion rates of college or university (13%).

Occupation and Income Generating Activities

The primary occupations among respondents were generally reflective of Juba’s urban environment and its seat as the national capital. A comparatively large percentage of respondents reported being a student (20%), trader (14%), or government worker (8%). Also, there were corresponding fewer reported farmers and cattle herders when compared to the national sample. While more respondents from the Juba sample reported, “currently not working” when compared to the national survey (14% versus 8% respectively), this may be related to greater opportunities for farming/cattle herding in rural areas. A possible explanation for these differences may be related to the definitions of an occupation, whereby respondents from rural areas might consider farming/cattle herding an occupation, while urban residents define an occupation in terms of an income generating activity.

Access to Media

In Juba, 65 percent of respondents had a functional radio in their household, which is a significantly higher percentage than the national response of 37 percent. Functional mobile phones were reported in households, reflecting a similar response to that of radio. Comparatively, access to television, computer and Internet within the home, was found to be much lower, with less than 34 percent of respondents having a television, 14 percent a computer, and 11 percent having Internet access in their household. These percentages are significantly higher than the national rates of ownership. Twenty-one percent have none of the devices functioning in their household. The following table represents access to these technologies by gender.

Technology	Awareness	Ever Listened	Weekly Listeners
Radio Miraya	74%	71%	64%
Radio Bakhita (CRN)	48%	45%	41%
Radio Juba	28%	25%	23%
Eye Radio	26%	25%	22%
BBC World Service (Arabic)	25%	20%	18%
BBC World Service (English)	18%	16%	14%
Voice of the People (VOP)	15%	12%	11%
Radio Liberty	15%	11%	9%
Radio Capital	14%	9%	8%
Voice of America	4%	1%	1%

Among those who listen to the radio, 53 percent said they listened on a daily basis; no other source of information technology is used this often, with 44 percent obtaining daily news from friends and family doing. Of those who had listened to the radio in the past six months, 44 percent replied that they had made a call to a radio station—45 percent among males and 42 percent female. Among

those who engaged in this activity, 53 percent were in the 26-35 age cohort. Only 14 percent of people responded that they had met with people from the community to listen to and discuss a radio program.

A1.1.2 Juba—Radio Miraya 101.5 FM

Radio Miraya is run by the UN Mission in South Sudan (UNMISS). It broadcasts on 101.5 FM from Juba, mostly in English and Juba Arabic.

The radio station has a network of about 30 FM relay stations across South Sudan, most of which are situated in UN camps. The relay stations are fed by a satellite signal, but most of them have low power transmitters on relatively low masts in UN compounds which only achieve a limited broadcast range.

Radio Miraya has relay stations in the Greenbelt in Torit, Nimule, Kajo-Keji, Yei, Yambio, Maridi, Mundri and Ezo. It is a popular source of national news in the Green Belt areas of Central Equatoria State.

Extract from Infoasaid Media and Telecoms Landscape Guide of South Sudan—2012

Radio Miraya www.radiomiraya.org

Radio Miraya is the UN radio station in South Sudan. It has a wider geographic reach than any other FM radio station in the country. It broadcasts from Juba on 101.0 FM through a network of 26 relay stations linked by satellite. The station also broadcasts on 9940 Khz Short Wave. Miraya means “mirror in Arabic.” The radio station was set up in 2006 by the United Nations Mission (UNMIS) in Sudan in partnership with the Swiss-based Foundation Hironnelle. Its remit was to promote peace and reconciliation and provide reliable news and information following the 2005 Comprehensive Peace Agreement. Radio Miraya is financed by the governments of Germany, Switzerland and Sweden. During the first five years of its activity, Radio Miraya maintained a news room in Khartoum and broadcast to the whole of Sudan on Short Wave. However, the station ceased all activity in the north when South Sudan became independent in July 2011.

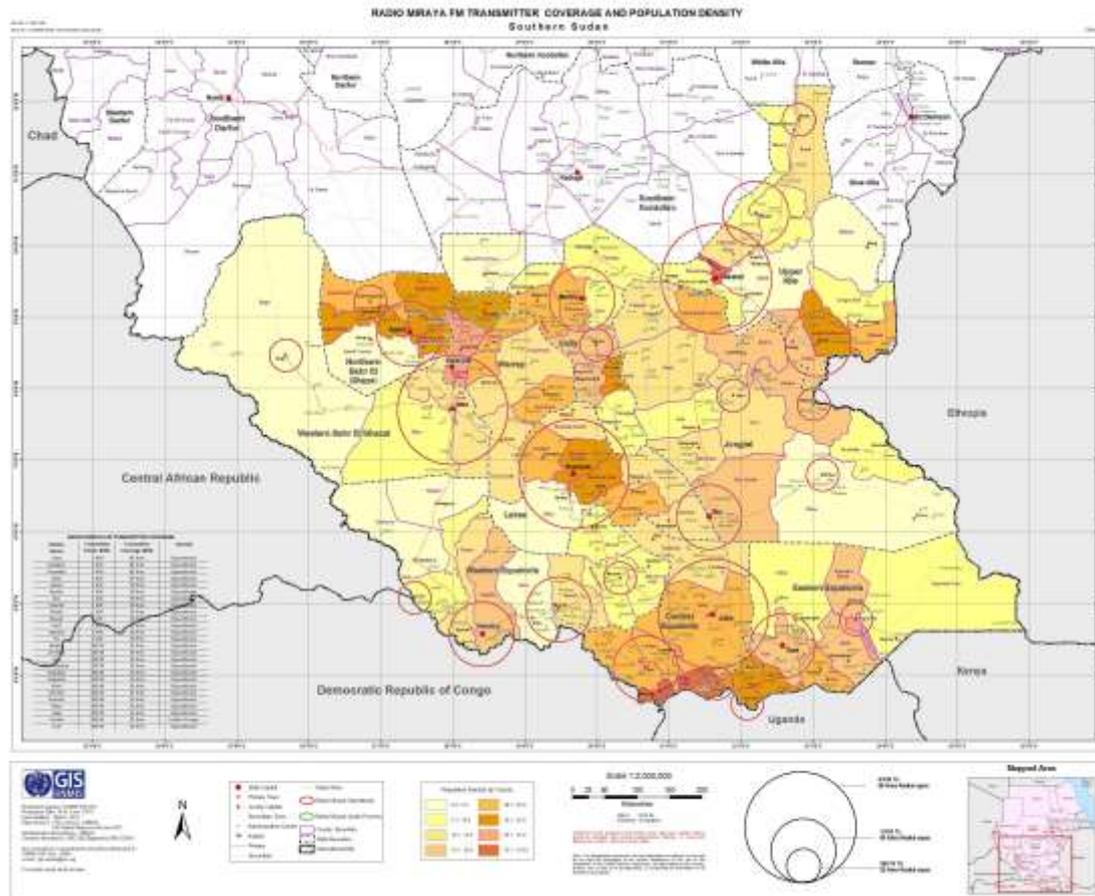


Figure 2. Radio Miraya FM coverage of South Sudan Source: UN Logistics Centre Sudan

Radio Miraya has reporting bureau with recording studios in **Wau, Malakal** and **Rumbek**. These are currently used to gather regional news and information for the Juba headquarters. Miraya does not yet broadcast regional programming. The station also has correspondents in **Bor, Yambio, Yei, and Khartoum**. Miraya was planning to establish a reporting bureau in every state capital of South Sudan during the course of 2012. The station broadcasts round the clock. Most of its programming is in **English, Arabic** and **Simple Arabic**. There are also some programs in **Dinka, Nuer, Shilluk, Bari, Zande, Lutuka, Mole** and **Lovo (Acholi)**.

According to BBC World Service Trust research in 2008, the station is very popular, especially among the youth. It has a good reputation for news. Since South Sudan became independent and Radio Miraya refocused all of its attention on broadcasting to audiences in the new country, the stated objective has been: "To contribute to the creation of a democratic, peaceful and stable new state of South Sudan by providing nation-wide high quality news and information." Miraya carries regular news bulletins in **English** and **Simple Arabic** throughout the day. There are also entertainment, current affairs and civic education programs, debates and phone-in shows. Radio Miraya has FM repeater stations in the following locations:

- Juba
- Akobo
- Aweil
- Bentiu

- Bor
- Gok Machar
- Kapoeta
- Kwajok
- Maridi
- Mundri
- Nimule
- Raja
- Rumbek
- Wau
- Yei
- Ezo
- Kajo-Keji
- Koch
- Malakal
- Melut
- Nasir
- Pibor
- Renk
- Torit
- Yambio
- Yuai

Additional FM relay stations were due to be installed at 15 new sites in 2012, including the following locations:

- Mayom
- Pariang
- Turalei

Radio Miraya was also planning to increase the strength of several of its smaller existing transmitters from 250 to 1000 watts.

AI.2 State Government Radio Stations

AI.2.1 Yambio—Yambio 90.0 FM

Yambio FM is owned and run by Western Equatoria State government. It opened in 2009. The station's main transmitter in Yambio broadcasts on 90.0 FM. There are relay stations in Maridi (91.0 FM) and Tambura (91.0 FM). A third relay station is planned for Mundri shortly. The main transmitter in Yambio broadcasts from a 1,000 watt transmitter via dipoles mounted on a tall mast, whose exact height it was not possible to verify. The relay transmitters are both 500 watts. They broadcast from dipoles mounted on the Zain mobile base station mast in Maridi and the MTN mast in Tambura.

Yambio FM has already arranged with MTN to mount the new Mundri transmitter on its mast in the town as soon as the transmitter equipment is made available by UNMISS. Yambio FM is usually on air continuously from 06.00 to 22.00.

It broadcasts live programs in a mix of Zande, the main language spoken in Western Equatoria State, English and Simple Arabic. Since March 2015, the station has been broadcasting a two-hour agriculture program called "Building Our Green State" three times a week between 09.00 and 11.00.

The program consists of studio interviews with an agricultural expert, a phone-in sections and packages that have been pre-recorded in the field. These different segments are interspersed with music. The agriculture program is produced by Yambio FM's own staff. It does not have a sponsor.

Extract from the Internews Audience survey of radio stations in South Sudan—2013

Yambio radio station was established by the government of Western Equatoria State in 2009. It is broadcast on 90.0 FM and covers the entire state from Nagero County to Mundri East. At its launch, the station ran morning, afternoon and evening programming supplemented by musical interludes. Since then, it switched to a 24 hour format.

Among those radio listeners who had heard of Yambio FM, 85 percent have listened to the station. The majority of those who had listened to Yambio FM (77%) indicated that they have listened to the station in the last seven days (64% male versus 35% female), 19 percent within the last month and three percent within the last year. Among the Yambio FM listeners who tuned in during the past seven days, 47 percent have listened on a daily basis—62 percent male and 37 percent female. Yambio FM listeners tend to be younger, with 52% of daily listeners falling within the 15 to 25 year cohort, showing that Yambio FM has a loyal following of younger listeners.

Similar to other stations, Yambio FM listeners tune in during morning hours, with 48 percent listening between 7-8 am and 47 percent between 8-9 am. Yambio FM has relatively high evening listenership, with 42 percent tuning in between 8-9pm and 43 percent between 9-10 pm. Males had a higher tendency of listening during these times, with 66 percent of those listening between 7-8am being male.

A1.2.2 Torit—Voice of Eastern Equatoria State (VoEES) 97.5 FM

This radio station is owned and operated by the government of Eastern Equatoria State. It is based in Torit, with a relay station in Kapoeta. There are plans to establish another relay station in Magwi, but no budget has been allocated for this project so far. VoEES began broadcasting in.

Most of the programming is in English and Juba Arabic. The 14 local languages spoken in Eastern Equatoria State each have one weekly slot of programming lasting 60 to 90 minutes. There are two slots for local language programming, one in the morning and one the evening. Every day, two local languages are featured. VoEES is on air continuously from 05.00 to midnight.

The radio station occupies a purpose-built building and has modern well-equipped studios. Its dipoles are mounted on an adjacent 42-metre high Gemtel mobile phone mast and the radio station uses power from the Gemtel transmitter.

A1.2.3 Juba—Equator Broadcasting Corporation (EBC) 89.4 FM

This radio and TV station based in Juba, owned and operated by Central Equatoria State government, was officially inaugurated in July 2015. The radio station has a 5,000 watt transmitter in Juba. EBC does not currently have any relay transmitters outside Juba, but may build some in the future to reach southern parts of the state.

In July 2015 the Ministry of Agriculture of Central Equatoria State was planning to run a series of weekly programs for farmers in Juba Arabic on the station and on state-run Juba Radio. (In the past,

the Ministry has also sent staff to be interviewed on Radio Bakhita, the Catholic Radio Network (CRN) station in Juba.)

News report by Radio Tamajuz on July 7 2015

JUBA (7 Jul.) The government of Central Equatoria State Governor Clement Wani Konga yesterday launched the Equator Broadcasting Corporation in Juba. EBC will serve as a public service broadcaster with two media channels, Equator Radio 89.4 FM and EBC TV, according to the management. The latter, a free to air or terrestrial signal transmission, is located on UHF channel 21.

The EBC studios are located next to the Central Equatoria State Secretariat and Ecobank. Jacob Aligo Lo Ladu will serve as managing director. President Salva Kiir was invited as the chief guest of the event but he did not turn up, instead sending Cabinet Minister Martin Elia Lomuro to represent him.

AI.3 Independent Radio Stations

AI.3.1 Eastern Equatoria State

AI.3.1.1 Torit—Radio Emmanuel 89.0 FM

Radio Emmanuel is located in Torit, the capital city of Eastern Equatoria State. It has a 1,000 watt transmitter, mounted on a 72 metre mast, but its broadcast output is only 850 watts. The station has a broadcast radius of about 70 km. The signal reaches nearly all of Torit, Ikotos and Budi counties and the eastern part of Magwi (Obbo, Parataka, Parajok, Labone).

The station is operated by seven regular staff and two volunteers. The radio station broadcasts mainly in English and Juba Arabic and carries a small amount of programming in 14 local languages. Radio Emmanuel is on air from 06.00 to 12.30 and again from 16.00 to 21.00. It carried a regular weekly agriculture and forestry program for two years called “Farm and Environment,” but this ended in early 2015.

In 2010, Radio Emmanuel reported agricultural commodity and livestock prices from four county markets—Torit, Magwi, Ikotos and Budi—but these reports stopped after six months.

AI.3.1.2 Torit Grace 90.5 FM

This radio station is run by the African Inland Church (AIC) in Torit town. The AIC also runs Grace FM in Kajo-Keji. Grace FM began broadcasting in Torit in 2009.

The studios consist of two containers with walls built to form a room between them and a roof over the whole lot. The station has a tall mast of at least 40 metres. The strength of its original transmitter was not known by AIC staff at the site.

When Grace FM is on air, it broadcasts mainly in English and Juba Arabic. It also airs some programs in other local languages. The radio claims to reach up to 150 km. AIC staff said it could be heard in Pajok, Ikotos, Obo, parts of Magwi, Nimule and even Kitgum in Uganda.

A1.3.1.3 Nimule—Nehemiah Trumpet Call (NTC)

The station was founded in 2003 by William Levi, a local man who spent many years in the United States and then founded the Operation Nehemiah mission in Borongole.

The radio station broadcasts mainly in English and Acholi. There are some announcements in Juba Arabic. The NTC is popular among the Madi-speaking people of the Nimule and Pageri areas. They also listen to Madi language radio stations broadcasting from northern Uganda.

Until now, NTC used a 650 watt transmitter which broadcast from a 300 foot (90 metre) mast on the hill just above Nimule town. Its signal reached north as far as Nestu, 60 km east as far as Labone in Magwi county and south into Uganda.

The station is on air from 06.00 to midnight. It broadcasts a mix of music, talk shows with phone-ins, and religious programs. Once a day it also carries news from the BBC World Service.

A1.3.1.4 Magwi—Voice of Freedom 93.00 FM

This is a community radio station based in Magwi town with a 1,000 watt transmitter and a 60-metre mast. It broadcasts mainly in English and Juba Arabic, but also airs three Acholi language program segments per day, in the morning afternoon and evening. There are plans to introduce some programming in Madi.

Voice of Freedom was launched by the Association of Media Women in South Sudan (AMWISS) in January 2012, with backing from the Agency for Cooperation and Research in Development (ACORD). Construction of the new station was financed by the Belgian government. Control of the radio station was subsequently handed over to an independent community trust.

Voice of Freedom broadcasts continuously from 06.00 to 23.00. Programming focuses strongly on local affairs, especially conflict resolution and peace building. There has not so far been any programming that focuses specifically on agriculture; however, the station formerly ran three times a week a program on livelihoods.

The original transmitter was rated at 250 watts and allowed the station to reach most parts of Magwi County, but the new 1,000 watt transmitter installed in 2015 is much more powerful and should extend the radio station's previous broadcast range. It is aiming to achieve a range of 100 km, but this is likely to be limited to the north by the Imatong mountain range.

Voice of Freedom has a management team of four, five presenters, and two journalists. It also has six volunteer reporters based in the interior of the county. These are also the facilitators of local listeners clubs.

A1.3.1.5 Magwi—Radio Magwi 92.5 FM (DEFUNCT)

The German aid agency GIZ financed the construction of Radio Magwi in Magwi town in 2010. It was designed to be a community station serving Magwi County. The station was built in the GIZ

compound in Magwi with support from the German NGO Xchange Perspective as part of a youth project.

It began broadcasting in 2010 with a 1,000 watt transmitter and two antennae mounted on a 42 metre mast. The station had an intended broadcast radius of 50 km. In practice, the signal could sometimes be heard up to 125 km away in Juba. Radio Magwi stopped broadcasting in 2012 after control of the station was handed over to the Magwi County government.

In July 2015, its transmitter was lent to Voice of Freedom in Magwi, so that this station could resume broadcasting after its own transmitter broke down in December 2014.

A1.3.2 Central Equatoria State

A1.3.2.1 Yei—Spirit 99.9 FM

Along with Radio Easter, this Christian radio station is one of the two most popular radio stations in Yei. It broadcasts extensively in the local Bari language and carries a popular weekly program on farming.

Spirit FM is owned and operated by the U.S.-based Dan Peters Foundation. This is a Christian-inspired organization which runs radio stations in South Uganda, Nigeria, Ghana, and the United States. Dan Peters is a member of the Anglican Church.

The Yei station first went on air in 2002. Its transmitter, rated at 300 watts, broadcasts at 275 watts from dipoles mounted on a 51-metre mast.

Most of Spirit FM's programs are in Bari, Juba Arabic and English. Its recorded programs generally use just one of these languages, but the station's live programs mix all three. Spirit FM also broadcasts short segments of programming in other local languages and in Lingala to cater to the Congolese refugees who live in a camp at Lasu near the DRC border region and for Congolese listeners in Aba, just across the border. Aba does not have its own radio station and listeners in Aba frequently place announcements on Spirit FM.

Spirit FM is usually on-air from 07.00 to 23.00

The station has six full-time staff, supplemented by three part-timers who broadcast at the weekend. Spirit FM broadcasts about 40 percent music and 60 percent talk shows. These mostly deal with health, education, social matters, agriculture and religion.

Since 2011, the radio station has been broadcasting a pre-recorded agricultural program three times a week on behalf of World Renew, a Canadian NGO active in Yei. This 12-minute program on agriculture is produced and pre-recorded in Bari by World Renew at a small studio in its Yei office. This program, which includes prices from seven local markets in Yei County and a topical agricultural extension message lasting about five minutes, is broadcasted every Tuesday at 19.00 which is prime time in the evening. Each edition of the program is repeated at the same time on Friday and Sunday. This agricultural program is also broadcast by Radio Easter.

World Renew sponsors a one-hour talk show and phone-in on Spirit FM once a quarter on a topical subject linked to agriculture. This features a panel discussion with experts in the studio who then answer calls from listeners.

A1.3.2.2 Yei-Radio Easter 94.0 FM

Radio Easter is a member station of the Catholic Radio Network based in Yei. It normally broadcasts from a 2,000 watt transmitter mounted on a 60 metre mast in Yei town. This gives it a reach of approximately 80 km radius. Radio Easter can be heard clearly throughout Yei and Morobo counties. Its signal carries south into bordering areas of Uganda and west as far as Aba, 60 km away just across the border in DRC. Radio Easter can also be heard, as far north as Wondruba and as far east as Tale. The signal does not reach Kajo-Keji.

Radio Easter employs 15 staff and carries a mixture of news, music, talk shows, phone-ins, and religious programs. The station broadcasts mainly in English, Juba Arabic and Bari. All three languages are mixed together by presenters in live programs. Radio Easter is on-air continuously from 0645 to midnight.

The station carries a weekly 12-minute program on agriculture in Bari which produced and pre-recorded in Yei by the Canadian Christian NGO World Renew. This program, which includes prices from seven local markets in Yei County and a topical agricultural extension message lasting about five minutes is broadcast at prime time in the evening and is repeated once later in the week.

A1.3.2.3 Yei—Liberty 90.0 FM

Liberty FM in Yei is a local subsidiary of the privately owned commercial radio station of the same name in Juba. However, it broadcasts completely separate programming. Liberty FM broadcasts on 90.0 FM and has been on air continuously since 2005.

Liberty FM broadcasts music and entertainment programs. The station broadcasts mainly in English and Juba Arabic. Its programming mix is 60 percent talk and 40 percent music. Liberty FM claims to target a mainly youth audience.

There are two Bari (Kakwa dialect) programs per week aimed at older listeners. One is a local news magazine program on Saturday evenings. The other is a music program on Sunday mornings.

Liberty FM was set up in 2005 by British businessman Gordon Bell and Peter Yata, a former senior SPLA figure in Juba, through a company called Juba Information Outreach. The Yei subsidiary was originally intended to serve IDPs in the Yei area.

The station claims that its signal reaches all of Yei and Morobo counties and beyond. It can be heard in the Ugandan border town of Koboko to the south and the Congolese border town of Aba to the west. The signal is said to reach as far north as Mandruba on the road to Juba.

A1.3.2.4 Yei—EPC FM

This small Christian radio station has a low-powered transmitter and a broadcast radius of about 10 km around Yei. It is owned and operated by the Evangelical Presbyterian Church, a small local church based in Yei.

A1.3.2.5 Morobo—Radio Morobo 102.8 FM

Morobo FM is a community radio station, based in Morobo, 20 km north of the border town of Kaya, in Central Equatoria State. It was set up in 2013 with support from the German NGO Xchange Perspective for the German aid agency GIZ as part of a governance project in Morobo County.

The station claims to cover all of Morobo County and can be heard well beyond its borders, in Uganda to the south, DRC to the west, Kajo Keji to the east, and parts of Lanye County north of Yei up to 70 km to the north. Morobo FM has a 1,000 watt transmitter, but generally broadcasts at 600 watts from dipoles mounted on a 39-metre mast.

Morobo FM is normally on air continuously from 06.00 to 22.00. It broadcasts a mixture of music and community-focussed talk shows. There are regular programs for children, women, and youth. There also is a daily magazine program called Morobo Focus. This covers a wide range of topical local issues, including agriculture. Morobo FM carries a weekly agricultural program on Saturday evenings. This normally features a live interview with an agricultural expert on a topical issue in local farming, followed by a phone-in. The two-hour show is interspersed with music.

The radio broadcasts in a mixture of English, Juba Arabic, Bari, and Kiliko. The population of three payams in Morobo County speak Bari. Most people in the other two payams speak Kiliko.

The radio is managed by two professional radio journalists and three administrators. Most of the programs are made by a team of 10 volunteer reporters. Staff access the Internet using modems linked to the mobile network.

Radio Morobo's target audience includes many returned refugees from Uganda and DRC who live nearby. Morobo County is an area of great agricultural potential.

A1.3.2.6 Kajo-Keji—Voice of Kajo Keji 92.0 FM

This local radio station in Kajo Keji opened in 2008. It was founded by a local businessman, but now claims to be community-owned. Local people say that Voice of Kajo Keji caters more for older people. Young people in the district listen more to its main rival Grace FM, which broadcasts more music.

Voice of Kajo Keji broadcasts from a 1,500 watt transmitter via dipoles mounted on a 20-metre mast. It claims to reach as far west as Morobo, as far south as Northern Uganda, as far north as Lanye County and east across the Nile into some parts of Eastern Equatoria State. The station has its own generator and is on air continuously from 06.00 to midnight. Voice of Kajo Keji broadcasts mainly in Bari. It also uses English and a small amount of Simple Arabic.

The station has 17 staff. It carries a variety of news programs and talk shows and some music. The station used to broadcast programs sponsored by Norwegian People's Aid (NPA) that promoted the use of fertilizer, but these have been discontinued. In August 2015, it was not airing any programs about agriculture.

A1.3.2.7 Kajo Keji—Grace FM 95.1 FM

Grace FM has been on air in Kajo-Keji since 2008. The station has a 1,600 watt transmitter. Its dipoles are mounted on a 20-metre high mast. Grace FM has a broadcast range of more than 60 km. It claims to reach the town of Moyo in northern Uganda to the south and the eastern part of Morobo County to the West. The station claims that its signal reaches as far north as Lobonok on the east bank of the Nile.

The radio station is on air continuously from 06.00 to 22.00. Grace FM is closely associated with the Youth Vision Development Foundation, a local community-based organisation founded in 2005. Its programs focus mainly on community issues and are all interspersed with music. Most of its programming is in Bari (60%). The rest is in English. Grace FM broadcasts very little programming in Simple Arabic which is not widely spoken in the Kajo Keji area.

A1.3.2.8 Kajo Keji—Hope FM

This radio station belonging to the Episcopal Church of South Sudan and Sudan began broadcasting in 2014. It has a low powered 150 watt transmitter which broadcasts from dipoles mounted on a four-metre mast erected on the roof of the Episcopal (Anglican) cathedral in Kajo-Keji. The radio station is powered by 16 solar panels.

The radio station is on air continuously from 05.00 to 23.00 and claims to cover the whole of Kajo Keji county, with the exception of some low-lying areas. It claims that its signal can be heard up to 40 km away. Hope FM broadcasts mainly in Bari (70%) and English. It very seldom uses Juba Arabic. The station has two full-time staff and five part-timers. It mostly broadcasts spiritual, developmental and educational programs and music.

A1.3.2.9 Kaya—Ngun Kata FM

This Christian evangelical radio station is based in Kaya in Morobo County, Central Equatoria State, a town where the borders of South Sudan, Uganda and DRC meet. The radio station was founded with U.S./Canadian missionary support.

Extract from Infoasaid Media and Telecoms Landscape Guide to South Sudan—2012

This Christian evangelical radio station is based in Kaya in the extreme south of Southern Sudan, close to the point where the borders of Sudan, Uganda, and DRC meet. It broadcasts in English, Juba Arabic, Madi, and Kakwa. Ngun Kata was set up by Sudan Christian Ministries in a grass hut on a hill near Kaya to broadcast religious programming, development programming and peace messages to the surrounding area in all three countries. The name of the station means "God hears" in a local language. However, the radio station has so far been hampered by the low strength of its transmitter and power supply. As a result, its broadcasts cannot be heard in at least three counties in the area. The surrounding areas of Sudan, Uganda, and DRC have suffered frequent attacks from roving bands of the Lord's Resistance Army (LRA). This Ugandan rebel group,

whose wandering bands of gunmen have raided as far afield as the Central African Republic (CAR), is notorious for its brutality and its recruitment of child soldiers. Ngun Kata receives support from High Adventure Gospel Communication Ministries www.hagcm.org a Canadian Christian missionary organisation.

A1.3.3 Western Equatoria State

A1.3.3.1 Yambio—Radio Anisa (“We Are One”) 89.0 FM

Radio Anisa is the Catholic Radio Network station in Western Equatoria State. It has been on air since 2011. The station has 2,800 watt transmitter which broadcasts from dipoles mounted on a 60.5 metre-high mast. It claims a broadcast coverage of 100 km radius around Yambio,

Radio Anisa broadcasts mainly in Zande (60%), English and Simple Arabic. The station broadcasts daily from 06.00 to 11.00 and then goes off air for four hours. Its programs resume at 16.00 and run through to 22.00. Radio Anisa has 13 staff, most of which are full-time.

It airs regular talk shows on education, health, women’s empowerment, peacebuilding and livelihoods.

Extract from Internews audience survey of South Sudanese radio stations—2013

Radio Anisa FM is based in Yambio, Western Equatoria and named after the Zande language word “anisa,” which means, “we are one.” The radio belongs to the Catholic Diocese of Tombura/Yambio and is a member of the Catholic Radio Network (CRN), an initiative of the Sudan Catholic Bishops’ Conference spearheaded by the Comboni Family since 2006 to promote reconciliation and integral development in South Sudan and the Nuba Mountains. CRN has eight community-based radio stations in South Sudan, broadcasting mainly in local languages.

Radio Anisa went on air in August 2011. The station broadcasts on 92.0 FM and includes a strong coverage area within a 100 km radius of Yambio, with a weaker coverage area in an outer ring of between 100-160 km radius. However, the signal is reported to have been received up to 185 km away and as far as Ezo Town Centre, Ibba Stream and Tombura Town.

There is a potential audience of upwards of 400,000 (based on estimates from the 2008 census associated with these broadcast ranges). Broadcasts are conducted in several languages to foster inclusivity. Languages include Arabic, English, and Zande among others. Among those who are aware of Radio Anisa, 84 percent indicated that they have listened to the station in the last seven days; 14 percent tuned in within the last month, and three percent within the last year.

Of the participants who listened in the past seven days, 41 percent are female. Thirty-five percent of respondents have listened to Radio Anisa on a daily basis, with only two percent being female listeners.

Radio Anisa has its highest listenership in morning hours, with 31 percent listening between 7–8 am, and 28 percent between the 6–7am and 8–9 am time slots. Radio Anisa also has listenership in the evening hours with 30 percent listening between 7–8 pm and 28 percent between 6–7pm. Both morning and evening listeners are between the ages of 16 to 25 years old, with 58 percent of this cohort listening from 7–8 am, as well as 36 percent between 7–8 pm. There are no listeners over 46 years old during these times. Males tend to listen more than females during peak morning hours.

A1.3.3.2 Maridi—Maridi 88.9 FM

Maridi FM is community radio station in Maridi based in Maridi town in Western Equatoria State. It is owned and run by a local NGO, the Maridi Service Agency (MSA).

Maridi FM started broadcasting in 2010. It has a 1,000 watt transmitter which broadcasts from dipoles mounted on a 38-metre high mast. Maridi FM has a broadcast range of about 40 to 50 km. Its signal reaches as far as Ibba, 50 km to the east on the road to Yambio, and about the same distance east to Bahrolo on the road to Mundri. Maridi FM also reaches beyond Amaki, 30 km to the north and it covers much of Ngamde payam, which starts 30 km to the south.

The station is usually on air continuously from 8am to midnight. It broadcasts mainly in Juba Arabic and English. There are two-hour segments of programming in Baka, the main local language, on Wednesday and Friday evenings. Maridi FM has eight full-time staff.

The station broadcasts 65 percent talk, 35 percent music, with the music shows being concentrated over lunchtime and after 22.00. Its talk shows focus on community issues such as education (with a special focus on educating girls), health (with a special focus on HIV/AIDS and measures to prevent common diseases), conflict and peace building (Freevoice radio dramas on peace building are popular) and youth issues. There are no agricultural programs at present, but most of the station's listeners are farmers and it is keen to introduce them.

Radio ownership is high in the Maridi area and many farmers hang their radio from the branch of a tree to listen to programs while they work in the fields

ANNEX II

Revised FARMII Public Service Announcement Messages

These are final drafts of the 15 existing and proposed key messages that should be incorporated into the PSAs on post-harvest, land preparation and planting activities. They contain adjustments proposed by FARM Agricultural Production Expert Costa Mwale and FARM Warehouses and Marketing Expert Cornelious Worigori.

Information highlighted in blue has been added to the content of the FARM PSAs devised and broadcast in 2011/2012.

Information *highlighted in blue that has been italicised* has been added to the message since the first draft was reviewed by Costa Mwale. (He has approved all subsequent drafts.)

Phrases that have been **highlighted in bold and underlined** are the key messages that should be repeated at least once in every PSA scripted and recorded for radio.

A2.1 Post-Harvest Messages (October-December)

A2.1.1 Crop Drying

A2.1.1.1 Message No. 8

Dry your grain crops under direct sun for five days on mats or plastic sheets

This will keep the grain clean and protected.

Spread the grain evenly in a thin layer so that each seed dries completely.

Do not spread your grain on the bare ground to dry.

It will get dirty and damp and may spoil. Pests may eat it.

You could lose four out every 10 heaps that you harvest.

Dry and store your grain properly so that all of it remains good to eat and sell.

Note:

The final message sentence is the slogan that will be repeated in all post-harvest messages. This general message about grain drying technique emphasises the extent of post-harvest losses that farmers could suffer if they do not dry or store grain properly. This element has been dropped from the more detailed crop-specific messages about how to store maize, sorghum and groundnuts. Instead, the crop-specific messages remind farmers how to test the grains of maize, sorghum and groundnuts to check that they have been dried sufficiently.

A2.1.1.2 Message No. 19

Dry your sorghum for five days under direct sun on mats or plastic sheets.

This will keep the sorghum clean and protected.

Spread the seed heads in a single layer so that all the grains dry completely.

The sorghum is dry and ready to store when the grains turn to powder if you pound them in a mortar.

Dry and store your grain properly so that all of it remains good to eat and sell.

A2.1.1.3 Message No. 13

Dry your maize for five days under direct sun on mats or plastic sheets.

You can also dry ears of corn on racks.

This will keep the maize clean and protected.

Spread the maize in a single layer so that all the grains dry completely.

The maize is dry and ready to store when the grains turn to powder if you crush or grind them.

Dry and store your grain properly so that all of it remains good to eat and sell.

A2.1.1.4 Message No. 24

Dry groundnuts for five days under direct sun on a mat or plastic sheet.

You can also dry groundnuts on a rack.

This will keep them clean and protected.

Spread the groundnuts in a single layer so that they all dry completely.

Groundnuts are dry and ready for storage when they turn to powder if you pound them in a mortar.

Dry and store your grain properly so that all of it remains good to eat and sell.

A2.1.2 Crop Threshing and Winnowing

A2.1.2.1 Message No. 20

Thresh sorghum and clean it well before you store it.

When your sorghum has been dried properly, put the heads into a bag and beat them with a stick to separate the grain from the husks.

Then remove the husks and dirt before you store the grains.

Pick out large pieces of unwanted material by hand.

Then pour the sorghum grains from a basket held up high onto a large mat.

The wind will blow away light husks and dirt as the sorghum falls.

This will leave you with clean grain.

Dry and store your grain properly so that all of it remains good to eat and sell.

A2.1.3 Crop Storage

A2.1.3.1 Message No. 25

Store your groundnuts in dry containers which allow the air to circulate.

Once you have dried your groundnuts properly, store them in gunny sacks, which allow the air to get in.

You can also store your groundnuts in dry plastic jerry cans.

But leave the cap off so that fresh air can get inside the container.

Store the sacks or plastic containers in a clean dry place *which is rat-proof*.

Dry and store your groundnuts properly so that all of them remain good to eat and sell.

A2.1.3.2 New Message A

Once you have dried your maize ears properly, store them in cribs.

The cribs should be raised off the ground as high as a man's waist.

Place rat guards on each leg supporting the crib to stop rodents from climbing up to eat your grain.

Don't store your maize in heaps on the ground where it can spoil and animals can eat it.

Dry and store your grain properly so that all of it remains good to eat and sell.

Store your ears of maize in rat-proof cribs.

A2.1.3.3 New Message B

Once you have dried and winnowed your sorghum, store the grains in gunny sacks *or baskets*.

Store these containers in a clean dry place *which is rat-proof*.

Don't let the rain or pests spoil what you have harvested.

Dry and store your grain properly so that all of it remains good to eat and sell.

Store your sorghum in a dry clean place which is rat-proof.

A2.2 Pre-Planting Messages (January To March)

A2.2.1 Land Preparation and Clearing

A2.2.1.1 Message No. 3

When you prepare the land for planting, **break up big lumps of soil to help all the seeds to germinate easily.**

The top layer of soil should crumble into dust when you rub it between your fingers.

Seeds will germinate quickly *if they are in close contact with loose soil.*

Young shoots will reach the sunlight easily if they do not have to fight through big lumps of soil.

Prepare the ground well and space your plants properly to get a good harvest

Note:

The final message is the slogan that will be repeated in all land preparation and crop planting messages.

A2.2.1.2 Message No. 4

Clear your cultivated land of tree stumps and large branches.

Pull out bushes by the roots.

Plants need to grow in an open environment.

Remove obstacles to their growth both *above and below ground.*

Large roots attached to tree stumps will hamper the root growth of your crops underground.

Branches left in the fields and take up space that your crops need in order to grow well.

Prepare the ground well and space your plants properly to get a good harvest.

A2.3 Planting Messages

A2.3.1 Message No. 5

Plant your crops in rows to get a good harvest.

Planting in rows makes it easier to weed your fields with a hoe.

Planting in rows helps to give each plant enough room to grow big and strong.

Each plant needs room to get enough sunlight and water and nutrients from the soil.

Prepare the ground well and space your plants properly to get a good harvest.

A2.3.2 Message No. 14

Plant sorghum in rows that are three human feet apart

In each row **plant sorghum seeds in holes that are one foot apart**

Plant five sorghum seeds in each hole.

Thin the seedlings when they appear.

Just leave the two strongest shoots to grow.

Prepare the ground well and space your plants properly to get a good harvest.

A2.3.3 Message No. 5

Plant maize in rows that are three human feet apart

In each row, **plant maize seeds in holes that are one foot apart.**

If you use certified maize seed provided by an NGO or dealer, plant one maize seed in each hole.

If you use your own seed from the previous harvest, plant two seeds in each hole because one may not germinate.

Make each hole half the length of your index finger.

Cover the planted maize seeds with loose soil.

Prepare the ground well and space your plants properly to get a good harvest.

A2.3.4 Message No. 26

Select cassava cuttings for planting carefully *in order to grow strong healthy plants that will give a good crop.*

Choose cuttings from mature, thick and unbruised cassava stems.

Healthy and productive cassava plants will only grow if you plant healthy stems.

Handle the cuttings carefully to protect the buds.

And remember to plant the cuttings with the buds facing up.

Prepare the ground well and space your plants properly to get a good harvest.

A2.3.5 Message No. 27

Plant cassava cuttings in rows that are three human feet apart.

In each row, plant the stems *four* feet apart.

This will give the cassava plants enough space to get sunlight.

It will also allow each plant to get enough water and nutrition from the soil to grow well.

And remember to plant the cuttings with the buds facing up.

Prepare the ground well and space your plants properly to get a good harvest.

ANNEX III

Information on World Renew Weekly Agricultural Program in Yei

The Canadian Christian NGO World Renew www.worldrenew.net has a small agricultural development project in Yei County. This provides extension services to about 660 small-scale farmers grouped into 20 different village associations.

Since 2010, this project has included a 12-minute weekly radio program on agriculture which is broadcast by Spirit FM and Radio Easter, the two most widely listened to radio stations in Yei County. Their broadcast coverage also includes Morobo County and parts of Lanye County.

The program, in Bari, is broadcast at 19.00 on the same day each week on both stations. It is repeated two days later. The agricultural program is extremely popular among farmers and commands a wide and regular audience in both Yei and Morobo counties. The program consists of two main segments, interspersed with music - including songs about agriculture in Bari that World Renew commissioned and recorded locally.

The first segment is a report on agricultural commodity prices during the previous week from three markets in Yei town and the rural markets of Mitika, Ombaci and Ginjam (Wholesale prices for eight staple foods in Yei central market and the three rural markets in nearby payams are currently monitored by FARM II on a weekly basis, but this information has not so far been shared with the local community). The second segment of the World Renew program is a 5-minute feature on a topical agricultural message for farmers. World Renew produce and record each program themselves in a small rudimentary studio in their Yei office. This is also their headquarters in South Sudan.

World Renew sponsor a one-hour panel discussion and phone-in program on a topical subject related to agriculture on Spirit FM and Radio Easter every three months.

In July 2015, World Renew conducted an audience survey of 260 randomly chosen respondents in Yei County to find out how many people listened regularly to the weekly program and what influence it had on the behaviour of farmers. Analysis of this survey was due to be completed in September and World Renew promised to share its findings with FARM II.

The NGO hopes to start up a new agricultural development project funded by the Canadian government in Torit, Magwi and Lafon Counties in early 2016. The go-ahead for this project, which would also have a radio component, is dependent on a successful bid for the Canadian funding. The markets reported on the Yei program are monitored on different days each week and prices are given in terms of both small quantities such as cups and larger ones such as basins. The

commodities covered are maize, sorghum, unshelled groundnuts, shelled groundnuts, beans, rice, sesame, cabbages, onions, tomatoes, avocados and sweet bananas.

Although these are not same day prices, they obviously interest traders as well as local farmers. Several traders in Yei, who come from other parts of South Sudan, have complained to World Renew that the prices should be broadcast in Juba Arabic as well as Bari so that they can understand them better.