Building an ecosystem around data: using interactive radio for accountability to farmers in Tanzania

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Acknowledgements
Thanks to Mark Leclair of Farm Radio International for comments on an earlier version of this practice paper.

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IDS requests due acknowledgement and quotes from this publication to be referenced as: Feruglio, F. and Gilberds, H. (2017) Building an Ecosystem around Data: Using Interactive Radio for Accountability to Farmers in Tanzania, Making All Voices Count Practice Paper, Brighton: IDS

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Summary

In 2015, Farm Radio International applied to Making All Voices Count for a practitioner research and learning grant. Farm Radio International (FRI) is a Canadian-based not-for-profit organisation working in direct partnership with approximately 600 radio broadcasters in 38 African countries to fight poverty and food insecurity.

The research studied the impact of one of FRI’s projects, the Listening Post, initially developed as a pilot project funded by the Bill & Melinda Gates Foundation to help agricultural development actors ensure their initiatives are responsive and accountable to farmers.

The Listening Post is an interactive radio series aimed at an audience of farmers. It combines specialised interactive radio broadcasts with Uliza, a tool created by FRI for gathering and analysing feedback and questions from audience members. Uliza is built on an interactive voice response (IVR) system which enables listeners to vote on poll questions, leave messages and request the delivery of specific information.

The research aimed to assess the effectiveness of the Listening Post, and to examine its potential as a tool for the adaptive management of agricultural programmes.

This practice paper describes the research, and reflects more broadly on the challenges and opportunities provided by feedback models such as the Listening Post for improving inclusive and participatory agricultural development, and for advancing adaptive programme implementation based on feedback. It also discusses the potential of building on a tech-enabled feedback model to enable collective civic action for extension services that are responsive to the priorities of smallholder farmers.

If the information generated by multi-stakeholder platforms like the Listening Post is to lead to adaptation and change in service provision, it is necessary to develop common understandings of the roles and responsibilities of different stakeholders from the outset of programme design and implementation.

Key themes in this paper

- Collecting real-time data for adaptive programme management.
- The role of infomediaries in ensuring that different stakeholders access data that is useful to them.
- Building effective partnerships for accountability and responsiveness.
Setting the scene for practitioner learning

Making All Voices Count is a citizen engagement and accountable governance programme. Its Research Evidence and Learning component, led by the Institute of Development Studies (IDS), focuses on building an evidence base on what works in technology for voice, transparency and accountability, how it works, and why (McGee et al. 2015). Through its practitioner research and learning grants, IDS gives tech for transparency and accountability practitioners funds of around £25,000, and mentoring support. This provides them with the space and capabilities to explore key questions that will enable them to better implement their governance projects. It is hoped that this real-time applied research will contribute to project learning and improved practice.

The practitioner research and learning grants support grantees to form their own learning and judgements, and the development of the Making All Voices Count Practice Papers series is part of this process. Practice papers document the practitioner research and learning processes from the perspectives of both the grant recipients and the fund managers. They situate the research findings and the reflective processes which led to them in contemporary debates in the field of transparency and accountability.

Making All Voices Count Practice Papers are co-produced and intended to prompt critical reflection on key learning questions. The Making All Voices Count–IDS team does not prescribe research questions and methods; rather, it encourages grant recipients to explore questions that they believe are of importance to the implementation of their project. Some of the practitioner research is embedded in Making All Voices Count’s innovation and scaling grants, which are curated and managed by Ushahidi and Hivos.

This practice paper focuses on the work of Farm Radio International (FRI), an organisation supporting radio broadcasters in developing countries to strengthen small-scale farming and rural communities. The research team, headed by Heather Gilberds, sought to study the impact of one of FRI’s projects, the Listening Post. This paper documents a conversation about the research between Gilberds and Francesca Feruglio, who works on the Making All Voices Count programme, and who managed FRI’s practitioner research grant. They reflect critically on how radio and information and communications technologies (ICTs) can best promote the participation and empowerment of small-scale farmers in agricultural programmes and policy decisions.

What is the Listening Post, and what were the aims of the research?

The Listening Post is an interactive radio series aimed at an audience of farmers. It combines specialised interactive radio broadcasts with Uliza, a tool created by FRI for gathering and analysing feedback and questions from audience members. Uliza is built on an interactive voice response (IVR) system, powered by VOTO Mobile, which enables listeners to vote on poll questions, leave messages and request the delivery of specific information. Programmes on the Listening Post include radio mini-series on specific topics – with listeners invited to participate in polls, ask questions and offer opinions. This feedback mechanism allows listeners to send unfiltered opinions to policy-makers and other development partners.

The Listening Post model was initially developed as a pilot project funded by the Bill & Melinda Gates...
Foundation to help agricultural development actors ensure their initiatives are responsive and accountable to farmers.

Each Listening Post usually runs for five or six weeks and focuses on a specific topic determined through consultation with partners, farmers, extension workers and broadcasters. The radio programme usually lasts 30 minutes, but this varies from Listening Post to Listening Post.

The objectives of the research were two-fold: (1) to assess the effectiveness of the Listening Posts that have been implemented to date, highlighting enabling and constraining factors that affect success; and (2) to examine the potential for the Listening Post to act as a tool for adaptive management in agricultural programmes meant to improve rural lives and livelihoods in sub-Saharan Africa.

FRI’s research questions

1. Do ICT-facilitated programmes that collect and aggregate feedback from farmers actually facilitate dialogue and influence decision-making around agricultural programmes and policies? If so, how? If not, why not?

2. To what extent are partner organisations (international non-governmental organisations (NGOs) implementing development projects) using farmer data to iterate and adapt their programmes? What are the challenges they face in doing this effectively?

3. What barriers – technological and otherwise – prevent the Listening Post platform from collecting useful data from a representative sample of farmers?

4. What motivates the different stakeholders – farmers, partners and funders – to use the system?

5. What sustainability mechanisms and pathways to scale exist?

More broadly, the research expands on evidence on the challenges and opportunities provided by feedback models such as the Listening Post for improving inclusive and participatory agricultural development, and for advancing adaptive programme implementation based on feedback.

The research team used a mixed-methods approach that combined qualitative and quantitative analysis examining relevance, effectiveness, impact and sustainability (Gilberds, Handforth and Leclair 2016). Three out of six Listening Posts conducted to date were selected for analysis. The selected Listening Posts were implemented in collaboration with Gates Foundation grantees N2Africa, Purdue Improved Cowpea Storage and Mennonite Economic Development Associates (MEDA). Each of the three projects focused on a specific agricultural issue – such as promoting the uptake of a post-harvest storage method, or encouraging the use of disease-resistant cassava seeds – which was being advocated by the grantee. The projects also shared a number of other features: they were large-scale, multi-year initiatives in the middle of the project cycle, and their staff had shown willingness and enthusiasm for beneficiary feedback and adaptive programme implementation.

Two types of data were collected. Content analysis of a sub-set of the data received on the Uliza system was conducted to explore some of the questions and answers that farmers were prompted to leave on the system, with the aim of assessing the user journey. The objective of this component of the analysis was to assess how ‘useful’ the data was in terms of the stated objectives of partners – that is, to determine whether or not farmers were leaving messages or asking questions that were in line with the type of real-time, beneficiary data that partner organisations wanted to receive. The content analysis also aimed to determine whether or not the Listening Post platform and process could be useful to inspire civic action through collective voice.

Agricultural extension officers are deployed in many countries, including Tanzania, to deliver knowledge-based support services to farmers. Their role is to communicate relevant information to farmers and support them in making decisions that can yield optimum results from farming practices.
Stakeholders need to know the points in their programmes which they can adapt based on feedback, and how quickly this can happen; and they need to communicate this clearly to respondents.

Qualitative data was collected through semi-structured interviews and focus group discussions with key stakeholders. Respondents included farmers who had participated in the Listening Post in Mtwara, Mwanza and Arusha, representatives from the partner organisations, and programme staff at FRI and the Gates Foundation. The aim of the interviews was to assess the motivations and perceptions that different stakeholders had about the Listening Post programmes they were involved with, and to identify the actors, processes, networks and relationships that need to exist around the technology for it to succeed in its aim of raising the voices of farmers to key decision-makers.

Finding common ground through effective partnership and clear objectives

Francesca:
The research process allowed FRI to disentangle the bundle of relationships, perspectives and expectations of the different actors involved in piloting the Listening Post. In other words, it allowed you to ‘step back’ from aspects directly related to programme implementation, and look at the broader picture – at the whole ‘ecosystem’. What did you see?

Heather:
The research exposed a certain degree of confusion over what the platform was meant to do, and a discrepancy between the expectations of implementing partners, FRI, Gates Foundation – and farmers, too. Among FRI and Foundation staff, the goal of the Listening Post was to collect data for making interventions more responsive to the needs of farmers. However, a lot of the implementing partners didn’t sign on to the Listening Post with a clear sense of their role and responsibilities. Rather, they got on board because their donor was funding it, and because they wanted more evidence about the impact of their work on farmers, such as uptake of specific products.

The lack of clarity over the purpose of the Listening Post may have been due to two factors. On the one hand, the programme was originally pitched to implementing partners by the donor as a way to collect data for monitoring and evaluation (M&E), and adaptive management. On the other hand, FRI focused on creating a technology for collecting farmers’ feedback through the radio, although there may have not been a clear sense of how the data could be concretely used.

This broad picture points to the need for ensuring a common understanding of roles and responsibilities of different stakeholders from the outset of the programme design and implementation. Stakeholders need to know the
points in their programmes which they can adapt based on feedback, and how quickly this can happen; and they need to communicate this clearly to respondents.

**Francesca:**

How did the research contribute to gaining clarity? And what did different stakeholders learn from the research?

**Heather:**

The research enabled different types of learning. On FRI’s side, the major learning from the research is to be able to clarify what the Listening Post can and cannot be expected to do, to better sell it to implementing partners. This also helps in selecting the ideal partner: a project or an organisation that has flexible points and some degree of risk tolerance, and which understands the value of real-time data and how to process and use it.

From the implementing partners’ point of view, the research was useful to test out the potential use of data on farmers’ feedback, for instance for improving internal M&E. On the heels of the research, one of the partners – MEDA – is in the process of negotiating with FRI to integrate the Listening Post into another of their projects in Tanzania, for real-time monitoring. In other cases – for instance, large-scale, multi-partner projects that don’t have capacity for adapting to real-time feedback – something like the Listening Post would not be useful.

**Francesca:**

Adaptive learning has been one of the key focal points of your research. Could you tell us a bit more about how you have integrated research findings into the Listening Post? And, what does adaptive learning look like going forward?

**Heather:**

Throughout the course of the research I have been in close contact with the tech team to tweak the technology of the Listening Post based on the feedback from farmers. For instance, farmers reported that they don’t always understand how to use the IVR system to participate in surveys. So, short, dramatised instructions explaining how to participate using the IVR system were developed and played on the radio for several days leading up to the live Listening Post. This led to an increase in participation, with farmers acquiring better capacity to use the technology in the last Listening Post compared to the first two.

Similarly, we had always thought that the polls would be most interesting to farmers, but the research showed that the real draw was the potential to leave a two-minute audio message for the radio station. This finding is being incorporated into the design of our other projects.

Another lesson was that farmers would have liked to directly receive the information requested during a particular radio programme – whether the results of a poll, or answers to questions they raised – as they may not listen to the following programme. As a result of that feedback we began aggregating all questions and answers and sending them via SMS [short message service] to all the listeners who had participated. Of course, we still present that information in future programmes, but this adjustment allowed us to immediately close the feedback loop and provide farmers with the information they needed.
Data can only inform action and lead to higher accountability if it is used by the right stakeholder. Too many programmes fail to be transformative because they focus too much on the technical aspect and forego the political dynamics that underpin the responsiveness of decision-makers.

‘Growing teeth’ – building scope for collective civic action

Francesca:

Peixoto and Fox (2016) make a distinction between citizen buy-in to an accountability initiative, which they call ‘yelp’, and the degree to which service providers respond, which they call ‘teeth’. You argue that while farmers’ feedback is important for providing real-time information to decision-makers, collective civic action triggers a public dimension of accountability. In the case of the Listening Post, the feedback pathway seems quite clearly articulated, while the scope for collective civic action seems much narrower. What would it take for the programme to ‘grow teeth’?

Heather:

Even though the Listening Post has a clear potential for amplifying farmers’ voices through radio programmes, collective action wasn’t well articulated – mainly because of the pilot nature of the programme. But FRI is interested in putting more effort into this aspect in the future. To do this, I believe that it is necessary to partner with civil society actors on the ground who have the muscle and teeth to advocate for farmers’ interests. At the moment, the Listening Post system allows farmers to express their opinions and priorities, and the radio station amplifies them, and in a sense aggregates them – but there is a missing link to ensuring that these desires are carried forward.

The Listening Post and FRI have really good connections with experts, research groups and government extension officers, but not so many with civil society activists, who would surely find the information collected by the Listening Post very useful to better advocate on behalf of farmers and base their advocacy on evidence and data. This needs to be planned more explicitly in the next stage of the programme. In a sense, this speaks to the need for “bringing the political back to development”: data can only inform action and lead to higher accountability if it is used by the right stakeholder. Too many programmes fail to be transformative because they focus too much on the technical aspect and forego the political dynamics that underpin the responsiveness of decision-makers.

A useful suggestion for the next phase of the Listening Post is to do stakeholder mapping at the outset of programme development to figure out who in the ecosystem has the right muscle to raise farmers’ voices. The mapping should be done collectively by partners. We would also need to work formally with implementing partners on developing explicit actions that could be taken based on findings from the Listening Post, clarifying their responsibility to be accountable and responsive to the information coming in.
Francesca: The government is a key player in any accountability equation. Many farmers who participated in the research expressed the hope that they could get useful information, and that the information they provided could inform government and private sector decision-makers in charge of supplying essential agricultural inputs. However, government actors and other suppliers were not identified as direct target audiences for the data. How can the feedback loop between farmers and relevant government agencies – particularly agricultural extension officers – be closed?

Heather: The Listening Post was initially created as a one-off pilot in collaboration with the Government of Tanzania to present farmers’ priorities to the Ministry of Agriculture as an audience analysis exercise. The recommendations – such as improved market access and better advisory services – were developed and delivered to the government. At that point, FRI thought that engaging with lower-level government officials who are directly working with farmers – namely, extension officers – would have had more impact. FRI felt that there could have been more value in influencing the performance of extension officers by ensuring they provide information targeted to the needs of the farmers – rather than submitting high-level recommendations to the Ministry of Agriculture.

Francesca: Or perhaps there is need for acting at both levels? Recent studies (Aceron and Isaac 2016; Fox 2016) examine the importance of comprehensive (‘vertically integrated’) accountability strategies tackling the government at different levels of decision-making, from local to regional and national.

Heather: Yes, perhaps both are needed. Extension officers would say they are interested in receiving the data – data of a type that currently isn’t often collected – but there is a lot of scepticism among partners / farmers / NGOs about the extent to which extension officers would be able or willing to act on this kind of data. I think there is the potential for the Listening Post to be used for farmers to evaluate the role of extension services – for instance, by providing feedback on how often they have received visits from extension officers, and what kind of advice they received. That might be a good way to ensure better performance of extension officers, and tease out reasons why those extension services are not working correctly – valuable information for the government to improve its role.

A frequent observation from our research is that farmers still prefer to receive information through personal contact. Therefore, investing in improving relations and performance of extension officers would be particularly important. Building on this, FRI is about to undertake some research on integrating radio programming directly into face-to-face extension, with the possibility of using radio as a catalyst to build demand for the services of specialised extension agents.
The implementing partners wanted actionable, quantitative data for decision-making ... But from a motivation standpoint, farmers preferred open questions. To reconcile this tension, infomediaries have a crucial role to play in parsing out the two types of data and delivering them to different stakeholders.

Infomediaries at the centre of the data ecosystem

Francesca:
Different needs and expectations are also reflected in the type of technological engagement each group prefers: while implementing partners seem to prefer polls, because they help them gather the information they need in a way that is easy to aggregate, farmers showed a strong preference for open questions that allow them to express themselves more freely and, more importantly, to ask questions that are important to them. In your research you draw a distinction between ‘thick’ (in-depth, qualitative responses) and ‘thin’ (quantitative data collected through polls) engagement. What is the role of data-savvy infomediaries such as FRI and radio broadcasters in balancing these types of engagement and data?

Heather:
There definitely is a tension between the data needs of implementing partners and farmers. The implementing partners wanted actionable, quantitative data for decision-making; but when we examined the data from open-ended questions, we found it hard to make it actionable. But from a motivation standpoint, farmers preferred open questions.

To reconcile this tension, infomediaries like FRI or broadcasters have a crucial role to play in parsing out the two types of data and delivering it to different stakeholders. This requires a very clear planning process to understand what kind of data will be gathered, and the audience that will use that data. Ideally, at the outset of the process, there should be a system to identify the ‘open’ and qualitative data that may not be useful to partners in decision-making, but may be very useful for civil society organisations for advocacy purposes, and share it with them; conversely, more quantitative data from IVR polls can be sent out to the partners. Again, this system relies on having clearly defined roles for each stakeholder involved.

Another important step is to train the broadcaster as a curator to improve the way open-ended questions are delivered. While poll questions are fairly easy to ask, more open-ended questions require a curator to understand what themes are useful to different stakeholders. Ideally, the broadcaster would be empowered to play a curation role, and be part of the stakeholder mapping from the beginning. A challenge in this process is ensuring that broadcasters are sufficiently motivated: while some are genuinely committed to farmers’ issues, in other cases, motivation is not very high, and this reflects poorly on broadcasters’ performance.
Free airtime, or other types of incentives, are significantly less effective at retaining farmer participation than concrete information that they can use to gain better access to resources and markets.

**Tackling participation and inclusiveness**

**Francesca:**
While radio is an easy and effective way to reach a large number of farmers, retaining participation through the course of the programme is not equally easy. Could you tell us about what incentives for participation need to be in place in a model like the Listening Post?

**Heather:**
We found that financial incentives (such as airtime) weren't successful in retaining farmers through the course of the programme. Instead, what contributed to retention of listeners was ensuring clarity over what information they would receive during the programme. This helped manage expectations, which is very important, as misplaced expectations towards the programme disincentivise participation.

For instance, a Listening Post held on the distribution of post-harvest storage bags clarified that the programme would provide information on the locations for bag distribution, the cost of the bags, and extension officers in the area who could support the farmers. And that was successful for retaining farmers over the six weeks of the programme. This was corroborated by farmers interviewed during the research, who confirmed that free airtime or other types of incentives are significantly less effective than concrete information that they can use to gain better access to resources and markets.

**Francesca:**
You found that women’s participation in the listening post polls was very low, not because they did not have access to phones or radios, but because they felt the poll questions were targeted towards men. Recent research on IVR polling in rural Ghana (Pegus 2016) found that careful consideration of the timing and language of IVR polls can increase rural women’s participation. Given that women are very engaged in farming in Tanzania, and that their opinions and priorities are valid and important, do you think that there are ways that the Listening Post could alter its approach to be more inclusive?

**Heather:**
Not only is gender equality a key issue for FRI, but also two of the major crops in Tanzania – cassava and beans – are typically grown by women. So we were quite surprised to see only men calling through the IVR. When we enquired about this in the focus group discussions, women said that the type of questions were targeted to men as they related to decision-making on harvesting techniques and seeds purchased, on which women don’t have a say. The type of question asked was not relevant to them because it did not fall into their scope of action.

FRI has, over the course of the time, developed institutional knowledge and understanding on how to best reach out to women through radio, for
instance by selecting specific times of the day or days of the week, but the Listening Post programme suffered from a lack of questions that speak to what women’s roles are. As much as it was successful in reaching them, it wasn’t so successful in engaging with them.

Thus, the next step is to figure out how to ask the questions that will trigger women’s response, building on our experience with other programmes that have been more effective in engaging women farmers. There is definitely a trade-off between ensuring inclusion and representativeness on one hand, and on the other hand gathering data that partners find relevant and actionable. A balance needs to be struck between the different purposes of the data. A useful exercise to maintain the balance is to understand from the outset what kind of questions elicit what kind of answers, and who will use that data.

The way ahead

Francesca:
How are the research findings being integrated across FRI’s programmes? And what are the channels for supporting other actors, including donors, in taking a more strategic approach to the use of ICT accountability – one that looks at ecosystems and power relations instead of focusing on the technology?

Heather:
The major findings from this research are going to serve to bolster our approaches in other types of radio programmes, which include participatory radio and weather-focused programmes. We already have a few more Listening Posts planned in Ghana, Mali and Burkina Faso that will serve as a test-bed for implementing some of the changes recommended in the research. For example, we will use audio recording opportunities to attract participants and build processes to engage more fully with partners to actually implement adaptive changes to the supply of inputs and provision of support services to listeners.

Beyond FRI, the pilot phase of the Listening Post was funded by the Gates Foundation, which is currently in the process of redefining its approach towards ICT and agricultural development – so they are very keen to discuss how to incorporate findings of the research into their strategy. The research was also presented at the Feedback Loop Summit in Washington last year, and very well received among donors and other stakeholders, especially because of the radio component which many found particularly intriguing. We’re now hoping to discuss some of the learning through AgriLinks – a platform hosted by USAID’s Bureau for Food Security – which will be running a series of webinars on ICT and agriculture.
References


About Making All Voices Count

Making All Voices Count is a programme working towards a world in which open, effective and participatory governance is the norm and not the exception. It focuses global attention on creative and cutting-edge solutions to transform the relationship between citizens and their governments. The programme is inspired by and supports the goals of the Open Government Partnership.

Making All Voices Count is supported by the UK Department for International Development (DFID), the US Agency for International Development (USAID), the Swedish International Development Cooperation Agency (SIDA) and the Omidyar Network, and is implemented by a consortium consisting of Hivos, IDS and Ushahidi.

Research, Evidence and Learning component

The programme's Research, Evidence and Learning component, managed by IDS, contributes to improving performance and practice, and builds an evidence base in the field of citizen voice, government responsiveness, transparency and accountability (T&A) and technology for T&A (Tech4T&A).

About Making All Voices Count Practice Papers

The Research, Evidence and Learning component has made a series of practitioner research and learning grants to support a range of actors working on citizen voice, T&A and governance to carry out self-critical enquiry into their own experiences and contexts. The main output of each grant is what the practitioner learns and applies to their own practice. Practitioners can also decide to produce their own written outputs. The purpose of the practice paper, written on completion of each grant, is to capture the essence of that learning process through a reflective dialogue between programme staff and funded partners, to share with a wider audience of peer practitioners and policy-makers.

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Disclaimer: This document has been produced with the financial support of the Omidyar Network, SIDA, UK aid from the UK Government, and USAID. The views expressed in this publication do not necessarily reflect the official policies of our funders.

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