



CASE STUDY NO. 1

Cash Transfers through Mobile Phones: An Innovative Emergency Response in Kenya

Case Study Summary

Kenya was the first country in the world to use mobile phones for cash transfers; through a service called M-PESA, developed by Safaricom Limited. Concern Worldwide has pioneered the use of M-PESA for emergency cash transfers in Kenya. This paper highlights Concern's experience, which shows that despite initial software and logistical challenges, mobile phone technology offers a unique and empowering approach to efficiently deliver assistance to the most vulnerable people living in insecure and remote rural areas. Experience also shows that cash transfers are a better option than food distributions in areas where adequate supplies of food are locally available. In addition, the partnership between Concern and Safaricom demonstrates that the private sector has significant and unique abilities to enhance the effectiveness of emergency response, and more importantly they can do so while maintaining their core business principles. The case study also demonstrates how technology can empower poor, marginalised and vulnerable people.



Implementing agency
Concern Worldwide in partnership
with the Diocese of Eldoret

Case Study author
Dipankar Datta,
Country Director
Anne Ejakait,
Programme Officer
with Kim Scriven, ALNAP

Location of programme
Kerio Valley, Kenya

Time period
March–June 2008

Estimated expenditure
€36,000 (Ksh 3,600,000)

Estimated Beneficiaries
570 households

ALNAP Innovations Case Studies showcase innovative solutions to the problems and opportunities faced in international humanitarian response. Each case study focuses on a specific innovation, and outlines the process through which the innovation was developed, from the initial recognition of a problem, through development to practical implementation and scale-up. The Innovations Case Study series is designed to act as a key mechanism to improve dissemination and take up of innovations across the humanitarian sector.



ALNAP

Active Learning Network for
Accountability and Performance
in Humanitarian Action

Background Information and Rationale for Innovation

Kerio Valley lies in the Great Rift Valley, between the Tugen hills and the Elgeyo escarpment, and is accessible from Eldoret town by a 110km dirt road. A number of pastoralist communities inhabit the valley, and are heavily dependent on livestock for their livelihoods. In recent years, climate change, environmental degradation and human settlement have increased the pressure on water resources and pastureland. The competition for scarce resources has led to frequent inter-ethnic tensions, often manifested through cattle rustling.

Three years prior to the project initiation, in a bid to improve security the Kenyan government established a police station and deployed security personnel. However, in early January 2008, during the post-election violence that rocked much of Kenya, these personnel were re-deployed to other parts of the country in order to contain the violent skirmishes and rising crime. Cattle rustlers living in the interior parts of East Pokot took advantage of the security vacuum and attacked the Tugen and Pokot communities. These communities lost their livestock and were displaced to the less inhabitable areas. In total over 1,800 households were affected.

While most lost livestock and other property, others also lost their homes, triggering a descent into food insecurity and increased vulnerability for these communities. While men worked to tend the remaining livestock, women and children remained behind at the poorly manned police station, exposing themselves to the risk of more attacks. Local health facilities, poorly resourced to begin with, were vandalised and the employees re-located to safer areas, effectively bringing health provision to a halt.

Following the breakdown of communication and information flows at the onset of the post-election violence, compounded by the remoteness of the area, most humanitarian organisations were unaware of the situation in Kerio Valley. Furthermore, the conflict was deemed by many to be 'traditional' in nature, and was therefore largely overlooked. When Concern Worldwide (hereafter referred to as Concern) learned about the suffering of these communities in mid March 2008, senior staff immediately decided to provide emergency food support to all the affected households, working through existing partners at the Catholic Diocese of Eldoret. However, it became apparent that transporting and distributing food in this remote area would be both costly and insecure. A team consisting of senior Concern staff and the Catholic Diocese of Eldoret set about exploring alternatives to delivering food aid. It was decided that to overcome the challenges posed by the terrain and the security situation, a cash-based programme would be instigated, and furthermore that a mobile phone based cash transfer system would be used to facilitate the transfer of funds from Concern to beneficiaries.

Description of the Innovation Process

The *recognition* of the potential for using mobile cash transfers came about due to an advert for M-PESA in the staff room in the Nairobi office of Concern, where senior managers had been discussing the problem of the emergency response. They realised that mobile cash transfers could be a way of overcoming the challenges posed by the terrain and the security situation. The primary added value offered by mobile technologies in their disaster response effort lay in the potential to facilitate the enhanced exchange of information, and the communication opportunities created by placing mobile technologies in the hands of those previously without access. Also important in this case was the scope to shift the operational risk of the cash transfer to a third party which specialised in the mobile-based distribution of funds.

The M-PESA service is provided by Safaricom, one of Kenya's leading mobile operators, in partnership with Vodafone. It is an innovative nationwide electronic cash transfer service that allows people to transfer money using a mobile phone via text messages (also known as Short Message Service or SMS). Kenya is the first country in the world where this service has been utilised – the service was originally created as a pilot funded jointly by Vodafone and the UK Department for International Development (Porteous, 2006).

The M-PESA service does not require a user to have a bank account, which is important in a country where many people do not have access to financial services. Users need to register at an authorised M-PESA agent by providing their Safaricom mobile number along with their national identification card. Registered users can buy funds at any M-PESA agent and send the electronic cash to any other mobile phone user in Kenya by SMS, even if recipients are not Safaricom subscribers. Recipients can then either 'redeem' the message for conventional cash at any M-PESA agent outlets, or use it to buy Safaricom airtime. Outlets are typically local Safaricom dealers, but also other retailers such as petrol stations, supermarkets and local shops.

M-PESA is designed to transfer cash between individuals, and the maximum transfer limit is €700 per day and €350 per transaction. M-PESA also needs to comply with all money transfer regulations set by the Central Bank of Kenya. For the emergency response, it was necessary to *invent* a customised solution – namely a system with the capacity to perform a bulk transfer allowing Concern to reach hundreds of beneficiaries simultaneously.

In response to this need, the Safaricom team worked with Concern staff to specify and develop a tailored M-PESA product. As well as meeting the specific delivery requirements, the new system also had to adhere to all Central Bank Regulations, designed to prevent the M-PESA service being used for money-laundering. During this complicated *development* process,

Safaricom invested time to learn about Concern and its activities, thereby developing a strong working relationship with the organisation.

It is important to note that although Concern wanted to start using M-PESA as soon as possible, the process took some time. It was not until early May 2008 that Concern could start using M-PESA effectively. Despite this delay, the high level of commitment and enthusiasm shown by Safaricom was both essential and commendable, and if this time had not been invested pre-implementation, the likelihoods of project success would have been diminished.

After the technical and regulatory hurdles were overcome, Safaricom set up Concern as a corporate user of M-PESA, allowing the NGO to access and *implement* the service on a large scale commercial basis. First, Concern was given access to the M-PESA administrative website, from where the disbursement can take place. Money was then deposited into Concern's M-PESA account, and service charges were paid. Next, the list of beneficiaries was entered into a database that could be uploaded onto the M-PESA system. The key pieces of information contained in the database were beneficiary names, amounts, due and mobile phone numbers.

Once targeting was completed and the transfer system had been developed, teams from both Concern and Safaricom worked together to train the beneficiaries in the use of M-PESA, and to register them. Both teams travelled to the target area in early May 2008, where they spent about a week completing recipient registration processes and the first round of cash transfers.

The recipient registration process in particular was painstaking, and presented Concern with a number of challenges:

- Though women were targeted as the recipients of the cash transfer, most lack identification documents such as national identity cards, which were a key requirement for the use of M-PESA.
- M-PESA runs on an SMS platform and thus users need to be literate, however, a large number of Kerio Valley beneficiaries were illiterate.
- About 60 per cent of the targeted beneficiaries did not have previous access to mobile phones.

To overcome these challenges, all targeted households were clustered into groups of ten or less, respecting each household's preference and proximity to each other. Cluster members nominated one literate person as a cluster leader. A beneficiary without a national identification card nominated a trustworthy adult member of the household to receive cash on their behalf. Close monitoring was undertaken of the cluster leaders, with a team from Concern and Safaricom organising a public verification exercise to confirm their names and identities. Where none of the cluster members had any access to a mobile phone, cluster

leaders were provided with a mobile phone and a solar charger. The cluster leaders were trained to operate the equipment and discussed their responsibility in terms of safety and use. The following simple regulations were agreed on:

- Every cluster leader will ensure non-discriminatory approach in using the equipment among the cluster members.
- Cluster leaders will not individually own the equipment, will not sell it, nor charge any user fee from the cluster members.
- Although the equipment is shared by all cluster members, every beneficiary should be registered for M-PESA using their own SIM card to minimise risk.

In a standard transfer a person goes to an M-PESA agent with his/her identity card to register and withdraw money. In the case of Kerio Valley, the nearest M-PESA agent was located 80km away from the target area. The travel costs to collect cash were prohibitive, and the security risk when returning with cash was extremely high. The local Kinyach Police Station was used to establish a remote M-PESA service and after discussion with the community, Safaricom requested their agent, Mobile World Limited, to go to Kinyach during market days. This system enabled the beneficiaries to get easy access to the cash and they also could buy their necessary food immediately.

Considerable time was spent overcoming registration and technical challenges, but this was essential for the success of the overall transfer process. The community engaged in the process of deploying the technology, and adapting it to meet their needs and requirements. There was widespread satisfaction with the fact that money was made conveniently and safely available. This notably included older members of the community, who termed the ability to receive money through a mobile phone as a 'miracle'. The level of acceptance received by the response was an indication that adequate preparations had been made.

Following the successful pilot, Concern have been active in their attempts to actively share information about the project, to aid further diffusion. As well as being highlighted in the HPN Exchange, an information sharing publication published by ODI-HPG (September 2008), the Kerio Valley case was also highlighted in IRIN's email based newsletter (August 2008). There was also coverage in a leading Irish newspaper (May 2008), and in video clips available via YouTube (<http://www.youtube.com/watch?v=GvY9pHI5AbE>).

The project was presented at the OCHA Kenya emergency coordination meeting in OCHA Regional Office (June 2008), and in poster presentation format in Strathmore University's Annual ICT Conference in Nairobi (September 2008). Champions within the organisation played a significant role in the subsequent marketing of the project.

The project has already been *scaled up* in the Early Recovery programme of Concern aiming to meet both short and long term food security and livelihood restoration needs for the very vulnerable and IDP households. The programme which started in August 2008 is currently targeting a total of 7,351 households with an average of six members per household representing an estimate 44,106 poor and vulnerable people still feeling the consequences of the post election across Kenya. On average Ksh 600 is being sent monthly by using M-PESA to each member of the family for a period of 3-6 months to enable them to buy food. The current market price was used to determine the cash amount to be sent to the families through their mobile phones. In addition to food security, restoration of livelihoods was provided both for farm and off-farm income generating activities. Concern is implementing the programme in partnership with local NGOs and Faith Based organisations. A total of 4,220 mobile phones and 800 solar chargers have already been distributed among the targeted beneficiaries as a part of the programme implementation strategy.

There were a number of *outstanding issues* that had to be considered when scaling-up from the pilot. The beneficiary database needed improving, to detect errors relating to mobile phone numbers and national identification numbers. The capacity of M-PESA to cope with bulk transfers in the scaled-up programme also needed to be strengthened.

The standard mobile phones used were not robust enough to cope with frequent changes of SIM card. The ratio of mobiles to families thus needed to be higher. The best option for a long-term cash transfer project is to ensure that the targeted households have mobile phones and M-PESA-compliant SIM cards. However, literacy levels need to be taken into account.

During the pilot, the second round of transfers was expected to be easy. Unfortunately, 20 of the 570 beneficiaries lost their SIM cards. Concern had to recall the money and then do the transfer again once those who had lost their cards received replacements. A quick mechanism to deal with lost SIM cards was therefore needed.

Risks

Concern invested significant time and money in the partnership with Safaricom. To minimise the risk of the project it was important that as well as mutual trust, all partners were accountable and legally recognised.

At the outset of the programme there was considerable uncertainty as to whether the beneficiaries would be able to access their cash using M-PESA due to scarcity of M-PESA shops and insecurity in the area. This problem was solved by Safaricom mobilising their M-PESA agents to bring cash to a designated site accessible to beneficiaries at their own cost. The

Catholic Diocese of Eldoret also mobilised local police officers and local administration to bolster security.

From previous experience working with the Church, Concern had noted that some churches were reluctant to utilise technology 'between' the community and the church, and prefer to maintain direct contact. There was therefore apprehension about the way in which the Catholic Diocese of Eldoret would receive the new idea of cash transfers using M-PESA. Time was taken to explain the process and address concerns related to the new technology and the context of Kerio Valley. The Catholic Diocese of Eldoret senior management and field staff received the new idea with great optimism and were ready to try it out immediately.

There was some pressure to put members of the community who did not meet the targeting criteria on the beneficiary list, chiefly because of the large number of people affected in comparison to the size of the pilot. This was made more challenging by the fact that the receiving communities had a natural attraction towards aid in the form of cash. This problem was addressed by using a transparent process to identify the most affected community members from different ethnic backgrounds. The beneficiaries were informed of that those supported would be given cash by M-PESA only after the identification process. This helped to minimise the chances of including undeserving members of the community in the beneficiary list.

During this particularly difficult time, the provision of humanitarian support to beneficiaries from one ethnic community had the potential of leading to flaring-up of ethnic tensions. Considering this delicate balance of peace, Concern, the Catholic Diocese of Eldoret and community leaders agreed to allocate the limited resources as equitably as possible to ensure that peace was maintained in the region.

Partnerships and Collaborations

The traditional relationship between the private sector and NGOs in the context of emergency response is philanthropic, based on the private sector providing money or goods in-kind to support good causes. There is nothing wrong with this approach in general terms: it is good for the communities, good for a company's image, and good for staff morale. However, the experience of Concern in the Kerio Valley highlights that this way of working is not always appropriate or sufficient.

The success of this partnership was in bringing together the significant and unique abilities of the private sector to enhance the effectiveness of emergency response, and doing so while keeping to their core business principles.

By way of illustration, Safaricom did not waive any M-PESA transaction costs, rather they mobilised their talents and technology resulting in a customised version of M-PESA for bulk cash transfers. Safaricom also assisted Concern in educating the community about using M-PESA and mobilised their agent to ensure that beneficiaries can receive the funds easily.

Partnerships with local humanitarian actors were also essential to the innovation process. Kerio Valley is a hard to reach area due to poor infrastructure and rough terrain; its complex administrative and ethnic boundaries have implications on the security and equitable allocation of resources for the area's inhabitants. In addition the area has low literacy levels. A strong local partner with knowledge of the context was essential to overcome these multi-dimensional challenges in the quickest possible time. Concern had partnered with the Catholic Diocese of Eldoret at the onset of post-election violence. The impetus for an emergency response in Kerio Valley came from the Diocese, but the use of M-PESA for cash transfers was a new concept for them. Concern had to conduct a number of meetings with the Bishop and the frontline staff explaining the benefits of mobile based cash transfer. The Diocese was very receptive to the innovation and provided wholehearted support to its implementation.

Lessons Learned and Evaluation Findings

Key Lessons

Using technology to empower communities:

The innovation powerfully demonstrated what technology can do for poor and vulnerable people. Making information technology accessible to poor people by developing relevant schemes can empower them directly, giving them the opportunity to connect with friends and relatives, and providing an increased sense of belonging and security. In addition, these tools can be used to generate income by offering informal payphone services to other members of the community.

Cost-benefit analysis of cash transfer:

A series of analyses indicates that a cash transfer intervention through M-PESA was more cost effective for Concern, beneficiaries and communities as a whole than a traditional food aid programme.

An analysis based on the provision of emergency food relief worth €1,900 to 100 households in Kerio Valley for two weeks indicates that the cost of transporting food from Eldoret town and distributing it would be 18.5 per cent of the total cost of food (€350), whereas a cash transfer of a similar amount to 100 households would cost only 3 per cent in support costs (€55), mainly through Safaricom transactional costs. If the cost of handsets and other equipment is added to Safaricom transactional cost, the distribution costs amounts to 16 per cent of the

total assistance of €1,900; still significantly lower than food aid. The project evaluation (see below) noted that when a calorific comparison is made, it was more expensive to purchase food individually by beneficiaries than in bulk by Concern, however, this analysis did not take into account either the increased security cost associated with a food distribution, or the fact that cash transfers create wider options than the purchase of like-for-like food stuffs. Compared to a direct food distribution, the innovative use of M-PESA therefore costs Concern less, provides the opportunity to reach more beneficiaries, and has the potential to have a positive residual impact on the communities involved.

Evaluation Findings

The pilot programme was externally evaluated by Mike Brewin in June 2008 and the report was widely circulated among donors and humanitarian agencies. The evaluator looked at the relevance and appropriateness, effectiveness and quality, cost efficiency and overall impact of the pilot project (Brewin 2008). The evaluator reported that targeting was good but, as can be expected in a pilot, there were many other households who would have qualified for assistance had resources been available. Targeting women, combined with the relatively small size of the transfer, was effective in ensuring that women retained control of the cash. Based on qualitative evidence the evaluator reported that about 70 per cent of the transfer was spent on food, with the remaining 30 per cent on transport and other non-food essentials. The evaluator did not find any incidents of misuse of the cash during the review. It was highlighted that the pilot had a strong impact on beneficiary empowerment and an increased sense of dignity. Use of a process which required beneficiaries to interact with new technology transformed them from passive recipients of aid to the active participants in a process. The provision of phones, SIM cards and chargers also gave recipients an opportunity for communication that they had never experienced before.

A major cost of the pilot was the distribution of the mobile phones and other equipment needed, and the evaluation notes that this would increase the efficiency of using M-PESA in longer term programmes, but make it unlikely to be viable if just one disbursement is planned.

Wider Sectoral Implications

The overall success of this pilot project offers an opportunity for other international agencies to reach the poorest and the most vulnerable people in the quickest possible time using mobile transfer schemes – whether M-PESA, or a comparable service. Such services offer transfers which are secure, respect affected peoples choices, and empower communities in a number of ways. Although Concern used M-PESA in an emergency context, this model could also be replicated in a community development context, which could incorporate a wide range of social protection activities.

In addition to the immediate operational implications of Concern's use of M-PESA, the reported perspectives of the recipients involved in the project – empowerment, engagement, and a greater sense of dignity – have implications for how agencies approach the delivery of aid in emergencies.

Mobile phone availability in the developing world is growing at a rapid rate. Because of the relatively low cost, those who receive humanitarian assistance, or might be likely to do so in the future, are also likely to have access to mobile technology. As well as such emergent spread of mobile technologies, there are increasing numbers of projects such as the one covered here which actively place mobile technologies in the hands of aid recipients. This is creating new means of communicating with aid recipients, and for aid recipients to communicate with each other.

This may be through traditional programming utilising such technologies, or the open development of innovations that build on existing mobile technologies, such as FrontlineSMS. Agencies now have a cheap and readily available medium for the exchange of information (and in Kenya at least, money), and conversely recipients of aid have the possibility to share their needs and views more readily.

Harnessed effectively, this has the potential to change the nature and scope of beneficiary engagement and participation in programme implementation, with knock-on effects on aid quality and accountability.

What the Concern project demonstrates in particular is that even in the most remote areas where mobile penetration and literacy levels are relatively low, there are still opportunities offered by mobile technology. This case study demonstrates that there is a lot of scope to use simple and easily available technologies as part of high quality and innovative programming. This can lead to improved performance, sustained impacts and greater empowerment within communities.

Key Contacts

Dipankar Datta

Email: dipankar2kbd@yahoo.com and dipankar.datta@concern.net
Concern Worldwide India
A/7 Ashok Nagar, Unit II
Bhubaneswar 751009, Orissa, India

Anne Ejakait

Email: anne.ejakait@concern.net
Concern Worldwide Kenya
5th Floor, Kalson Towers
The Crescent, Off Parkland Road
Nairobi 13850-00800, Kenya

Kim Scriven - ALNAP

Email: k.scriven@alnap.org Phone: +44 (0) 20 7922 0403

Relevant Publications

BBC (2007). 'Mobile phone lifeline for world's poor', *BBC News, Delhi*. Available at: <http://news.bbc.co.uk/1/hi/business/6339671.stm> (accessed July 16 2009)

Crilly, R. (2008). 'Food aid by mobile phone: Irish agency's new venture in Kenya' *Irish Times*, 12 May 2008

Donner, J. (2007). 'M-banking: Extending financial services to poor people', *id21 insights* no. 69, September 2007

Harvey, P. (2007). 'Cash-based responses in emergencies'. *HPG Report 24*, January 2007. London: ODI

Porteous, D. (2006). 'The enabling environment for mobile banking in Africa', London: Department for International Development (DFID)

Brewin, M. (2008). 'Evaluation of Concern Kenya's Kerio Valley Cash Transfer Pilot', Nairobi: Concern Kenya.

Dipankar, D., Ejakait, E, and Odak, M. (2008). 'Mobile phone-based cash transfers: lessons from the Kenya emergency response', *Humanitarian Exchange*, no. 40. Humanitarian Practice Network, London: ODI

Please Note: The views expressed in this case study are the authors', and do not necessarily reflect the views of ALNAP, Concern, or any of its partners, including Safaricom Limited.

Published August 2009