

Good communication is vital to small farmers who need better access to markets and to reliable information about prices, product quality and market conditions. Can new information and communication technologies (ICTs), especially the Internet, help? The First Mile is a two-year pilot project supported by the Government of Switzerland. It is implemented in collaboration with the Agricultural Marketing Systems Development Programme of the Government of the United Republic of Tanzania. Technical assistance is being provided by the International Support Group.



The First Mile Project

Juliana Raphael Kulaya, 45, lives in the village of Shiri Njoro, close to Mt Kilimanjaro in the highlands of northern Tanzania. Her six children study and work far from home, and her husband moved away some years ago, leaving Kulaya alone to work her half hectare farm.

Kulaya is poor, but with the income earned by selling her produce at Mbuyuni market in the nearby town of Moshe, she has managed to build a modest home. Kulaya has no phone or television and says she has no time to listen to her radio. When she needs information, she has no idea where to go, and she hasn't seen an agricultural extensionist in years. When she goes to market she has no information about prices and no idea where to find it, so she sells for whatever price she can get.

Close by lives Magdalena Lema, a 55-year-old schoolteacher whose four children are university educated. Lema and her husband have a 10 hectare farm where they grow food crops and keep dairy cattle. Every member of the family owns a mobile phone and their home computer is connected to the Internet. Despite her relative wealth, Lema has a problem similar to her neighbour's – she has no idea where to go or who to speak with to get agricultural and market information.

"I would use my mobile phone to call someone for market information," she said. "If I knew who to call."



▲ With better access to information, Magdalena Lema can get higher prices for the milk her cows produce.

The project brings the communication and the marketing dimensions together

Kulaya and Lema are just two of the farmers who stand to benefit from IFAD's First Mile Project, now underway in several districts of Tanzania. The pilot project is helping small producers, processors, traders and others in the market chain communicate better, form partnerships and learn from each other so they can have better access to market information and negotiate fairer and more collaborative market relationships.

The term "first mile" refers to bridging the connectivity gap that separates a village with no electricity and no telephone line from the nearest online computer. It emphasizes rural communities as the starting point of connectivity, not the end point.

► Farmers from the village of Wili near Mt Kilimanjaro meet to share information.



Linked to the IFAD-supported Agricultural Marketing Systems Development Programme, the First Mile is tackling two challenges: access by rural poor people to information and knowledge and to communication technologies such as mobile phones, the Internet and e-mail; and their access to other key people in the market chain, including traders, processors and even consumers. As the project leader, Clive Lightfoot, says: "The project brings the communication and the marketing dimensions together. Marketing has a tight connection to immediate income and is very dependent on information: not just price information, but also market intelligence, such as information about product quality and what is coming into the market. It is very information-intensive. We've coupled that with the potential to make an income, and that is what is driving the project."

The immediate challenge for the First Mile during the two-year pilot project is to work out how small farmers can connect through intermediaries to the Internet to get market information and to communicate with other farmer groups, with groups of processors and traders, and directly with consumers as they build their own producer-to-consumer market chains.

During Phase One of the project, from May to July 2005, current access by local people to information and communication technologies (ICTs) was assessed, and their interest in working together to learn about market chains was explored. Small farmers, processors and traders who attended an initial workshop, held in Arusha, Tanzania in early June, together explored the challenges they face in marketing and realized that none of them fully appreciated the problems faced by others in the market chain. They showed a strong interest in working together and agreed that they would all gain from more cooperation along the market chain. Learning groups were formed that will eventually use technologies like e-mail and the Internet to share information, experience and learning.

A second workshop trained 28 people in development of market chains and in how to support local learning as a way to improve market linkages. Their role is now to respond to demand and train others locally in the same skills.

During Phase Two, which runs until December 2005, some learning group members will be trained in how to use an Internet-based learning support service, Linking Local Learners, accessible at <http://www.linklearners.net>. In part, their role will be to help ensure that the learning groups are able to use the service, either directly or through intermediaries. Assessments in December and early in 2006 will determine the level of local interest in and action taken towards building market chains, forming learning groups and using ICTs to support learning.

IFAD's country programme manager for Tanzania, Ides de Willebois, stresses the importance of local commitment to the First Mile process. "This must be on a demand basis," de Willebois says. "If the learning groups find value in the exchange of information and knowledge and express an interest in continuing, then the project will respond. There is a change in behaviour that is needed if small farmers, processors and traders are going to form partnerships to work and learn together, rather than compete with each other, as is now the case. We are hopeful that the First Mile will help bring about that change."

There is a change in behaviour that is needed if small farmers, processors and traders are going to form partnerships to work and learn together

Communication and learning for better market linkages

The majority of Tanzania's poor people live in rural areas, and most are small farmers for whom agriculture is the only way out of poverty. But poor farmers face many difficulties in marketing their produce. They are often forced to sell their produce low and buy farm inputs high because they have little or no choice about whom they sell to, or at what price. Disconnected from consumers and policy-makers, they usually have no control over transportation, storage and processing as their produce moves along the market chain. The importance of improving agricultural marketing systems for rural poor people cannot be underestimated.

The Tanzanian Government's Agricultural Marketing Systems Development Programme (AMSDP) is a broad-ranging initiative that aims to increase rural poor people's food security and incomes by improving the structure and performance of the country's crop marketing systems. The seven-year, US\$42.3 million programme, partly funded with a US\$16.3 million IFAD loan, is working in four main areas:

- developing agricultural marketing policy
- empowering small producers by building their entrepreneurial and organizational capacity and improving their links to markets
- providing marketing-related financial services so that small farmers using warehouses can secure loans to cover the period between harvest and sale
- developing rural marketing infrastructure, including storage facilities, marketplaces and roads

The programme coordinator, Nathaniel Katinila, puts it simply: "The programme is here to improve marketing systems to enable people to trade in a very fair way. In short, by the end of the day both the buyer and the seller should go home happy. It means that everyone is making a profit, no one will have a loss."

The programme is working with about 1,000 producer groups in the northern and southern zones of the country: the regions of Kilimanjaro, Tanga, Arusha and Manyara in the north, and Iringa, Mbeya, Ruvuma and Rukwa in the south. The aim is to help producer groups improve their bargaining position in the marketplace by strengthening their capacity to identify market opportunities, to negotiate prices for both buying and selling, and to have a say in policy-making.

The programme also helps producer groups link up with other grass-roots organizations, processors, traders and others in the market chain, and with exporters.

The AMSDP has identified networking as key to the success of these activities, and has asked for IFAD's support in exploring local interest in peer-to-peer learning as a way to improve marketing and communication networks, in particular through exchanging information over the Internet. The First Mile Project is an attempt to address these needs. It is tackling the challenges of access both to markets and to information. The premise is that when market linkages are stronger, everyone along the market chain benefits. And one of the keys to improved market linkages is better access to market information.

▼ The First Mile is exploring how ICTs can help people like this Maasi man at the Lokii market near Arusha work collaboratively with other traders, producers and processors to build more efficient market chains.



Good communication and networking is about people, not ICTs, study finds

Better access by rural people to ICTs as tools to support communication and learning is a key focus of the First Mile Project

The project is exploring how ICTs such as mobile phones, e-mail and the Internet can help small farmers, processors, traders and others in the market chain as they learn to work and think collaboratively, not competitively, to build fairer and more efficient market relationships.

It has been clear from the outset that the crucial ingredient for success is not ICTs themselves. Rather, it is the willingness of local people to work together to share information and learning about markets.

A study conducted in June 2005, during the project's exploratory phase, found that there are no technical reasons why producers and other key players in the market chain could not contact each other regularly by using mobile phones to call or send text messages, and to a lesser extent by using e-mail. The bigger problem is not access to the technology, which is closer and more accessible than it seemed at first, but whether people feel the exchange of information is valuable enough to justify the cost.

According to the study, rural people in Tanzania are discovering that even ICTs such as e-mail and the Internet are not beyond their reach, and they are interested in using them to communicate across distances. However, the quality of the information, especially its relevance and usefulness, is crucial. People interviewed for the study said they were not prepared to spend time, let alone money, to use technology to communicate unless the information was very worthwhile.

The study underlined that effective communication is not only about laying cables, constructing microwave towers and opening Internet cafés. It relies on creating networks of people with relevant information to share. As IFAD's country programme manager for Tanzania, Ides de Willebois, points out: "Much more important than the ICTs is the communication itself. Rural people working together

to access and share relevant, timely, local information will be key to the success of this project."

The project leader, Clive Lightfoot, says that the importance of access to locally relevant information cannot be underestimated. "Local knowledge is relevant knowledge," he says. "Rural people want to hear success stories and information about what works for local people who are struggling with similar conditions and problems. The First Mile is an attempt to use ICTs to capture that knowledge and information and share it more widely."

The ICT diagnosis looked at the national context, including the government's communications policy, the regulatory framework and the current state of the telecommunications sector. It also focused on access to ICTs in rural areas. Interviews were conducted with groups and individuals in several villages in the Hai and Babati districts in the north, and with group members from the southern district of Mbeya, to develop a picture of how people are communicating now and about what, and of their access to communication technology, including mobile phones, landline phones, faxes, computers, e-mail, the Internet, radio, television and newspapers.

Its main findings were that:

- mobile phones are increasingly and more widely used in rural areas as coverage extends throughout the country
- access to mobile phones does not equal ownership – shared ownership and use of commercial pay-for-use services are common
- radio is widely used as a source of information and entertainment, but many people feel it does not provide adequate agricultural and market information
- most people have seen but have never used a computer
- many people have heard of e-mail and the Internet, but have never used them

Mobile phones

The study confirmed that change is happening fast in Tanzania's telecommunications sector. Most of the people interviewed had started using a mobile phone only in the previous 12 to 18 months. But lively competition and increasingly good coverage in rural areas by mobile phone companies mean that some of the rural people who are using mobile phones may never have used a landline. Similarly, the introduction of GPRS technology, which will allow people to receive e-mails on mobile phones in the near future, could mean that the need to use a computer to send e-mails will be eliminated before most people have even seen a computer.

About 90 per cent of group members surveyed in the northern districts said they used a mobile phone. This dropped to about 50 per cent of group members from Mbeya, where rural coverage is less extensive.

Total ownership of mobile phones is low: it stands at only about 2.5 per cent of the population. But use through friends, relatives or local shops is as high as 70 per cent in many rural areas. "A very large number of people have at least used mobile phones," says Jonathan Cook, the communication specialist who conducted the ICT diagnosis. "A much smaller number actually own a mobile, but use is far more important than ownership."

Mobile phones are almost always used for social communication – to contact families and friends – and mainly only when there's an urgent need. However, now that mobile phones are proving their worth, many people are starting to think about the possibilities of using them for other purposes, such as obtaining regular, updated information on prices at local markets.

Network coverage is extensive in Tanzania and is expanding rapidly. While full coverage is stronger in and near urban areas, including all regional, provincial and district towns, about 60 per cent of villages have direct access. Even in remote areas, boosters are being installed to allow extension of coverage by another 20 to 30 kilometres from the nearest phone mast.

But the challenges are enormous. Despite the soaring use of mobile phones, there are still only just over 2 million customers using telecommunication services in a country that has a population of 35 million.

E-mail and the Internet

In rural areas, more and more people have heard of e-mail and the Internet, and a surprising number of people have seen them used. However, the actual proportion of people who have used them is very low. But, as with mobile phones, change is rapid. In an increasing number of district towns, Internet cafés and even local post offices, staff will help people set up e-mail accounts, and write and send messages for them. This use of intermediaries, where someone acts on behalf of another person to send an e-mail or download information from the Internet, is quite common. In Babati, for example, Hadija Issa has never



◀ Villagers can pay to use mobile phones in the growing number of small kiosks like this one in Manjinga.

used a computer – but she has sent an e-mail. On behalf of her local group of women processors, she took a handwritten message to the local post office, where a staff member keyed it into a computer and sent it on her behalf.

The technology is a tool

The study underlined the advantages of working in groups. Small farmers who were members of local producers groups were more likely to have regular access to information that would help them improve production, solve problems and get information on prices at the local market. They were already sharing information and knowledge with fellow producers, and they were also more likely to be using mobile phones. Some groups had invested in a mobile phone for shared use by members.

For groups to grow and remain strong, time is needed to develop familiarity, trust and a strong motivation for collaboration. "As people find they have a common purpose and would like to have more information of interest to the group, for example about market prices, or the bulk supply of inputs, gradually they will start to work together," says Cook. "Gradually, as they work for a clear, common purpose they build trust, which is extremely important for strengthening the groups, and for enabling them to work with other groups."

For Vincon Nyimbo, agricultural marketing specialist and coordinator of the market linkages component for the AMSDP, the long-term result is strong farmer organizations that can plan and develop new and more profitable enterprises, building on better information about markets and collaboration with others in the market chain. "More income for rural poor, and therefore less poverty. That is what we are working for," Nyimbo says.

“Gradually, as they work for a clear, common purpose they build trust, which is extremely important for strengthening the groups, and for enabling them to work with other groups”

Village billboards: combining low tech and high tech for better communication

New technology is not always better. Sometimes simpler, more traditional communication technologies can provide the most effective solution to information sharing.

Small farmers often use village billboards to get information about prices. Market information billboards are a locally based effort promoted by the AMSDP that makes information available for all. They are a variation on a Tanzanian tradition, the *dua-kali*, a Swahili term for “office under the sun”, or a place to take shelter from the sun. Information is posted on the billboards by village council members and producer group leaders and market monitors, who are employed by the programme to monitor prices and activities at markets in their district.

But many producers complained that prices posted on the billboards were not always kept up to date. Producers need regular price updates, ideally once or twice a day, but most village billboards are updated once a week. Still, the billboards are an important source of information in many villages, and some group members are considering using mobile phones to get regular updates on market prices – to be posted on billboards.

Twaha Abdullah Mweta is chairman of the village producer group in Magadini village, Hai district. He is responsible for updating the market information on the village billboard. “Sometimes it takes longer to update the information because of communication difficulties, but we do our best nowadays, especially with the coming of mobile phones,” Mweta says.

► While use of e-mail and the Internet is still limited to urban areas in Tanzania, it is realistic to expect greater access in rural areas in the near future, especially through intermediaries. Maryam Killo acts as an intermediary for her local women’s group, using an Internet café in Arusha.

▼ Producer group chairman Twaha Abdullah Mweta updates information on the Wili village billboard.

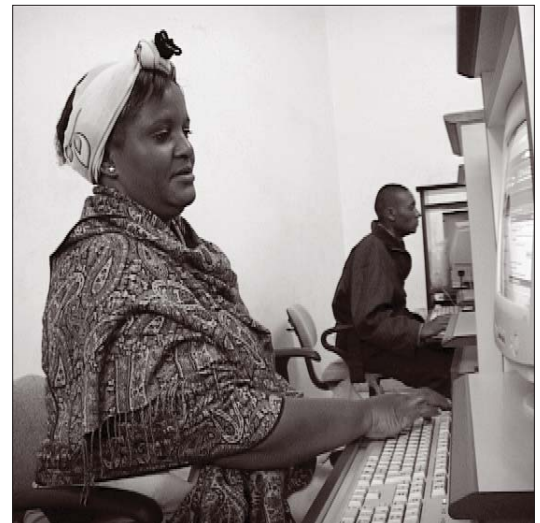
“Billboards may be simple, but before we began to use them most people received no news at all about market prices.”

Everyone interviewed for the ICT diagnosis said they wanted better information about markets, especially up-to-date information on prices at local markets, as well as markets around the country.

Village billboards are an important link in an information chain that might eventually also include use of mobile phones, radio, e-mail and the Internet.

Linking local learners

A core part of the First Mile Project is an Internet-based learning support service that will allow the learning groups to share information and knowledge about their successes and failures, hold discussions and build their own library of local best practices. The service also provides online mentoring.



The service, Linking Local Learners, accessible at <http://www.linkinglearners.net>, enables groups who live far apart and have little or no physical contact to talk about their experiences and challenges, and share their expertise and ideas through a learning community of practice.

It is also open to project staff, partners, donors and others interested in the learning and best practices emerging from the interaction of the small producers, processors, traders and others participating in the initiative. Information sharing could, for example, take place between farmers, or between farmers and traders, or farmers and civil servants. The service allows them to pool their knowledge, so they can learn from each other’s experiences and make their knowledge available as a common resource.



“Development speeds up when you connect people living far apart who don’t normally have any contact, so they can share their innovations and ideas and information about how they are solving their problems,” says project leader Clive Lightfoot.

During the first phases of the First Mile Project, learning group members have been trained in how to use the service. As the learning groups consolidate, their role will be to help other group members use and benefit from the service – either through direct access or by using intermediaries. A computer software programme has been developed specifically for the First Mile Project, to help people without direct access to the Internet use the Linking Local Learners service.

Radio: a widely used medium

Despite the mobile phone revolution in rural Tanzania, radio is still the most widely used medium for gaining access to information. Radio Tanzania, the national broadcaster, reaches about 90 per cent of the country. Everyone interviewed for the ICT diagnosis, regardless of their income level, owned a radio. Many listen to agricultural information programmes broadcast by Radio Tanzania. However, many said that information about markets was inadequate or not appropriate to their needs. Community radio, which would enable farmers to become more involved in determining content, is limited in Tanzania. Private FM radio stations encourage listener feedback, but they broadcast from the city and large towns and their reach is limited in more remote rural areas. Broadcast licences can now be obtained at district level, and there is significant untapped potential for local radio stations to provide market information.

A powerful tool for rural development

IFAD is a specialized agency of the United Nations dedicated to eradicating rural poverty in developing countries. Seventy-five per cent of the world's poorest people – 800 million women, children and men – live in rural areas and depend on agriculture and related activities for their livelihoods. Through low-interest loans and grants, IFAD works with



governments to develop and finance programmes and projects that enable rural poor people to overcome poverty themselves.

Information and communication technology (ICT) is a powerful tool for rural development. However, before ICTs can make a meaningful contribution to improving the lives of rural poor people, certain conditions have to be met. These relate to ownership, local content, language, culture and appropriate technology. Access to ICTs becomes important only once these conditions have been met.

IFAD’s approach to the use of ICTs to support development initiatives is to focus on people and not technology.

Learning and sharing

Through photography, video and text, IFAD’s Communication Division is documenting learning and change during the life of the First Mile Project.

The challenge is to capture, communicate and archive the project’s impact in ways that are thorough, meaningful and accessible to audiences both inside and outside IFAD. A thematic approach is being used to document pre-existing conditions, processes, outcomes and emerging lessons. The thematic areas are:

- overall conditions for meaningful use of ICTs by rural poor people
- geographic, economic and cultural isolation
- learning and its impact on livelihoods of rural poor people
- responsiveness to community demand

▲ Members of a savings and credit society in Magugu were interviewed about how they use ICTs. Most have mobile phones, but use them mainly to communicate with family members.

Contacts

Ides de Willebois
Country programme manager,
Tanzania
IFAD
E-mail: i.dewillebois@ifad.org

Clive Lightfoot
Leader, First Mile Project;
Executive director, International
Support Group
E-mail:
clive.lightfoot@linkinglearners.net

Nathaniel Katinila
Coordinator, Agricultural
Marketing Systems Development
Programme
E-mail: amsdp@cybernet.co.tz

Roxanna Samii
Web manager
IFAD
E-mail: r.samii@ifad.org

Helen Gillman
Editorial services manager
IFAD
E-mail: h.gillman@ifad.org

Links

First Mile Project
<http://www.firstmiletanzania.net/>

Linking Local Learners
<http://www.linkinglearners.net/>

IFAD in Tanzania
[http://www.ifad.org/english/
operations/pf/tza/index.htm](http://www.ifad.org/english/operations/pf/tza/index.htm)



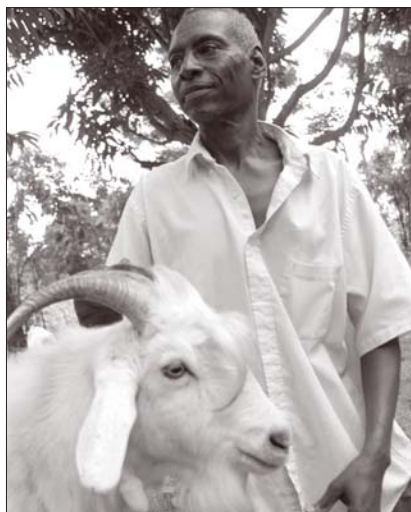
International Fund for
Agricultural Development
Via del Serafico 107,
00142 Rome, Italy
Telephone: +39 06 54591
E-mail: ifad@ifad.org
www.ifad.org

The small farmer and the Internet

Tumsifu Lema, 68, is an organic farmer in Shiri Njoro village. He grows mixed crops on his two acres of land, including vegetables, maize, sunflower and coffee, and he is constantly looking out for new organic farming techniques. Experimental plots planted with neighbouring farmers are a good source of new ideas. Lema would like to contact an organic farmers' group in Uganda: he heard that they had successfully made and used a molasses-based organic fertilizer. But he had no way to get in contact with them.

Although Lema has heard of e-mail and the Internet, he has never seen or used them. However, he likes the idea that e-mail could help him communicate cheaply over long distances with people like the Ugandan organic farmers. "Maybe e-mail would have been very useful," Lema said. "We had tried to make organic fertilizer using molasses, but it didn't work. We needed to learn from the experience of others."

▼ Organic farmer Tumsifu Lema, of Shiri Njoro, would like to use e-mail and the Internet to share information with organic producers in Tanzania and abroad.



Tumsifu is among the growing number of poor farmers in Tanzania who are just starting to consider the potential benefits of ICTs. Many, Lema included, are already using mobile phones, mainly only to communicate with children living away from home and other distant family members. But with increasing frequency, people are using their mobiles to exchange agricultural information with others in their farmer groups between meetings, or to obtain updated information about local markets. In places like Shiri Njoro, where the majority of people still rely on the village billboard as their main source of information, widespread use of computers and the Internet for everyday communication might seem a long way off.

However, early experience emerging from the First Mile Project shows that access to the technology is not as far away as one might think. "Although people don't have direct access to e-mail and the Internet, they're really not very far away from it at all," says Jonathan Cook, communication expert, who conducted a study on access to ICTs in Tanzania in June 2005. "Through an intermediary, or possibly two, they can use Internet and e-mail today. Even though the nearest Internet café may be 100 kilometres away, people are constantly travelling between the most remote villages and the nearest town where there is an Internet provider."

For Cook, more widespread use of e-mail and the Internet in Tanzania's rural areas is foreseeable in the near future. "It is absolutely realistic to expect that use of the Internet is going to increase, even in the most remote rural areas, as groups such as farmer organizations start to use this form of communication to work, to share ideas between groups and between individuals over long distances," he says. "It is because of the very, very low cost of the technology and the fact that you can share much larger amounts of information than you can through text messages on mobile phones."

“It is absolutely realistic to expect that use of the Internet is going to increase, even in the most remote rural areas”