Youth using mobile phones in an HIV AIDS drama performance.

# Multimedia centres for farmers and health workers

## Lessons learned from the Association of Church Development Projects (ACDEP)

This Learning Brief describes the lessons learned in the ACDEP Rural Access to Information project. This project establishes a multimedia centre at the ACDEP Secretariat and five satellite information centres. The project explores the opportunities for knowledge sharing, communication and information exchange to accelerate community (health and agriculture) development programmes. These lessons are intended for practitioners in the field as well as organisations that would like to learn from the experiences of this project and implement similar activities.

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Most of this brief's content is based on results from monitoring and evaluation exercises that have been performed with the help of IICD and the local Evaluation partner Development Alternative Services Foundation (DASF) over the last two years. This M&E system, which was developed by IICD, consists of quantitative and qualitative assessments. Each year, questionnaires are filled in anonymously by the end-users of the project (a representative sample). The answers are then analysed to discover more about end-user profiles, levels of use and satisfaction, and the impact of the project. This process is complemented by periodical Focus Group discussions which are attended by project staff and end-users in order to reflect on the data that has been collected through the

questionnaires and discuss successes and challenges relating to the project, and possible solutions.

## Context

After twenty years of economic reform, Ghana is still classified as a low-income, food deficit country. The economy is still largely based on agriculture and the production of primary commodities. Agriculture contributes over 40% of GDP and about 75% of export earnings. More than two-thirds of the population depend on agriculture for their livelihoods. Social indicators of development are generally very low. Life expectancy is 58 years. The economy is characterised by extensive and unbridled liberalisation, which has seen a growth in mining, export of timber, imports and services. Agriculture and industry, particularly local industry, have remained stagnant in the best of years and recently there is a declining trend. This has had serious and debilitating implications for poverty reduction.

The three Northern regions of Ghana continue to lag behind the rest of the country as far as development is concerned. These regions suffer a number of disadvantages: environmental, economic, infrastructural, access to basic social services (education and health), low human capital, poverty and political muscle. Apart from the geographical disparity, there is a gender disparity in the distribution of poverty within Northern Ghana.ithangende Women are the most affected by the worsening poverty situation. They have less access to economic resources, have less education, bear a disproportionate share of the house keeping burden and they have less access to health and education.

Ghana has long recognised the potential of ICT as a catalyst for national development. In fact, in the last five years the Government has developed an ICT for Accelerated Development (ICT4AD) policy. For the use of ICT to thrive and remain sustainable in rural development, which is the focus of this Multicentre project at ACDEP, more could be done towards achieving this objective. Further deregulation is needed to usefully explore and apply ICT for development purposes. The church-based development projects have over the years supported farmers and rural producers to increase production of food crops, cash crops (mainly soya beans and cow peas), and poultry and small livestock. Women have also been supported to increase processed products like shea butter, rice and handicrafts.

The Association of Church Development Projects (ACDEP), which was formed in 1977, operates in partnership with a network of about 40 mainly church-based NGOs in the rural areas of Northern Ghana. Communication and access to relevant information is low among these NGOs and poses a major challenge to them.

The ACDEP Secretariat is expected to perform three main functions:
- institutional capacity building of the member NGOs (stations)
- facilitate the development work of the stations at the



### Ghana Profile

| | |
|---|---|
| Surface Area (km²): | 228 000 km² |
| Total population: | 23.8 million |
| Life expectancy: | 57.5 years |
| Combined gross enrolment ratio in education (%): | 56.1% |
| Human development index (UNDP): | 130 (out of 169) |

*Source: World Development Indicators database, 2010*

### Access to communication technologies
**per 1,000 people**

| | |
|---|---|
| Mobile subscribers: | 495 |
| Internet users: | 43 |
| Personal computers: | 5.8 |

*Source: UN eGovernment survey 2010*

### Data on the project

| | |
|---|---|
| Sector: | Livelihoods and Health |
| Number of users: | 500 |
| Number of beneficiaries: | 4,000 |
| Target group(s): | farmers and health workers |

community level to create the desired impact
- influencing policies and practices of government and government institutions through advocacy and sharing ACDEP's experiences.

This ICT project could contribute to all three of these functions.

## Project description

The Secretariat has five thematic areas that support the development work of member stations and rural communities: Agriculture, Health, Advocacy, Gender and Reproductive Health, and Market access (for rural producers and processors). ACDEP, which is a pacesetter in rural development in Northern Ghana, considers the use of ICT as a catalyst for rural development in Northern Ghana, and therefore decided to explore ICTs to promote development.

Through the CORDAID and IICD supported Roundtable on Market Access in 2003, ACDEP began discussions with IICD on how ICT could be used to support and strengthen ACDEP and its member stations' development activities. Consequently, in 2004, a needs assessment was carried out by ACDEP, IICD and CITRED to determine the information needs of the stations and how these could be addressed using ICT. The most important findings were then:
- Access to development information by field level staff was very limited.
- The drive to seek new information and knowledge by staff

was generally limited; largely due to lack of access and/or high cost of (time and distance) obtaining this information.

- Low level of ICT knowledge and skills among development staff.
- A high level of interest and desire for new development information for their work with rural communities in the areas of health, agriculture, small-scale enterprise development, community mobilisation, small-scale credit management, and gender among others.
- Poor communication between ACDEP members and the Secretariat; thus affecting implementation of joint and agreed activities.

After the needs assessment, a proposal was drafted and combined with a feasibility study in 2006 at 26 member stations. The study mainly aimed to check if the stations were ready to embrace change with the support of ICT. The majority was willing to do so in order to innovate in their community development work and for self-empowerment. Only five stations could be selected as part of the pilot phase due to budget constraints. Three agricultural stations engaged in improving rural livelihoods: the Evangelical Presbyterian Development and Relief Agency (EPDRA) in Chereponi; the Presbyterian Agricultural Station (PAS) in Sandema; and the Tumu Deanery Rural Integrated and Development Programme (TUDRIDEP) in Tumu. Two health stations engaged in primary health care delivery were

selected: Presby Clinic (PC) in Langbensi and Baptist Medical Centre (BMC) in Nalerigu. A Memorandum of Understanding (MOU) between the Secretariat and the five stations was signed to show commitment. The member stations were also requested to show their commitment by adding part of their own resources to the project. But this failed due to many management changes in three of the five stations. Staff ICT skills were also assessed. Based on this, two staff members and a community leader from each station were trained in basic ICT skills and Local Content Development.

The ACDEP Secretariat would become the hub of the network. At each station an information centre would be established where communities would be encouraged to ask technical questions and specific development information questions. The pilot would also develop a replication model that could be used by the rest of the ACDEP members in Northern Ghana.

A Project Implementation Team at the ACDEP Secretariat was formed. The implementation started in May 2008 with the procurement of the ICT equipment. Two computers, a modem, a printer, a scanner, an LCD projector, a pen drive and a digital camera were provided to each member station. The ACDEP Secretariat would become a multimedia centre were they have purchased and installed 3 computers, a printer, a scanner, an LCD projector and a digital camera.

Some of the stations were off the electricity grid, so special attention was given to their energy needs. Part of the



Community members watching a drama performance on HIV AIDS.

# "I now download learning materials to access information for my agricultural research."

requirements for procurement was energy efficient components.

The five pilot stations would be strengthened not only by providing them equipment, connectivity and capacity building but also with audio visual documentation tools. The station could create their own resources to enhance their services to the community. The original plan would create a very strong Documentation and Publication unit at the Secretariat that would provide the stations with additional audio visual resource material that could easily be stored and retrieved, but that has not yet materialised. The focus shifted after implementation toward setting up the five stations and less on strengthening the Secretariat.

Documentation and publication of field experiences is an important tool for ACDEP. It is an essential part of the learning process of the organisation. It also shows the world what you are doing can be used to influence policies. Until now, ACDEP used two publications *"Savannah Farmer"* and the *"Northern Health Monitor"*. Pilot stations found it easier to submit articles for these magazines. But the next step in the project to publish articles at the website has not yet been achieved.

The ACDEP project's main objective is to strengthen the partnership between the ACDEP Secretariat and the involved stations; and between ACDEP with Government and the donor community.
The specific objectives are to:
- use ICT to meet communication and development information needs of ACDEP members
- improve decision making
- facilitate the use of ICT.

In November 2009, a review meeting with 21 participants from the ACDEP Secretariat, members (not only from the 5 stations), CORDAID and IICD was conducted to review what has been done and what were the first results of the implementation:
- All five stations were operational although Chereponi had a break in and had to start all over after equipment was stolen.
- Staff was trained and is able to communicate with others. They now have basic to intermediate ICT skills.
- Stations were able to collect agricultural and health information for their communities and stored this in a digital resource portfolio.
- At station level monthly fora were established to share information and experiences.
- Communication between stations and Secretariat has improved, although connectivity was an issue at all five stations.
- Communication between stations and district assemblies (local government) were clearly improved.

But not everything had already been achieved. These include the following:
- Facilitating joint meetings of thematic officers and stations to devise strategies for using ICT4CD as community development tool
- Collaborating with District Community Information Centres (CICs) for knowledge sharing
- Facilitating online interactive learning and discussions
- Organising learning visits
- Establishing a content creation centre at the ACDEP Secretariat.

The second objective around improved decision making is also not yet achieved.

## Target group

The target group (users) of the project are in Agriculture, Health, Advocacy, Gender and Reproductive Health, and Market access (for rural producers and processors). This mixed background is supported by the questionnaires that were filled in by the end-users. A total of 117 participants did fill in the questionnaire. In 2010, these two groups were split: the agricultural users (58) and the community health users (29). In this publication the results for 2010 will be split into these two groups.

In 2009 66% of the users were male and most of them (58%) were between 21 and 40. They lived in the rural areas (68%), but were in possession of secondary education (38%) or tertiary education (40%). In 2010, you can see the clear difference between both types of projects. From the Agricultural sector 54% now is male with a majority between 31 and 40 (57%), most with tertiary education (64%) living in rural areas (54%). The users in the community health sector is much younger, 46% is below 20, still most are male (57%) and in high school (69%). It is seen as a concern by ACDEP that mostly highly educated males are reached. Although information is also made accessible for non-literate people with the use of digital camera and mobile phone, it is possible that only people who are able to read the questionnaire are asked to fill this in. This could then give an impression that lower educated people are not part of the user group. The focus of the two health sites are in educating adolescents in ICT and health and this is clearly evidenced in the user profile. Agricultural users are working daily (50%) with the project, health users mostly monthly (38%). But although they use the facilities less frequently, the health users have more often achieved their goals (86%) than the agricultural users (74%). This has not changed much since 2009 were 78% achieved their goals. In both sectors the most common reason to participate in the projects was that the project "improved their ability to handle and use the computer for personal

An extension worker showing good practices to farmers.

and business purposes." One user mentioned that he "touched the computer for the first time, but now I can type letters and print them." Another user mentioned: "I now download learning materials to access information for my agricultural research." The second reason mentioned was "improving health and well being knowledge, skills and behaviour." An example is the health user whose aim was "to learn ICT and to know much more about adolescent reproductive health." One of the reasons for agricultural users to participate is "enhanced farming knowledge, skills and practices" like the farmer who was now able to use information about compost so that he now cultivates organic soya. The reasons for not achieving goals vary from limited access to computers, inadequate exposure and logistic challenges.

## Satisfaction

With the use of questionnaires, the impact as perceived by When the respondents were asked to indicate their level of satisfaction with various services provided by the project, respondents expressed varying levels of satisfaction across the 11 dimensions measured. For health users only seven dimensions were measured. Overall, between 15% and 74% of respondents expressed strong satisfaction with the various services provided. The satisfaction for health users was in general higher than the satisfaction for agricultural users. This was most clear with training and seminars where 16% of agricultural users and 46% of health users were highly satisfied; and with access to information by

mobile phone 44% of agricultural users were satisfied compared to 74% of health users. Only in the access to electronic information on CD did agricultural users score higher (33%) than health users (15%). In general users were far more satisfied in 2010 than in 2009. The difference of satisfaction between agricultural users and health users could be explained by a shift in attention of the project implementation team to health. The second phase of the project will increase the number of health sites to 5, but not the number of agricultural sites.

When the respondents were asked to indicate what actions, if any, they had undertaken as a result of this project in order to improve their situations, the categories of responses clustered around accessing and using information like "research work on a treatment plan with the aid of ICT. Use of knowledge and skills gained in programs was also common, for example: "I use the video camera now to document activities after a training in video shooting and editing." The ACDEP Headquarters have also seen improved communication with the different member organisations as a result of the project.

## Impact

IICD measures perceived impact through the questionnaires on: awareness, empowerment, economic, sector, gender and negative impact.
**Awareness** indicates the changes in users' level of awareness for the importance of ICT for their work. In 2009 68% of users indicated that their level of awareness on the

# Health users see the project as a motivation to work harder.

various dimensions have increased as a result of their participation in the project. In 2010 this was 74% with agricultural users and 76% of health users. Agricultural users were most positive about "this project has broadened my horizon" (81%), while health users were most positive about "through this project I see opportunities in ICT I had not seen before." They were less positive about "I feel responsible for high quality health service", but with 72% positive votes still quite high. A good example of the use of ICT to raise awareness was the use of a picture gallery during Farmer Day Celebrations to inform the public about their activities in agriculture. Another example was at Langbensi Station where staff was able to create a malnutrition campaign with digital photos of children with malnutrition before and after rehabilitation. This was shown to mothers to warn them of the dangers of malnutrition in their children.

**Empowerment** is an indicator that measures what people have done as a result of their awareness. Overall in 2009, 54% of respondents indicated that they felt empowered through participation in the project, and this increased to 68% of agricultural users in 2010 and 86% of health users. Health users were most positive (93%) about "through this project I have gained additional skills (besides computer skills)." Both were least positive about "through the project women have, more than before, influence on decision making." A good example of empowerment is the health station of Langbensi. The ICT Coordinator, a male nurse, has used Google Health in combination with submitted digital photos about sexually transmitted infections (STI) and other skin diseases. At the small medical clinic they lack specialised knowledge. They now use the internet for diagnosis and treatment advice and were able to treat several patients in a much better way than before.

**Economic Impact** is an indicator on the economic impact of the project in terms of financial gain (more income, more productivity). In health it does not indicate financial gain, but is it an indicator if better health services or information provided. In 2009 only 24% were positive about economic impact. In 2010 this increased to 54% of the agricultural users and even 90% of health users. The agricultural users were here most positive (63%) about "the increase of new economic opportunities for women using ICT", but less positive (48%) about "the access to price information of products." The health users see the project "as a motivation to work harder" (96%). The staff of the site at Chereponi was able to advise a group of farmers not to invest in a particular chemical to increase soil moisture conservation instead of the soil fertility which they were looking for. They were now able to invest in other inputs. The station in Langbensi is able to send their quarterly reports as a PowerPoint presentation by e-mail instead of

travelling to Tamale, which saves them petrol, staff time and travel allowances.

**Sector Impact** is the influence from the project on the sector as a whole. In 2009 only 30% saw this as positive; this was increased for the agricultural users in 2010 to 60%. In the health sector not the sector impact, but the social impact is measured. This is the influence of the project on the community. Eighty-three percent of health users were positive about this. The only sub factor they were not so positive about (55%) was the improved access to infrastructure and connectivity. In Langbensi the community has embraced the ICT facility: students use it for research, mothers to inform each other about health issues and health workers for their further education.

**Gender Impact** is an indicator to measure if users noticed positive impact on gender roles and responsibility. In 2009 this was only seen by 14%. This decreased in 2010 for the agricultural users to 13%. The health users were more positive: 32% noticed positive improvement. Some users noticed a decrease in equality between male and female, because men have better access to ICT. The project addressed this issue only late in the project cycle. They encourage women to participate and share positive stories to increase participation. They also have appointed focal point women in the various project sites. These actions are not yet measured and the results should be visible in 2011.

**Negative Impact** measures (unexpected) unwanted impact of the project on the lives of users. In 2009 only 5% indicate a negative impact. This was mainly about staff turnover. In 2010 this increased both in health (23%), but even more in agriculture (41%). Most agricultural users see a higher cost than benefit as the major negative impact (53%), but also an increase in false competition due to the fact that some have access and some have not (52%). In health the most negative impact was that the project only reaches the privileged (53%). This could be linked to the highly educated user profile that was described earlier in the article.

## Challenges

There are a number of key challenges at the moment, and potential solutions are being sought to address them:

- There is a low human resource capacity vis-à-vis workload and key staff movement at the station level. This drastically slowed down the process of down streaming. It is also difficult to address. Lobbying to improve work conditions of rural health staff could be a long term solution.
- Only younger staff has interest in the use of ICT. To train older people the training materials should better address the needs of older people.
- The choice of community representatives as conduits for community participation in the project was flawed as the majority were either not interested in ICTs or were not

given proper orientation about the project. This is addressed at the moment by selecting younger people, who will receive more training.

- Connectivity issues – ranging from delayed payment of subscription fees to administrative bottlenecks at ACDEP head office and service provider level. This affected the creation of an online discussion group and exchange of information between the stations and the secretariat. This is addressed and should improve in 2011.
- Computer virus infections had corrupted many files. There is now anti-virus software installed.
- There is a security risk in having ICT equipment in locations were the phenomenon is relatively new. One of the stations was broken into and almost all their equipment was stolen. Security measures to protect the equipment better is now in place.
- The two-year implementation period was too short to achieve all the objectives. In the extension phase, some of the objectives of phase 1 could still be achieved. Sustainability of ICT beyond the project period is not yet in place in all stations, although one station managed to save money from visits by motorbikes due to use of mobile phones. They bought two additional computers from what was saved.

## Lessons learned
- Stations now see the value of ICTs and are willing to embrace ICTs as a catalyst for development. Unfortunately, however, some are not able to develop strategies to commit resources to deploy ICTs or are reluctant to invest in ICTs.
- The milestones at the five sites have triggered interest among development organisations and individuals to explore the possibility of deploying similar technologies for communication and information sharing in the communities where they operate.
- It is also interesting to note that as a result of the deployment of ICTs amidst the surging challenges of a rural setting, the public image of the ACDEP members among its development partners including the District Assemblies has been enhanced.
- There is high potential of comparative research via the internet on the causes, symptoms, diagnosis and treatment of certain diseases – an area Langbensi clinic explored for diagnosis and treatment of certain disease conditions, and counselling of the patients.
- Though mobile telephony was not part of the ICT tools that were deployed in the project implementation phase, the use of the technology to arrange meetings with farmer groups (in Chereponi and Sandema) and also occasionally deliver important messages has saved some of the stations significant costs in terms of fuel and staff time.
- Some farmer leaders, particularly in Chereponi, are now able to use computers to generate reports on their group activities and communicate with other farmer organisations
- Management support is a critical success factor. They have to be aware of the value of ICT and incorporate their community needs into the project in the early stages.



Shooting a video to show good practices in Sorghum farming.

The satelite connection at Langbensi Clinic.

health programme which will reach 5,000 adolescents and their families in 60 communities; and the traditional medicine practitioners' programme that will reach out to 450 traditional medicine practitioners. Both programmes will be documented and information will be shared among the stakeholders. The advocacy role of ACDEP will be strengthened through these two programmes. ICT is used to communicate easier between the ACDEP members and the ACDEP Secretariat to improve the quality of community health materials by downloading available content and modifying these for local relevance. The health stations will also use the digital camera (photo and video) to document good practices for knowledge sharing, learning and advocacy. Flyers will be produced on adolescent reproductive health rights, and also on traditional medicine practice.

- In the direct surroundings of the project stations, schools did not have access to ICT. For many youth this was the only opportunity to learn about ICT and health issues. The combination triggered many adolescents to attend the ICT training.
- Although the user profile shows a focus on higher educated users, the ICT project has reached also illiterate people with the use of photo materials with the digital camera, drama in combination with downloaded health information and with the use of mobile phones to reach farmers in their own language.

## Next steps and future plans

Phase two has started with a focus on the health programme, especially the improvement of primary health care delivery in rural areas. In this current phase, five Primary Health Care stations will participate to reach out to 60 communities and 450 traditional medicine practitioners (TMPs). The main focus is on enhancing two programmes: the adolescent

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