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People - ICT - Development

Promoting Equal Chances for Women and Men to Use and Benefit from ICT-enabled Solutions

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CONNECT 4 CHANGE

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ABOUT IICD

The International Institute for Communication and Development (IICD) was a non-profit foundation that specialised in Information and Communication Technology (ICT) as a tool for development. IICD was mainly active in sub-Saharan Africa and Latin America, where we brought about technical and social innovations that created and enhanced development opportunities in economic development, agriculture, education, governance, and health.

ABOUT GRF

The Gender Resource Facility (GRF) provides expert advice, technical assistance and knowledge services on gender equality and women's rights to the Dutch Ministry of Foreign Affairs, its embassies and partners.

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I. INTRODUCTION

Ia. Gender Equality and ICT for Development (ICT4D)

Information and communication technologies (ICTs) are rapidly reshaping the nature of global economic, social, and political life. They can help realise economic development but also, enable social change or more specifically, help to achieve globally shared goals of equality and justice[1]. The range of benefits that ICTs and improved access to information can offer is wide such as better health decision-making, enhanced income through improved access to market information and alternative markets, and more business growth through using business development support services.

That said, experience and research has shown major barriers to people's abilities to enjoy these benefits. One broad barrier with far-reaching effects is the socio-economic and cultural divide particularly amongst poorer people who typically have a lower level of access to and skills in ICT. In addition to this, there is another vast challenge that hinders development through ICT: *the gender gap*. The gender gap[2] not only effects access to and use of ICT, it also penetrates ICT education at all levels. This is particularly true in the science and technology fields, in the ICT labour market, and in basic ICT skills. In all these cases, the opportunity to participate in and benefit from ICT is skewed towards men. Women however, need ICTs for the same reasons as men but miss out on new opportunities for earning income, starting new businesses, accessing or selling products, finding employment, making new contacts, and accessing information about health, education, and other issues critical to their families and their own lives. Unfortunately, there is a general lack of reliable statistics about the differences in access and use of ICTs differentiated by gender.

Closing the gender gap or striving for *gender equality*[3] in using and benefiting from ICT is important from the point of view of women's rights and women's meaningful participation in decision-making processes that affect their lives and future. Equal rights, in this context, mean that women are able to decide what ICT services or tools to use and for what purposes. In parallel, the use of ICT opens up the worlds of women through exposure to new information and communication channels which broaden their opportunities and ability to make choices about their lives, the lives of their families, and those of their communities. In general, women invest a large share of their income back into their families and communities – often significantly more than men. They also take more time than men to inform and support their community members which positively impacts health, education, and development broadly. Thus, gender equality in the right to access, use, and shape ICT is important from both the perspective of social development as well as economic development.

1: As expressed in the United Nations Millennium Development Goals (MDGs, 2000-2015) and the subsequent Sustainable Development Goals (SDGs, 2015-2030)

2: Gender as a social category is intersected by a multitude of other social attributes, such as age, ethnicity, class, race, caste, disability, etc. which can, depending on the cultural context, be more significant than the norms and expectations about roles, responsibilities, rights and relations of men and women, boys and girls prevailing in a specific culture.

3: Gender equality means that women and men, girls and boys enjoy the same status in society; have the same entitlements to all human rights; enjoy the same level of respect in the community; can take advantage of the same opportunities to make choices about their lives; and have the same amount of power to shape the outcomes of these choices. Gender equality does not mean that women and men, or girls and boys are the same. Women and men, girls and boys have different but related needs and priorities, face different constraints, and enjoy different opportunities. Ultimately, promoting gender equality means transforming the power relations between women and men, girls and boys in order to create a more just society for all (Source: Plan International, 2013, Planting Equality. Getting it Right for Girls and Boys & Plan International's Gender and Child Rights Training Manual).

Ib. About the Publication

ICT tools and services increasingly form an integral part of development programmes that focus on social and economic change. There is also a growing body of knowledge and literature describes the approaches and practices that increase the chances of women to access, use, and shape ICTs alongside their male counterparts. The experiences they cite mostly concern specific sectors such as health and economic or agricultural development[i]. However, few organisations use an explicit *gender equality approach* in designing and implementing these ICT-supported tools and services. Such an approach requires understanding the relative differences in needs and priorities, constraints, and opportunities of men and women whilst also appreciating that these differences are not rigid but evolving. Only then, after these differences are considered, can policies, programmes, and services be designed.

Existing research[ii] suggests that we need to understand better women's *access to and use of* ICTs in relation to men. However, since access and use do not per se imply that women also benefit from such use, there is also a need to learn about the *extent to which women benefit from ICTs* compared to men, and whether and how the use of ICTs influences equity in *decision-making processes* within the family, communities, and organisations. The Connect4Change (C4C) programme (see box 1) provided a good opportunity to gain more insight into these issues and to identify approaches that worked well to enhance equitable participation in, and benefits from, the use of ICT in agriculture and health programmes. The experiences gained in the Connect4Change programme serve to inform how such gender-responsive programming could be structurally embedded in organisational systems and structures at the local level.

Box 1: Connect4Change programme and gender equality

Connect4Change (C4C) was a consortium of Dutch development organisations comprised of IICD, ICCO, Cordaid, Edukans, Akvo, and TTC Mobile[iii]. The C4C Alliance members came together with a common vision of contributing to creating a world where all people are able to use relevant information and communication technologies to unlock their full potential and shape their own future. The alliance worked from 2011 to the end of 2015 and focused on Bolivia, Burkina Faso, Ethiopia, Kenya, Ghana, Mali, Malawi, Peru, Tanzania, Uganda, and Zambia. The common goal of the programme was to strengthen individuals and civil society organisations in the sustainable use of, and lobby for, ICT to achieve their development goals particularly in economic development, health, and education.

Throughout its work, the C4C consortium emphasised a gender sensitive approach to ensure that projects responded equally to the needs of men and women and generated benefits and opportunities for them equally. During the design and start-up of the projects under C4C, implementing organisations in the different countries integrated gender into their strategies in different forms and with varied intensity depending on their familiarity and previous experience with gender issues. During implementation, gender responsiveness and the documentation of gender-related experiences and insight was not given structural or systematic attention although programmes did result in changes in women's empowerment and male-female relationship dynamics that warranted further research.

As part of this publication, case studies from Connect4Change's work in Kenya, Uganda, and Tanzania were selected so that in-depth insight and lessons learnt could be shared and replicated. C4C partner organisations ADS North Rift, ADS Western, Health Child, and AfyaC4C (see box 2) had relevant anecdotal practices on how to increase opportunities for using ICT tools/services and benefits for both women and men. The case studies are based on information collected through interviews and focus group discussions that were facilitated by two consultants. Our sincere thanks go to the C4C project partners who graciously opened up their operations and learning for the benefit of this study. Our thanks also go to Doreen Kwarimpa-Atim, the Ugandan consultant who conducted the research on the AfyaC4C and Health Child case studies in Tanzania and Uganda and to Salomé Omamo, the Kenyan consultant who conducted the research on the combined ADS Western and ADS North Rift case study in Kenya[iv].

Box 2: C4C partner organisations participating in the case studies

ADS Western & ADS North Rift (Kenya)
Both ADS Western and ADS North Rift are development arms of the Anglican Church of Kenya in Kenya's former Western and Rift Valley Provinces. They partnered with the C4C alliance to integrate the use of ICT in their agricultural value chain development work. The aim of the programmes was to improve efficiency and effectiveness along the chains, strengthen the capacity of associated farmer-led producer and marketing organisations, and improve members' access to markets.

ADS Western made ICT-enabled information services and tools available to support the economic and social advancement of small-scale tomato and onion producers in Bungoma County in Western Region. ADS North Rift focused on Irish potato farmers in Chepkorio, Kaptarakwa, and Kabiemit wards (Elgeyo Marakwet County).

Health Child (Uganda)
Health Child is a Ugandan NGO established in 2006 that focuses on improving the health and well being of young children aged 0-8 and women in childbearing age. Health Child's programmes aim to promote child and maternal health, early childhood education, child nutrition, and child protection. It partnered with C4C to integrate ICT solutions into key interventions of its maternal and child health (MCH) programme which promotes birth preparedness, quality maternal and child health service delivery, and home-based care practices on maternal and child health. Health Child works closely with health workers and community representatives to implement its activities. A few key representatives include the Village Health Teams (VHTs), health centre staff, and Community Based Trainers (CBTs).

AfyaC4C (Tanzania)
Afya Connect4Change Lake Zone (AfyaC4C) is a Tanzanian NGO established in 2010. It provides ICT integration services to 20 health facilities around Lake Zone in the Northern part of Tanzania (Mwanza region). The core services AfyaC4C provides include the installation of Hospital Management Information System (HMIS) software in health facilities, training of key users, supporting change management, and providing maintenance and technical support. AfyaC4C also implements and supports mHealth activities focused on maternal and child health as well as nursing.

The following sections of this publication highlight the main results of the case studies and identify good practices to enhance equitable participation in and benefits from ICT-enabled solutions as well as the conditions that make those practices effective[4]. Specific attention is paid to gender-related changes concerning access, decision-making processes, and benefits accrued from participation in ICT-supported projects. The last section presents the overall lessons drawn from the three case studies and includes recommendations for designing and implementing ICT-enabled solutions that benefit men and women equitably, both economically and socially. The case studies are included in full in the second part of this publication.

4: Our use of the term Good Practice is informed by the FAO (2013) definition that states: 'A good practice is not only a practice that is good, but a practice that has been proven to work well and produce good results, and is therefore recommended as a model. It is a successful experience, which has been tested and validated, in the broad sense, which has been repeated and deserves to be shared so that a greater number of people can adopt it.' In order to understand under which conditions use of such a practice can lead to valuable results, this study includes organisational or contextual factors that influence the effectiveness of an approach. These are described as 'conditions'.

2. GOOD PRACTICES

The case studies[v] have revealed a number of good practices for promoting equal opportunities for women and men to use and benefit from ICT tools and services. They have also brought forward conditions or critical factors that proved essential for making the good practices possible within the specific context. This section provides a summary of the approaches and conditions identified in the case studies. Special attention is paid to the resulting changes in gender dynamics to which the good practices contributed.

2a. The ICT tools and services that were introduced

In order to understand the good practices related to gender-responsive ICT integration, we have described below the central tools and services introduced in the programmes.

AfyaC4C introduced a specific solution in health facilities, namely an electronic Hospital Management Information System (eHMIS). The eHMIS is a software package called AfyaPro[5] and is used to manage patient information, laboratory requests, human resources, and assets and stock. It is also used to enhance billing and accounting. Use of the system allows facilities and clinics to professionalise their operations, improve data quality and accuracy, and generate reports as requested by the Tanzanian Ministry of Health.

ADS Western/ADS North Rift (Kenya) and Health Child (Uganda) work directly with communities to support the economic and social advancement of small-scale farmers and enhance maternal and child health. The ICT-enabled tools and services used in their community-focused programmes are:

- **ICT Centres:** ICT centres through which farmers belonging to the targeted Kenyan farmer groups can access current information on good agricultural practices, relevant production technologies, quality input providers, meteorological information, and information on financial service providers. The centres also provide ICT skills training to farmers and farmer group leaders in order to enhance farm administration, production planning, and marketing both at the individual farmer level and organisational level. In Health Child's maternal and child health programme, basic computer skills training is provided at ICT-enabled resource centres for Village Health Teams which includes the use of the internet to access maternal health related information.
- **Video-based instruction:** in the agricultural value chain development programmes, videos about good agricultural practices and new agricultural technologies are used to support extension and group discussions amongst farmers. The videos are sourced from agricultural research and extension agencies and local TV stations but also include self-made videos of farmers' own production techniques. In the maternal and child health programme, instructional videos are used to build the capacity of male and female Village Health Team members and health workers, and to educate men and women with key messages on maternal and child health, sanitation, and hygiene in video halls.
- **Market Price Information Service:** the Kenya based M-Farm[6] service was introduced as a recommended service for the members of the Kenyan farmer groups, allowing them to obtain information on the real-time retail prices of their products, buy farm input directly from manufacturers, and find buyers for their produce using their mobile phones. The programmes provide support to farmers to subscribe and productively use the information obtained through the service.
- **Mobile-based messaging:** SMS messages are sent to Kenyan farmers multiple times a week and provide technical production information, good agronomic practices, availability of input, pest and disease control information, and reminders about scheduled trainings and meetings[vi]. Farmers also use the SMS messaging platforms to advertise their produce directly to buyers. Young farmers with more advanced phones also use readily available messaging platforms such as WhatsApp and Facebook to network and share experiences with other farmers in the region. Health Child used SMS and voice messaging to provide information and education on maternal healthcare to community members and Village Health Team members, including reminders about

5: For more details on the AfyaPro software solution, see http://www.aeh-s.com
6: For more information on M-Farm, see http://www.mfarm.co.ke

antenatal and postnatal care appointments, and information on birth preparedness and family planning.

- **Radio:** content that is relevant for farming and marketing purposes is aired through collaborations with local radio stations. Programmes include information such as market prices and trends, advice on which seeds to plant in each season, and meteorological information. Radio listening groups allow farmers to listen jointly to these programmes and discuss the content. In the maternal and child health programme, community radio is also used to sensitise large numbers of men and women with key messages on maternal and child health, sanitation, and hygiene.

The programmes do not solely use digital ICT tools and services to provide and obtain critical information but rather, combine the use of digital tools with more traditional communication methods such as:

- **Board games and playing cards** with messages about family planning and health specifically designed for men to use at their regular meeting places.
- **'Inspirational corners'** at strategic points at health centres (e.g. close to antenatal care rooms and immunisation rooms). These show best and worst practices and real-life community testimonies on related issues.

2b. Good practices for promoting equal opportunities for women and men to use and benefit from ICT tools and services

The case studies have revealed that all four implementing organisations shared a similar inclusive approach to their programmes that proved to be fundamental to the success of their work.

This first approach concerns **purposefully creating a safe environment for both men and women to participate in ICT-related training opportunities and make use of information services**.

In the case of these organisations, a deep sensitivity toward equitable participation of men and women was either derived from prior project experience or already rooted in their founding principles. However, having such clear intentions from the beginning did not guarantee that efforts resulted in both genders being able to make immediate use of these new opportunities. For example, in the value chain development programmes, purposefully involving equal numbers of men and women did not immediately translate into higher levels of active participation and ICT use by women in the early stages. What was more, and perhaps more importantly, equal numbers of both genders did not result in women sharing equitably in the benefits from higher earnings from the ICT use. In the case of the community health programme in Uganda, despite emphasising the involvement of both men and women at the start of the project, the initial result in men's active participation in maternal and child health care activities was meagre and required a more purposeful targeting of men as key change agents using channels and messaging that spoke specifically to their interests and needs.

Purposefully involving both genders and creating safe environments for them to participate actively requires such foundational inclusive approaches[7] as implemented by all four organisations, but cannot be limited to that. During project implementation, the teams were increasingly required to consider and adjust to specific gender-related differences in participation needs, interests and limitations. Of course, given the differences in organisations, their work, and their contexts, the ways in which they adjusted their activities to increase the participation of men and women differed.

Below is an example of adjustments made by the Kenyan value chain development organisations. For other detailed examples please see the full case studies in Section II of this publication.

ADS Western and ADS North Rift needed to address inhibitors to participation which were rooted in the local socio-cultural context. These inhibitors included things like time availability due to culturally rooted household responsibilities, the social norm of in-laws not being allowed to be in the same space at the same time, attitudes towards technology, and interest in content based on tasks women and men have to perform on and off the farm.

ADS North Rift staff, for example, saw from attendance records that the presence at the free ICT skills training at ICT centres and at other centre-based activities was significantly lower than expected. In most cases, the majority of attendants were male and young whilst women of any age participated rarely. The majority of participants in the farmer groups were aged over 40 and were the ones who perceived the centres as something meant for younger people. Women did not immediately see the relevance of the ICT training and preferred to attend to other tasks. The distance between the farms/households and the centres and the unavailability of time to visit the centres presented bottlenecks to participation, especially for women. ADS Western staff experienced some of these challenges as well and also faced a specific culturally rooted constraint: women or men refrained from visiting the centres if their in-laws were also present. Relatives such as mothers-in-law and their sons-in-law are not allowed to be in the same room at the same time or sit on the same chairs. Both organisations adjusted their work to improve participation whilst also considering the gender constraints, which resulted in higher participation, especially of the women farmers. Some adjustments included: moving ICT centres closer to farms and to places where farmers meet, scheduling more suitable timetables and activities based on the preferences of women and men (including adults, youth, and in-laws) and offering training by male and female volunteers who speak the local language (a particular benefit to women farmers).

Further, upon recognising that the use of ICT tools at ICT centres did not reach both men and women farmers to the extent the project teams had expected, video trainings on good agricultural practices were organised at locations closer to their farms and households (often in churches

7: ADS Western and ADS North Rift programmes are based on a foundational methodology called People-Owned-Process (PoP), which is a development model that seeks to empower communities to make maximum use of resources within their own setting and environment for self-reliance in development initiatives and processes.

or community buildings). These sessions turned out to be very popular amongst both men and women. Male and female youth who were still attending school were especially interested in the video-based sessions and often encouraged their parents to attend subsequent ones. The video-based sessions were also repeatedly mentioned by women as one of the most appreciated ICT-enabled interventions contributing to positive changes in their farming activities and households, and triggering changes in the distribution of roles and responsibilities amongst husbands and wives.

Another Good Practice applied by ADS Western, ADS North Rift, and Health Child is **tailoring the content conveyed through ICT-based solutions to address the specific interests of key actors and those in the target audience's immediate support structure**. Messages that are intended to influence the behaviour of targeted people need to be tailored to the psychological interests of those people. The role of social factors in limiting or sustaining the new behaviours, norms, and actions over time must also be considered. Over the course of the project, the team monitored the extent to which content provided through SMS/voice messaging, video, or radio actually met the interests of those targeted. This allowed them to revise and further tailor the content and messages over time, which significantly increased the effectiveness of information uptake and action.

These three projects, which focused on giving information services to rural populations, show how important tailoring and adaptation are on project success in the long term. The most compelling outcome was that more women and men began to use the agriculture information on their farms or during sales and further, men were more involved in supporting expectant mothers through accompanying them to clinics and being more financially responsible. Health Child's work on health behaviour change yields insights that illustrate the importance of such constant monitoring and adaptation of triggers contained both within the choice of media as well as in the messages themselves[8]:

When Health Child initiated its maternal and child health programme, it mainly targeted women. Its ICT solutions therefore also focused on a women audience. The programme used a system in which SMS texts were sent to expecting mothers to remind them about preparing for childbirth, attending antenatal clinics, and taking on family planning after giving birth. The messages were sent directly to women who had phones and in the case of those who did not, they were sent to Village Health Team members (VHTs) and the contacts of persons the women had given when they joined the programme. Health Child had learnt how important it was to understand and work with the existing information network around the women from a survey they conducted on how text messaging supports mobilisation for family planning uptake and adherence. At the time, many women did not own a mobile phone and thus depended on VHTs or their husbands. Through monitoring, feedback, and review processes, Health Child noticed that male spouses had a prominent role to play because they were the key decision makers and in most cases, owned the family phone. Therefore, the organisation's staff made various adjustments in the ICT tools and the way they were using them specifically to attract and involve men. In regards to the SMS messages, specific messages are now sent to the husband referring to his wife's situation. This information includes things like which trimester she is in, the need to remind her to seek antenatal care, and to accompany his wife to the health centre. The messages for the woman would be directed to her and include information about her specific situation. Health Child also discovered that the gender of the person speaking in voice messages mattered. The community did not find the original man's voice appealing which caused Health Child to resort to using a female voice. After feedback sessions, Health Child was told that both men and women preferred the female voice. The organisation also looked for places where men were likely to be found so that they could hold community radio events. At these events, moderated by VHTs or health workers, loud speakers were used to sensitise people on health-related issues. Health Child developed quiz SMS texts that were sent to those who attended the community events to facilitate further participation and information sharing with the community. These SMS quizzes were specifically targeted at couples and the couples that won the contests received prizes. This attracted men to participate too and supported couples to engage in discussions about the issues as they attempted to respond to questions. Another adjustment was the introduction of special radio talk shows which were targeted at men and conducted by health personnel, Health Child staff, and VHTs. The thinking behind this adjustment was that men are most likely to own radios or listen whilst in the company of fellow men at bars or other gathering places. Health Child also developed board games and playing cards with messages about family planning and health, especially for men to use at their regular meeting places. The games were designed in such a way that they generated discussions on the issues.

AfyaC4C's work differs from the work of the other implementing organisations in that its

8: For more examples from the other case studies, please see the full case studies in section 2.

main area of intervention is strengthening health facilities and hospitals rather than working with information services for community members. These processes of organisational change, which have been brought about by HMIS systems (eHMIS) in health facilities, are supported by a change management plan based on AfyaC4C's experience and then implemented with each health facility. The case study revealed particular elements of AfyaC4C's approach that clearly contribute to enhancing equal opportunities of male and female staff in terms of skills building, exposure, professional development, and career growth possibilities.

One such approach was already mentioned but is reemphasised as being fundamental to the successful adoption of HMIS systems in each department – namely, **purposefully involving both male and female staff of health facilities in ICT-related training opportunities and information services, and ensuring a safe environment for both women and men to explore, learn, and appropriate the tools**[9].

Since all facility staff is faced with the same challenge of adopting and integrating the eHMIS into their work, the challenge is a joint and common one regardless of the department they work in, their gender, age, or ethnicity. Whilst the challenge was common, there were differences in how particular staff responded. Further, having mechanisms in place to be able to recognise and discuss those differences proved to be essential to ensure adaptive and responsive change management on the part of health facility leadership and AfyaC4C's team.

It appeared that women took more advantage of the learning opportunities provided to them compared with their male counterparts. Also, such exposure was benefitting women more, particularly the older ones, because they had previously had the least exposure to IT. In contrast for men, particularly the younger ones, it is very likely that they have already been exposed to computers from earlier learning experiences. One of the learning mechanisms introduced was inter-departmental peer learning and peer support. This fostered better working relationships between staff and generated respect for one another, regardless of gender. Male staff interviewed said they no longer had problems asking female colleagues for support and vice versa.

9: For more detail and examples of how AfyaC4C supports facilities to do this, see the AfyaC4C case study.

Such joint sharing emerged as being crucial, and **encouraging the health facility to institutionalise on-going learning opportunities and sustainability mechanisms** was therefore posited as a Good Practice for similar initiatives to emulate.

In order to act on the findings that emerge from the monitoring and learning mechanisms, and to allow staff interest and performance to translate into alternative professional development paths, there needs to be a link to organisational structures and systems such as performance appraisal and human resources management. Buy-in and ownership on the part of facility management of the implementation strategy and change process proved crucial to making sure that responsibilities could be shifted and opportunities for professional growth were provided.

Ensuring buy-in, ownership and accompaniment of the implementation strategy and process on the part of management was an important Good Practice that AfyaC4C's experience brought forward.

Promotions amongst staff into ICT-related functions created opportunities for women who had developed the right skills and showed interest in such functions. The benefits of management involvement in the ICT change plan are evidenced by how some management teams became aware of gender issues and how they acted on them. In one of the facilities for example, male staff infrequently attended and participated in the trainings. Some of them complained about the length of the sessions and the lack of 'participation allowance' provided. AfyaC4C shared this challenge with the management during a feedback meeting upon which the management decided to 're-envision' the men about the need for the training in the context of the institution. They took a strong stance and wrote letters urging them to attend the training, an action that resulted in increased male participation.

In short, the approaches that came forward from investigation into all cases were:

- Purposefully involving and creating a safe environment for both men and women to participate in ICT-related training opportunities and make use of relevant information services.
- Tailoring the content that was delivered through ICT-based solutions to address the specific interests of key actors and of those in the target audience's immediate support structure.
- Encouraging the organisations to institute on-going learning opportunities and sustainability mechanisms.
- Ensuring buy-in, ownership, and accompaniment of the implementation strategy and process on the part of organisations' management.

2c. Changes in gender dynamics to which the Good Practices contributed

The approaches described above are labelled 'good' because they created equal opportunities for both men and women to effectively access and use ICT tools and services. The case studies also revealed how such an increase in access and use impacted gender dynamics within families and the community.

For example, the Kenyan value chain case studies showed that men and women participating jointly in the ICT-related activities has been instrumental in **improving relationships within the family**: there is more peace in the home and male relatives allow women more space. As one woman put it: **"the increase of income and profit through the ICT project has made the men and the women to walk together but before he would go alone. Because we are now both doing farming, are both members of the association and attend some ICT lessons together, it has brought us together"**.

Now, men respect the work and views of their female counterparts more and have begun to share domestic tasks which previously were the sole responsibility of women. More and more men **involve their wives in decision-making about the planning of farm activities, the sale of produce, and financial affairs**. Some women produce and sell their own products, cultivating land that was provided to them by their husbands or through leasing. In meetings, men increasingly take women's views into account in a serious manner.

The changes in family relationships and decision-making also became visible in the Health Child maternal and child health case study. One interesting finding was that the involvement of both men and women in family planning discussions resulted in better relationships between genders and 'lightened the burden' for women, particularly around issues of child spacing. Men are now more directly participating in decisions such as where to give birth and ensuring antenatal care attendance.

In all the case studies, particularly women but also men expressed that their **self-confidence and respect from relatives, community members, and colleagues of the same and opposite sex had increased** due to their involvement in ICT training and their subsequent use ICT tools. For example, the mixed gender training of VHTs contributed to respect and cooperation between the two genders. The men felt that their female counterparts were at the same level with them. The training has also demystified conversations about sexual and reproductive health, which has enabled male VHTs to teach about and address such sensitive issues, thus further increasing male involvement in issues traditionally known to be the exclusive domain of women. The VHT's work in the communities has earned them respect and built confidence particularly in female VHTs whose emerging leadership was quite evident during the study. The female VHTs, as well as leaders of Village Saving and Loan Associations (VSLA), reported that they had become bolder and could speak in public with confidence.

Some female staff participating in the AfyaC4C case study spoke excitedly of the benefits in their personal lives. Some benefits they mentioned were the way they had diversified their knowledge, skills, and use of IT beyond the eHMIS software (AfyaPro), the increased respect and admiration from other people, and their higher confidence and self-esteem. One young female nurse shared **"I learnt AfyaPro after I had my computer certificate training though I had not practised much. AfyaPro inspired me to learn more - I realised I could do it, I bought my own laptop, now am able to use the internet to find information, exchange ideas with others, and even play music in my home where we have no electricity. My family is very proud of the fact that we have a computer in the home"**.


NOKIA

3. CONDITIONS OR CRITICAL FACTORS FOR SUCCESSFUL GOOD PRACTICES

The extent to which the Good Practices are effective highly depends on the particularities of the context in which they are applied. The case studies pointed to various critical factors that influenced the effectiveness of the approaches, and can be said to constitute **conducive programming practices**. In spite of the different characteristics of the four implementing organisations, the nature of their interventions and ways of working, and the ICT tools and services introduced, similar critical factors or conditions for success were found across the case studies.

A first critical factor – **gender responsiveness in programming** – was found to have laid the foundation for the gender equality outcomes of ADS Western, ADS North Rift, and Health Child. Gender-responsive programming paved the way for a smoother application of the equal participation and benefits intentions in the ICT project. Both ADS North Rift and ADS Western prioritise promoting gender equality in their projects. This promotion usually exists in terms of participation and sharing of benefits. In terms of age, both organisations encourage youth[vii] of both genders to participate. Gender sensitisation, participatory discussions on gender needs and gaps with farmers of both sexes, affirmative action (e.g. not more than 2/3 representation of each gender in membership and leadership of mixed groups)[viii], and leadership training for women are ADS' key tools to help push projects to respond to the needs, interests, and opportunities of both men and women farmers. Health Child's adjustment of ICT-related approaches described above was the result of its gender-sensitive action research based methodology (which it used in executing its programmes) and its openness to gender dynamics during programme implementation. Interventions are carried out and continuously adjusted through various review and analysis activities and organisational processes in which community members and field staff participate. Their data collection tools are sex disaggregated[10] which enables Health Child to note the gender-related trends or emerging issues regarding a particular issue. Further, Health Child adjusted their routine monitoring and evaluation processes to strengthen the gender aspect in collecting and analysing information. For example, the VHTs ask what the men think about some of the trainings or specific issues to bring out their questions and concerns. This enables Health Child to respond to men's particular information gaps or concerns with new ICT-supported actions that are gender responsive in the particular context of that community.

The Health Child case study in particular pointed to a second critical factor, namely – **strong leadership in increasing gender responsiveness at the organisational level**. A strong organisational leadership role is imperative when it comes to institutionalising learning mechanisms, facilitating staff development and other human resources issues, and budgeting. Following the principle 'practice what you preach', Health Child made efforts to better balance the number of staff in terms of gender in order to ensure that the voices of both men and women were heard and represented in Health Child's work. In the process of bringing in more male staff, they discovered that men brought aspects and views that were previously missing in the organisation: **"we were able to see the different paradigms and perspectives of men, and their views were very instrumental in formulating SMS texts targeting men"**.

ADS North Rift, ADS Western, and Afya C4C worked closely with farmer groups/associations and health facilities. Another critical factor that influenced the effectiveness of a practice approach concerned organisational aspects of the associations and facilities. For both ADS North Rift and ADS Western, **well-functioning, gender sensitive farmers groups and farmer associations** appeared to be an important condition to create equal opportunities for men and women farmers in their ICT projects. ADS North Rift and ADS Western both promote farmers organising themselves into groups and associations. The

10: Sex-disaggregated data refer to data on socio-economic attributes of men and women. Such data are important for analysing a situation through a gender lens. When speaking of gender-disaggregated data, we refer to the analysis of seks-disaggregated data which include qualitative considerations (based on: FAO 2003, Gender-Disaggregated Data for Agriculture and Rural Development)

groups and associations that have gender equitable representation not only in numbers but also in governing mechanisms, and that provide real opportunities for women member and leaders to participate, appear to have more positive outcomes from the ICT project in terms of social and economic benefits than those that function less well and are less equitable organisation and governance. Whilst the farmer leaders were well aware of the importance of equal participation and opportunities for women in elective or appointive bodies, due to prominent political developments and debates in Kenya since 2010[11], this awareness does not necessarily translate into farmers' representative organisations actually functioning in a way that allows meaningful participation and leadership roles for women. In the cases where ADS Western or ADS North Rift monitored and provided additional support to the farmers' organisations to improve governing structures and group dynamics to be more equitable, the integration of ICT-based solutions on the part of individual women was higher and more women leaders took an active role in promoting and socialising the ICT-related services to other community members.

"The women have gained courage and boldness to take up leadership positions. I was in a group and I did not have any say. My work was to go to a group and keep quiet. But when I came for the ICT and I saw the way they were teaching, they gave me a heart to continue and become a leader and I was appointed as a leader in the association. We used to sit back and say that it is the work of men to be leaders. In our cultures it was said that a woman cannot stand where a man is. But when we were taught that everybody is equal and both men and women can be leaders, we developed the interest and were given the opportunity to lead in the association." (female leader, focus group discussion). In those well functioning, gender sensitive groups and associations, male leaders also see themselves as role models for other farmers to emulate in terms of supporting women's engagement and leadership in ICT-related work.

AfyaC4C found that **committed leadership that inspires a shared vision and ownership of the ICT solutions** as well as **leadership commitment to a conducive internal working environment in the health facility** was critical to being able to create the required buy-in and change management support at management level. Leadership commitment to the entire process became a driving factor in enabling equal opportunities for male and female staff to participate and benefit from the integration of the eHMIS and other ICT related tools. AfyaC4C also noticed the hindering influence of conflictual relationships amongst staff. This included tension between higher and lower level employees, the negative influence of apathy, and a lack of conviction about the work they do and the facility as a whole. In instances where the internal working environment was relatively healthy, the situation was seemingly the opposite allowing open and transparent opportunities for noticing and responding to gender-related differences and needs.

11: Article 27(8) of the Constitution of Kenya 2010 provides that the State should take legislative and other measures to implement the principle that not more than two-thirds of the members of elective or appointive bodies shall be of the same gender.


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4. LESSONS LEARNT AND RECOMMENDATIONS

The three case studies, although relatively small in scale, brought forward valuable lessons on how to reduce inequalities between men and women in using ICT-based tools and information services. They also gave insight into how to enhance the opportunities for both men and women to benefit equitably.

The importance of an inclusive approach:
Based on their organisational principles, all four implementing partners used an inclusive approach in involving staff (the case of eHMIS) or in involving community members (the cases of maternal health and agricultural value chain development). Both men and women, often including the younger generation, were explicitly encouraged to participate in training activities to enable them to use specific ICT tools and services. Such an inclusive approach to implementing ICT-supported interventions was not part of an explicit strategy on gender-based empowerment, which refers to building assets, strengthening people's ability to make choices about the future, and developing a sense of self-worth and belief in their own ability to control their lives. It was rather built on a belief in fairness in seizing opportunities provided by access to, and making beneficial use of, ICT-enabled solutions to improve the lives of people, regardless of sex or age. The organisations already showed gender awareness or responsiveness in the way they carried out their programmes which was easily transferred into their approach to implementing the ICT-related activities. Interestingly, the organisations did not pay much attention to other social divides such as the specific interests, constraints, and opportunities of women heads of household such as widows or divorcees or of men and women with a disability. This resulted in a lack of information about the extent to which the ICT-supported activities cater to the needs of particularly disadvantaged groups.

Recommendation: pay explicit attention to all types of social divides in the design and implementation of programmes. As gender equality gaps are usually wider among disadvantaged groups, systematically differentiating your approach according to gender when investigating various different social categories is a cornerstone of inclusive programming.
Lessons from the case studies show that paying explicit attention to understanding and addressing barriers to participation and equitable benefits for targeted groups is important. It allows the use of ICT-based information services to overcome those barriers and create positive socio-economic change for those groups. Understanding and addressing all types of social divides at the outset and during the course of implementation enhances inclusivity even further.

The importance of conducting comprehensive gender analyses: None of the organisations had done a comprehensive gender analysis at the start of the ICT programme or in relation to implementing specific ICT-enabled solutions. Conducting such a comprehensive analysis would have helped to better understand contextually specific gender dynamics and anticipate challenges concerning gendered differences in access, participation, or control over resources and process. For example, in maternal health programmes, which by nature deal with women's reproductive roles, understanding particular socially-constructed norms around those roles is needed to identify which ICT tools and information services may suit men and women's interests, responsibilities, and work schedules best. In agricultural value chain development programmes, understanding particularities about decision- making processes between spouses is critical to ensure that both women and men can effectively use information about market prices and gain from subsequent increases in income. Or, within an organisational setting, identifying to what extent the occupational stratification in the healthcare system affects access to ICT training and facilities is fundamental to designing inclusive training activities.

Recommendation: conduct a comprehensive gender analysis at the start of a programme. Lessons from general programming and more specifically from ICT-enabled solutions clearly point to the importance of conducting a gender analysis. Such an analysis allows programming to cater better to the needs and interests of female and male ICT users and to ensure equal opportunities and benefits for both.

The importance of 'learning while doing' using a gender lens. The case studies showed that an inclusive approach is the start to enhancing equal access and participation of men and women but that the ability of organisations to learn whilst they are doing is equally important. All implementing organisations observed factors that hindered them from working effectively and efficiently. Examples of factors include: low attendance of women in ICT training in the agricultural value chain development programmes, poor attendance and low participation of male staff in the training on HMIS, or low levels of interest of men in maternal health. In the programme related to maternal health, these hindering factors influenced the effectiveness of training or limited the ability of women to act on newly available health information. This in turn, influenced the expected outcomes of the programme.

In the case studies, systemic learning mechanisms proved to be instrumental in understanding differences in access, participation, and control between women and men. Subsequently, they allowed programme staff to take action to balance identified gender gaps. Learning mechanisms that were built into the regular operations and organisational structures could bring to the forefront team members' experiences and perceptions related to gender issues. A good example of adjusting the programme as a result of the learning while doing approach is the changes made in the maternal health programme to better involve men through text messages tailored to their specific interests. Another example is the value chain development case which started to encourage in-laws to attend activities separately or provide ICT training for adults and youth separately by organising it at different times.

A well-functioning and gender sensitive monitoring and evaluation system goes beyond collecting sex-disaggregated data. It should also include reflective analysis of information through a gender lens and facilitate learning and adapting. The organisations use monitoring and evaluation systems but realised that they did not consistently differentiate the information according to gender (except Health Child), and, more importantly, did not systematically and structurally analyse the data to understand if existing gender gaps were reducing or if others were arising due to their ICT-related interventions. A critical gender issue, for instance, is decision-making: the extent to which women compared to men can take their own decisions, and act on those decisions, such as buying a mobile phone, selling produce, visiting clinics, using ICT facilities in hospitals, and the like. Promoting access to ICT tools, services and capacity building does not automatically imply equitable benefits for both men and women, it is here where decision-making - having a choice and being able to pursue a particular choice - comes into play. In all case studies the importance of decision-making came to the fore. For example, for both community-focused programmes included in the study it took more than only providing access to information to facilitate change in the household: **'When you save and bring money home it earns you respect from your husband, your participation in decision-making increases and you have power and confidence to participate.'** (female focus group participant)

Recommendation: combine a sex-disaggregated data collection system with organisational learning through regular and systematic analysis of the information collected, using a specific gender lens. ICT-enabled solutions cannot be introduced and effectively implemented without a more profound understanding of gender dynamics. One of the most critical dynamics that must be better understood is decision-making and power relations between women and men in a household or an organisational setting. In order to understand such dynamics effectively, and better measure changes over time, M&E systems would do well to provide gender-disaggregated data on whether the use of ICT solutions contribute to the ability of individual participants to make choices that benefit them, their households, and their communities.

The importance of gender work being embedded in sustainability strategies: Building further on the issue of decision-making, all implementing organisations (sometimes implicitly) work towards increasing the decision-making power of the individual participants of their programmes. This is based on the assumption that if women as well as men can make their own decisions about their lives within the contexts they live in, the organisations' own support programmes can gradually be withdrawn. The same applies to the organisations or institutes they work through - the implementing organisations in these case studies attached much importance to enhancing the capacities of farmer organisations or those of health facilities' staff and leadership. They also gave high priority to designing relevant ICT tools to support operational efficiency and income gains to ensure financial means are available to continue and sustain their ICT use over time. Examples of this include the support on improving record keeping, data collection for reporting, and the use of management information systems.

The case studies did not shed sufficient light however on the extent to which the introduction

of ICT tools and services for farmer organisations or health facilities was explicitly and structurally linked with promoting gender sensitivity. The implementing organisations that worked with farmer groups and associations provided gender training and promoted affirmative action to increase gender sensitivity in general. The organisation focusing on maternal health made special efforts to change the attitude of health workers (including midwives) to respect and acknowledge men who come to the clinic with their wives and/or children. It is very likely that all implementing organisations will agree with the lesson learnt of the organisation focusing on HMIS support, formulated as follows: **'gender awareness needs to be ensured in the cooperating partners and organisation-wide gender-responsive learning processes need to be institutionalised'** beyond a particular project lifecycle.

Recommendation: combine the implementation of ICT enabled solutions with creating gender awareness amongst cooperating partners (such as farmer organisations or health facilities) to ensure that these partners understand how gender differences can impact the effectiveness of their operations, particularly related to the use of the ICT tools and services. Organisations often think that 'technology' is gender neutral, without recognising that tools and services are used by men and women who have different opportunities and constraints due to the overall socio-cultural context as well as the culture of the organisation in particular.

The importance of a gender-responsive organisation. What holds for cooperating partners in regard to gender-responsiveness certainly also holds for the implementing organisations themselves. The implementing organisations participating in the case studies feel that their own operations should be gender responsive as a prerequisite for designing and implementing gender-responsive programmes. All the implementing organisations have trained their staff on gender equality issues yet some referred to their predecessors' work as the one who 'knew about gender'. Such findings show that gender is not explicitly embedded in all the participating implementing organisations. Some do not have an organisational gender policy or gender strategy, nor are gender equality objectives always explicitly mentioned in other policies and strategies – the organisations' entry points generally were inclusiveness and people-owned-processes to facilitating development. The case studies also highlighted the critical role that gender-sensitive IT officers played in supporting and encouraging other implementing staff, both at the organisational level and during execution of activities in the field.

More could be gained if considerations on gender issues would be better embedded in organisational mechanisms based on a clear vision on what the organisation wants to achieve in terms of gender equality. Ideally, this vision translates into organisational policies and strategies, M&E systems, as well as in human resource management decisions such as hiring new staff, skills development support, appraisals and promotions, and so forth. ICT can play a facilitating role in this by making larger amounts of gender-related data more easily available amongst different levels of users.
As the case studies on health showed, the leadership's role in increasing gender responsiveness is of key importance, not only at the level of the cooperating organisation, but also, and especially, at the level of the implementing organisation which acts as an adviser and facilitator of the programmes.

Recommendation: 'practice what you preach'. Implementing organisations should make efforts to fully embed gender equality in their organisations as a pre-requisite for truly gender-responsive programming. This can be done by clearly formulating what change the organisation wants to contribute to in addressing prevailing gender equality gaps and how it wants to achieve it, ensuring that staff have the right capacities to identify and address gender issues, promoting teamwork and joint learning, creating a gender balance in terms of numbers at different levels, and investing in a conducive working environment to ensure that the voices and concerns of both men and women staff are heard. Such 'gender-aware' organisations will be credible advisors and role models to the organisations they cooperate with.

END NOTES

[i] See, for instance, Deshmukh, Madhu & Patricia Mechael, 2013, Addressing Gender and Women's Empowerment in mHealth: An Analytical Framework, mHealth Alliance/UN Foundation http://www.villagereach.org/wp-content/uploads/2013/07/gender_analytical_framework_report.pdf; Flynn-Dapaah, Kathleen & Ahmed Tareq Rashid, 2013, Gender Digital Equality in ICT Interventions in Health: Evidence From IDRC Supported Projects In Developing Countries http://ci-journal.net/index.php/ciej/article/view/526/512; Mbo'o-Tchouawou, Michèle, and Kathleen Colverson, 2014, Increasing access to agricultural extension and advisory services: How effective are new approaches in reaching women farmers in rural areas? ILRI http://www.e-agriculture.org/content/increasing-access-agricultural-extension-and-advisory-services; O'Donnell, Megan, 2014, Women In Agriculture: A Toolkit For Mobile Services Practitioners. GSMA mWomen & mAgri http://www.gsma.com/connectedwomen/wp-content/uploads/2014/06/Women_in_Agriculture-a_Toolkit_for_Mobile_Services_Practitioners.pdf; World Bank, 2014, Engendering ICT Toolkit http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTGENDER/EXTICTTOOLKIT/0,,menuPK:542826~pagePK:64168427~piPK:64168435~theSitePK:542820,00.html

[ii] Hafkin (2012) in Broadband Commission Working Group on Broadband and gender. 2013.Doubling digital opportunities: enhancing the inclusion of women and girls in the information society. UNESCO http://www.broadbandcommission.org/documents/working-groups/bb-doubling-digital-2013.pdf

[iii] IICD: International Institute for Communication and Development, www.iicd.org; ICCO: Interchurch Cooperative Organisation for Development Cooperation www.icco-international.com; Cordaid: www.cordaid.org; Edukans: www.edukans.nl; Akvo: www.akvo.org; TTC Mobile: www.ttcmobile.com

[iv] The case studies on health were conducted in June 2015 by Doreen Kwarimpa-Atim, Ugandan consultant, and the case study related to value chain development in May and June 2015 by Salomé Omamo, Kenyan consultant.
The Health Child case study was carried out in Uganda's Jinja District and insights were derived from focus groups with representatives from Village Health Teams (6 females, 5 males), members of Village Saving Loans Associations (20 females, 12 males), Community Based Trainers (1 female, 3 males), health workers (3 females, 2 males), and Health Child staff (4 females, 2 males). Total number of respondents: 34 females, 24 males.
The AfyaC4C case study was carried out with three selected health facilities: one small facility on the outskirts of Mwanza, and two district hospitals, Sengerema DDH and Nyakahanga DDH. Interviews and focus group discussions were held with women and men (20 females, 23 males) who directly use or manage the HMIS in different hospital departments. The findings were further informed by group interviews with AfyaC4C staff (4 females, 5 males).
The combined case study of ADS Western and ADS North Rift is based on research carried out in several counties in Western Kenya. Interviews and focus group discussions (16) were held with women and men farmers, leaders of farmer-led organisations (in total 27 females, 32 males) who use ICT-enabled solutions and services availed through the C4C-supported programmes or who participate directly in the ICT centre-based activities. Additional interviews were conducted with volunteers who provide training and information support services at the ICT centres. The findings were further informed by group interviews with ADS Western and ADS North Rift staff (4 females, 5 males).

[v] The case studies of two implementing organisations, ADS Western and ADS North Rift in Kenya, have been combined to provide a thorough overview of experiences and insights generated regarding agricultural value chain development. The other two case studies were conducted at Health Child and AfyaC4C both engaged in the health sector.

[vi] The two organisations implemented different systems, with ADS Western working with the Frontline SMS messaging platform and ADS North Rift making use of TTC Mobile's platform offered through the Connect4Change consortium. The interviews did not yield any information on differences between the two platforms in terms of value offered or relevance for particular user groups.

[vii] Youth in this context refers to boys and girls between the ages of 20-35 years.

[viii] These organisations are not the only actors promoting women's development or empowerment or creating gender awareness. Women's increased confidence, self-esteem and voice can also be attributed to (access to) education, to specific government programmes or discussion in churches on equality between the genders. Moreover, radio stations using local languages air programmes and discussions that teach women on improving family life, how to raise children, the duties of women and men in the family and the need for supporting each other.

[ix] A gender analysis is the systematic effort to understand the roles of men and women and the social, economic and/or power relations between the two genders within a given context, such as that of a household, community, region, or organisation. It includes the collection of sex-disaggregated data about tasks and responsibilities, workload, access and control to resources, and participation in decision-making, as well as the identification of the needs and priorities of women and men, and the identification of existing opportunities and constraints to develop, grow and engage. Such an analysis can be done at community as well as organisational level, where it concerns staff or members.

[x] A useful framework to understand the limitations on decision-making and power relations is Dorothea Kleine's 'ICT4What? – Using the Choice Framework to operationalise the Capability Approach to Development' (2010).

gkf: Gender advisory and knowledge services supported by the Netherlands Ministry of Foreign Affairs

iicd People - ICT - Development

CASE STUDY 1

Promoting Equal Chances for Men and Women to Use and Benefit from ICT-Enabled Agricultural Value Chain Development

ADS Western and ADS North Rift | Kenya

"Before, the husbands would order their wives to plant and weed. When it reaches harvesting time, he is the one who would do that work and you won't even see the money he gets from selling the onions. He would perhaps just buy for you half a kilogram of meat and you won't see the rest of the money. Through the ICT and gender discussions, we are all involved right from planting up to harvesting, I also keep my records and through this we have seen progress because during harvest we go together and I am the one who keeps the money as we budget." *(Female focus group participant)*

1 INTRODUCTION

This case study presents the work of two Kenyan organisations and their experiences with promoting equal participation and benefits for men and women in ICT-enabled agricultural value chain development.

This case begins with a description of context followed by the learning and takeaways gained by the organisations in their work to enhance equitable participation and benefits for male and female farmers. Building upon these lessons, a number of good practices are presented together with sets of conditions that are required for effective implementation.

1.1 The Context

The case study research presented here has generated insight into how ICT-enabled services and tools can contribute to equitable benefits from agricultural value chain development for women and men of all ages. The qualitative research with a total of 59 respondents (32 men and 27 women), yielded sufficient material from which shared experiences, views, and trends could be extracted and analysed.[1]

The organisations that were involved in this study were ADS Western and ADS North Rift which are both development arms of the Anglican Church of Kenya in Kenya's former Western and Rift Valley Provinces. Both organisations partnered with the Connect4Change (C4C) alliance to integrate ICT into their agricultural value chain development work. The broad aim of both organisations was to improve the efficiency and effectiveness along the value chains and strengthen the capacity of farmer-led producer and marketing organisations which in turn would improve access to markets. ADS Western chose to make ICT-enabled information services and tools available to support the economic and social advancement of small-scale tomato and onion producers in Bungoma County in Western Region, whereas ADS North Rift chose to do the same but mainly focused on Irish potato farmers in Chepkorio, Kaptarakwa and Kabiemit wards (Elgeyo Marakwet County).

The main technologies used by both organisations include:

- ***Farmer ICT Centres:*** ICT centres through which participating farmers can access current information on good agricultural practices, production technology, quality input providers, meteorological information, and financial information. The centres also provide ICT training to members to enhance farm administration, production planning, and marketing at both the individual farmer and organisational levels.
- ***Video-based instruction:*** Videos are used to support extension services and group discussions amongst farmers. The videos are sourced from agricultural research and extension agencies, and local TV stations. They also include videos created in collaboration with farmers and by farmers themselves.
- ***Market Price Information Service:*** a service produced by Kenya based organisation M-Farm[2] was introduced and recommended for the members of the Kenyan farmer groups. The service allows them to obtain information on the real-time retail price of their products, buy farm input directly from manufacturers, and find buyers for their produce using their mobile phones. The programme also provides support to farmers so that they can subscribe and productively use the information provided.
- ***Mobile-based messaging:*** Using the TTC mobile messaging platform, SMS messages are sent to farmers multiple times per week. These messages provide technical production information, good agronomic practices, availability of inputs, pest and disease control information, and reminders about scheduled trainings and meetings. Farmers use the same platform to advertise their produce to buyers and young farmers, who often have more advanced phones, additionally use existing messaging services such as WhatsApp and Facebook to communicate with each other and other farmers in the region.
- ***Radio:*** The programmes also collaborate with local radio stations so that content about farming and marketing (such as prices and trends, advice on planting, and weather) can be aired. Early on, radio listening was discovered to be an effective way to get information across because farmers, especially in groups, could collectively listen, discuss, and collaborate.

1: Interviews and focus group discussions (16) were held with farmers and leaders of farmer-led organisations and volunteers in ICT centres, both men and women, revealing the dynamics at play, as well as the obstacles and successes as experienced by the farmers themselves. Reflections by the organisations' project teams on their experiences since starting the initiatives in 2011 added valuable insights into the approaches they had taken, what they have learnt and what constitutes good organisational practices to be able to design and implement gender-responsive ICT-enabled value chain development programmes. Both organisations' data and experiences have been combined to provide a thorough overview of experiences and insights generated.
2: for more information on M-Farm, see http://www.mfarm.co.ke

1.2 ADS Western and ADS North Rift's Track Record in Balancing Gender in their Projects

Before beginning to integrate ICT into their work, both ADS North Rift and ADS Western had been implementing partners in previous Fair Economic Development programmes.[3] During these programmes, they conducted foundational work with farmer group members and leaders to raise awareness on gender roles in agriculture and facilitate gender balance in the membership and leadership of farmer organisations. Early on, ADS Western and ADS North Rift recognised that in most of the communities where they worked, women disproportionately lacked access to information, organisations, and resources important for them to enhance their farming work. Although women were highly involved in production, when it came to selling produce, men would keep any income and would decide what to do with it. In general, the daily schedules of women working on the farms and tending to household duties did not allow them sufficient time to attend trainings, seminars, and farmer association meetings. This often resulted in male dominated attendance and decision-making informed mainly by their views. Further, skills building programmes mostly benefitted men and women usually depended on information relayed to them by their male counterparts after village meetings which they often were not allowed to attend. This was especially prominent in the cultural context of ADS North Rift's catchment area[4].

In light of these gender gaps, both organisations aimed for equal participation of women and men in their programmes geared towards to enhancing agricultural production and sales. Their aim was to ensure that their various activities would relieve both men and women of their hardships and would contribute to them being able to enjoy the fruits of their labour. A number of project approaches and tools were mentioned as having been implemented prior to the start-up and integration of ICT-supported services including:

- The '24-hour activity calendar', a method whereby men and women jointly reflect on how people of both genders and of all ages allocate their time between different activities over a 24-hour period. Through joint analysis of the calendar, the organisations anticipated that men and women would have a better appreciation of the unequal distribution of tasks, time, and benefits and take action to change the observed inequities.
- The promotion of women's participation in farmer groups and farmer organisations through affirmative action and purposeful messaging on women's right to leadership, decision-making, and active participation in community meetings and community affairs. This was amongst others triggered by government campaigns (at least 1/3 of the members and leaders should be men or women).
- Dialogues on men and women's roles in agriculture-related activities and household responsibilities during regular value-chain related meetings.

3: supported by the Interchurch Cooperative for Development Cooperation (ICCO), see www.icco-international.com
4: ADS North Rift's catchment area covers 6 counties of Kenya's North Rift, namely Elgeyo Marakwet, Nandi, Trans-Nzoia, Turkana, Uasin Gishu and West Pokot

2. KEY LESSONS LEARNT DURING THE INTRODUCTION AND USE OF ICT SOLUTIONS AND ICT CAPACITY BUILDING

Having recognised the prevalence of unequal access to information and learning opportunities, ADS North Rift and ADS Western took to purposefully communicating messages at the start-up of the initiatives about women's rights to participation in the new ICT-related programmes. Theses messages emphasised that women have the right to participate in community and ICT related meetings, should be able to obtain first hand information, make decisions, have equal opportunities to access ICT centres, and use technology for personal and professional development. In addition, the focus from the onset was on realising access to and the effective use of ICTs by both men and women rather than employing strategies with a specific focus on women alone. During the process of implementing various tools and solutions, both organisations learnt valuable lessons in how responsive their approaches and solutions were to the needs of different groups and different types of farmers within the groups. These lessons informed adaptations to their approaches along the way. Some key lessons related to experiences with specific ICT-related approaches and services are discussed in more detail below.

2a. Farmer ICT Centres

The farmer ICT centres were an important element of both ADS North Rift and ADS Western's projects from the start. The centres provided free ICT skills training to farmer group members and leaders and helped them to use the tools to search for information, create and keep records related to their farming enterprises, and communicate with input suppliers and potential buyers. Three key lessons related to these ICT centres and their implications on gender relations stood out and are discussed below.

The first lesson came after ADS North Rift reviewed the attendance records during the course of implementation. What it saw was that the general presence at the centres was significantly lower than anticipated. Further, the majority of attendants were male and young whilst women participated infrequently. What ADS North Rift quickly realised was that the majority of farmers targeted for participation were older than 40 and perceived the centres as something for young people. Some of the farmers, particularly women, were illiterate. In addition, women did not see the relevance of the ICT training for their daily concerns and preferred to attend to other tasks.

From a logistical standpoint, many farms/households were located in remote areas which meant that farmers had to walk long distances to visit the centres and attend sessions. What was more, these impediments were found to be especially prominent for women. These challenges proved to be inhibitors to the success of the programmes and both organisations adjusted their interventions in order to improve participation in light of these gender-related constraints. Key adjustments included:

- Moving centres closer to the farms
Additional ICT centres were established closer to the location of farms and at times, were co-located on the premises of farmer organisations or collection centres. This change appeared to be successful especially in regard to the participation of women who began to attend as they did not have to worry about leaving their tasks for long periods of time or travelling long distances.

- Scheduling suitable timetables and activities
ADS North Rift and ADS Western asked female group members when they would prefer to visit the centres. Women across regions responded differently which meant that no uniform schedule could be set. However, changing timetables to suit the preferences of particular groups did result in higher participation of women.

ADS Western acknowledged at the start of the project that **'the constraints [on women's access, usage and capacity vis-à-vis ICT] are not just limited to the issue of an equal number of women and men using ICTs. They include issues that 'interfere' with not only family matters, but cultural matters as well'**[5]. A good example of this happened during the early stages of implementation when project staff found that women and men refrained from visiting the centres because their in-laws were present at the same time. Traditional customs and rules do not allow such mingling to occur. Relatives such as mothers-in-law and their sons-in-law are not

5: excerpt from ADS Western's initial project plan (2011)

allowed to be in the same room at the same time or sit on the same chairs. Since such customs would not be easily changed by the project team, different slots were provided for group members to sign themselves up, allowing for (extended) family members to schedule their attendance such that they would not attend at the same time as their in-laws. Such flexible scheduling also allowed older farmers to participate more often since they had felt uncomfortable asking questions when attending with their younger counterparts who made fun of the questions they would ask. In addition, youth were reported to enjoy the separate scheduling since before, they feared sharing the classes with their elders.

Therefore, scheduling separate activities that accommodate cultural customs and the needs of particular group members during the early phases of such initiatives allows for more equitable participation and learning for everyone.

In addition, both organisations felt that it was important to reach both husbands and wives in the trainings for joint discussion, despite this being culturally unusual. Trainers at the ICT centres actively asked male leaders to bring their spouses, calling on their representative positions to model this behaviour. They also asked farmers to attend as couples. Similarly, after recognising that young men dominated attendance at early training sessions, trainers encouraged boys to bring their sisters and conversely, encouraged girls to bring their brothers. Such joint attendance and learning also contributed to the idea within the household that ICT learning opportunities should be the domain of both boys and girls.

- Training facilitation

Training is generally done in the native language spoken in the places where centres are located. This benefits women farmers in particular. Both ADS North Rift and ADS Western work with male and female volunteer trainers. ADS Western has started to train male and female members of farmer groups to become trainers themselves. What was more, when more youth attended the training, many began to work as volunteers (especially those with prior IT education). Interestingly, ADS Western observed that where young women taught, a higher percentage of young men and older women attended. In classes where young men taught, young women and older men attended and participated more.

The second lesson concerns digital record keeping. Of the ICT training offered at the centres, those on digital record keeping were highlighted as especially useful. This was the case because these skills allow individual farmers and group leaders to keep track of the capital they use in their production and the profit make from their individual and collective enterprises. However, from responses in focus groups, it appears that men came to the centres more frequently to update their farm records than women. Apart from better insight into production costs and profits, the availability of dependable records was reported to contribute to increased transparency and accountability of finances amongst husbands and wives. Leaders of producer groups could keep group records on a regular basis and track the profit of collective sales on computers on a daily basis, allowing them to have a better overview of collective revenue over time. **"Earlier on we had challenges with manual record keeping, you could find some of our records being destroyed for example mistakenly used to light the jikos (charcoal stoves) by our children. However, ever since ICT was introduced, you can save these records in the computers and you can easily retrieve these records. You can also update these records and then you can know how much profit you have made from these systematic records."** (Female leader, focus group).

The third lesson relates to the use of the internet and social networking sites. Both ADS North Rift and ADS Western actively encouraged youth to use such sites for agriculture or agribusiness related purposes. Social networking sites such as Facebook appeared to be an important initial attractor for youth to come to the ICT centres. This ICT use garnered interest in farming amongst a number of youth who subsequently used income generated elsewhere to lease land, buy inputs, and start farming[6]. The younger farmers were able to look quickly for relevant information as and when they needed it, as well as act on the tips received via the SMS services.

In response to this interest, ADS North Rift started a mentorship programme for young men and women in which they were provided more training and support to use social media tools

6: see IICD's "ICT4D Effects: Youth, ICTs and Agriculture" (2013) publication for more information on the role of ICTs in young farmers' empowerment

for agriculture-related purposes. During this 3-month mentorship period, the youth jointly formed a Facebook group[7] in which they could exchange farming content. Fewer female youth attended the mentorship programmes than male, a difference in participation that was also reflected in the dominance of activities within the Facebook group.

However, actually turning the information into a profitable farming enterprise has mainly applied to young men since traditionally, women do not inherit land from their parents and social norms prohibit women from buying land and prescribe girls to look for paid work off the farm. From the outset, young women had less social opportunity to apply new skills on farms, apply ICT to selected value chain crops, and accrue financial benefits in the same way as their male counterparts. Beyond the young women participating in the mentorship programme, female participants in the focus group discussions raised a concern that social networking sites were generally seen as being immoral and that if they were to use them in the ICT centres, they would be seen as being 'loose women'. When the centres were first established, older men and women farmers were worried that young people would be accessing pornographic content and that they would not feel comfortable visiting the centres. In response, the centres were set up in such a way that the screens could always be seen by centre staff and by other visitors which helped to maintain the focus on searching and using agriculture-related sites. During training sessions, the instructors focus on imparting sites that are useful whilst also raising awareness of the dangers inherent in visiting sites of a sexual nature or other malware-infected websites.

2b. Mobile Video-Based Trainings

There are three key lessons that can be drawn from mobile video based training and how it relates to gender – (a) in regards to accessibility, (b) in regards to the involvement of farmers in video production, and (c) in regards to the content of videos and the combination of general and gender specific topics. Through video shows and discussions about good agricultural practices and new agricultural technologies, and by attending sessions together, men and women are able to discuss how to apply the new information on their farms and how the roles and responsibilities could be distributed to ease everyone's burden, maximise collaboration, and equitably share profits. Women reported that the sessions with video-based instruction were some of the most appreciated aspects of the ICT-enabled interventions. Further, women reported that these sessions contributed to positive change in their farming and households, triggered changes in the distribution of roles and responsibilities amongst husbands and wives, and enabled more positive relationships within marriage.

Upon recognising that the use of ICT tools at the ICT centres did not reach both men and women farmers to the extent the project teams had expected, video trainings on good agricultural practices were organised at locations closer to farms and households (in church or community buildings). These sessions were open to all group members (both adults and youth) and were very popular with men and women of all ages. In addition, they were often attended by agricultural experts who could respond to questions and participate in discussions on issues raised in the videos. The challenge of scheduling to accommodate the cultural taboo of in-laws mingling together (see above, ICT training) was not an issue in such larger video screenings since in-laws were able to find space to sit away from each other.

Male and female youth who were still attending school were found to be especially interested in the video-based sessions and often encouraged their parents to attend subsequent ones. Parents approved of the community's youth attending the video sessions instead of being idle after school or during periods of waiting for exam results.

Most of the video content was sourced from agricultural research institutes or other specialised agencies on agriculture. The videos also showed men and women from other regions working together in farming which led to an appreciation amongst locals that traditional roles can be different from what they are accustomed to. Some of the screenings included specific videos discussing gender-related issues during or after the agricultural extension videos. This used the opportunity of large numbers of participants to raise awareness on issues relevant to gender relations in the community and expose them to alternatives.

The research also revealed that videos produced by farmers themselves led to increased gender-related benefits. Some women interviewees, who were instructed to film demonstration videos on their own plots, expressed their appreciation of learning how to use a camera to shoot short videos and photos which would later be screened.

7: the Chepkorio Digital Youth Farmers group

2c. Market Price Information Service

A major component of the programmes was to link farmers working in the selected value chains to the Kenyan market price information service M-Farm[8]. Mobile phone ownership is widespread in the areas where ADS Western and ADS North Rift operate. Both men and women often own a simple feature phone, and youth (mainly men) are increasingly investing in buying cheap smart phones.

One key learning in regards to this ICT service was its usefulness in combination with video-based instruction. The use of the M-Farm service, especially when combined with the video-supported lessons on good agricultural practices and marketing, was repeatedly mentioned as one of the solutions that created the most value for the farmer group members. Using the market price information service also allowed farmers to know the prices of their produce on key markets before harvesting and eliminated their need to travel long distances to the markets to find out the prices. This, of course, allowed farmers to have more time for on-farm work and to prepare for marketing their produce.

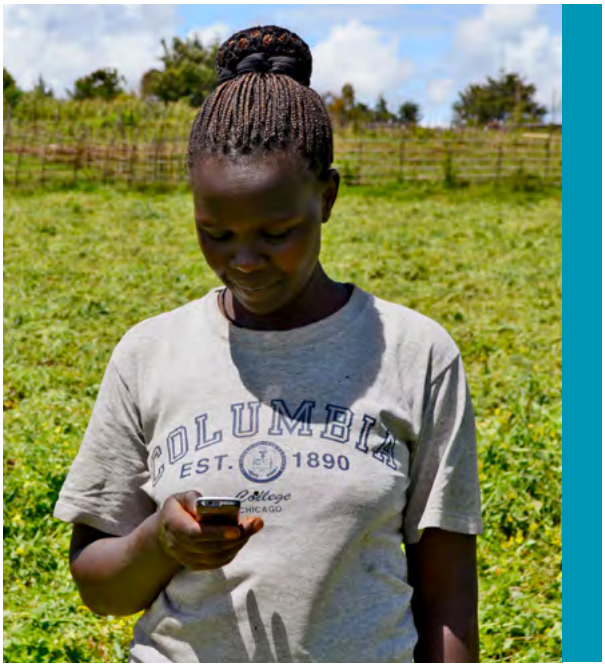
A second key lesson was that this service indeed addressed a critical constraint of women farmers: their limited access to information. **"I have used the phone to benefit from M-Farm. Before I used to plant onions and the brokers would come and exploit me with low prices. But now when they come I ask them where they come from and I simply send an SMS and confirm the price of the onions in the area where they come from. For example, if in Kisumu one kilogramme of onion is kshs 50 and the broker wants to give you kshs 20, I will tell him or her the right price and we will bargain based on that"** (female participant in focus group). Through being better informed and having access to various information channels, women were able to generate income, pay school fees, and improve food security in the household, as reflected in the statement by a female participant of a focus group discussion: **"I just used to eat sukuma wiki (Kale). I used to plant onion in small scale only for subsistence but now I plant them in large scale for sale (Agribusiness) through ICT. So when I get the money, I use some to pay school fees, some for preparing the farm and the rest I use to buy good food in the house. I also used to plant onions only but through the videos I watched in Cheptais I learnt about intercropping and now in the same farm I try to mix planting coffee, bananas, vegetables and beans"** (female participant, focus group).

8: Where dependable and proven services exist locally, Connect4Change established linkages and capacity building support to both the NGOs as well as their farmer groups to be able to understand the service's potential and the develop the skills required to make informed use of the available services. For more information on M-Farm, see http://www.mfarm.co.ke

2d. Mobile-Based Messaging

Next to the SMS-based market price information service introduced to farmers, both ADS North Rift and ADS Western integrated the use of a more generic messaging platform so that interactions between members of farmer groups on important content could be enabled.[9] The SMS messages are used for follow-up guidance on how to apply knowledge and skills acquired during video sessions and trainings at the ICT centres. Tips on reliable input providers intended for farmers to establish direct linkages with them and invitations and reminders for training events was critical content provided through the service. Focus group participants (both male and female) mentioned many benefits of the messages. For example, some discussed how the messages allowed them to become aware of the existence of good seeds which helped them engage their county government and pressure it to provide such seeds to their remote locations.

The messages also help them articulate their needs to supporting stakeholders from a more informed position. Both ADS North Rift and ADS Western's farmers clearly stated that receiving messages brought great value to them. Women farmers especially valued the ability to have messages with critical information sent directly to their phones as opposed to having to go to the ICT centres for it. Staff at both organisations also mentioned their ability to use the SMSs to continue encouraging women to come to the centres as the initial geographic and cultural inhibitors gradually began to change and more room for intermingling with in-laws and enhanced access for women became possible.



2e. Radio

Both ADS Western and ADS North Rift used radio as ICT tools for the transfer of knowledge. ADS North aired instructional radio programmes[10] between 18:00 and 19:00 hours when both women and men would be at home. This timeslot was chosen as it had the potential to create a shared experience of listening to the issues discussed on air and a joint foundation for further discussion of the issues in the groups.

ADS Western first used pre-recorded radio sessions with the voices of farmers at a group training. Also present at such training events was an official of the Ministry of Agriculture who responded to questions and guided discussions. The recordings were also replayed at the ICT centres.

However, when the video sessions were introduced, it appeared that they appealed much more to farmers of both sexes who quickly abandoned attending the radio sessions. Upon questioning, farmers expressed that with videos, they could easily see and relate to what they were taught as opposed to the abstract radio lessons. Staff also observed that more men attended the radio sessions whilst there was equal attendance of men and women at the video sessions. Therefore, ADS Western changed its approach and did not continue with the radio sessions. They will, however, look for mechanisms to capture and use information on what farmers listen to at home and will include information on what radio stations to listen to during the well-attended video sessions. ADS Western also wants to investigate further to see whether women listen to the radio at home and which programme timetables are favourable to both men and women.

9: The two organisations implemented different systems, with ADS Western working with the Frontline SMS messaging platform and ADS North Rift making use of TTC Mobile's platform offered through the Connect4Change consortium. The interviews did not yield any information on differences between the two platforms in terms of value offered or relevance for particular user groups.

10: A station known as Sayare radio was used as it reaches the whole of North Rift and was the most affordable option for the project.

3. GOOD PRACTICES TO ENHANCE EQUITABLE PARTICIPATION IN AND BENEFITS FROM ICT-ENABLED SOLUTIONS

The lessons ADS North Rift and ADS Western learnt through tweaking their approaches to be more gender responsive inform this case study. Two of these overarching lessons are described below with evidence underlying such good practices.

Good Practice: purposefully involving men and women in ICT-related training opportunities and information services

Based on previous experience, ADS North Rift and ADS Western knew that from the start of the C4C programme, that they had to take active measures to enable both men and women to access and benefit from ICT tools and services.

Both organisations were already used to sensitising farmers on gender equality and women's participation and leadership in farmer groups, activities which they continued in the Connect4Change programme. Reflecting on what happened during implementation of the ICT-enabled programmes, they took corrective actions to improve the level of participation (especially amongst women) and increase the benefits for women. The lessons learnt described above showed how both organisations tried to address participation issues mostly rooted in the socio-cultural context. Some of these included time availability due to culturally ascribed responsibilities, norms of in-laws not being allowed to be in the same space at the same time, attitudes towards technology, interests in certain content based on the tasks farmers perform, and the like. This purposeful involvement of both men and women farmers, whilst also addressing participation issues, proved to be successful as evidenced by the following examples provided by focus group participants and by ADS North Rift and ADS Western staff members.

In focus group discussions, participants of both genders explained how they applied the knowledge, for instance, about text messaging, about improved agricultural practices (videos), and record keeping. A young woman said: **"We have been linked to experts who have various pesticides. We just call them through the phone and explain to him the signs the crop is having, they advise us on the right pesticide to use. We also listen to them on the radio when they are teaching." A Female leader: "Since I am now knowledgeable in recordkeeping, I keep track of the returns and save. This is contrary to the past when I could not know where the money was."**

Farmers of both genders shared that their family income increased due to profit made from the sale of farm produce and credit the use of ICT (such as video and mobile-based messages) as a key to the success. Further, farmers shared that they used the income to purchase assets (some women bought a cow for milk production) and to buy better quality food for their family members. In some cases, farmers were able to hire labourers with their increased income which often reduced the physical burden women face on and off the farm. With the increased income, some of the farmers (both men and women) were even able to start income-generating activities in parallel to their farms. Many women in both areas formed table-banking groups (merry-go-rounds) as a more secure way of saving.

Increased income, which translated into improved family welfare, also positively influenced gender relations themselves. According to both women and men participating in the focus groups, women now have more control and self-determination over their activities and their time, and are also more involved in decision making over the use of income from produce. **"For instance, a willing buyer may come to buy the tomatoes from the farm and I am not around. I give my wife authority to sell but in the past the wife had no authority to sell. Through the ICT we have enabled them to do that because we can even communicate through the phone. We involve our wives in decision making now – both of us determine how the money is going to be used"** (male participant, focus group). This appears to apply more to women interviewed in the Western region than in the more traditional North Rift region.

In both the areas where ADS Western and ADS North Rift operate, women stated that now their husbands allow them to go to meetings and attend seminars, trainings, and field days. This, they say, greatly increases their exposure and expands their network. **"Before the ICT project, our husbands never allowed us to go for meetings. When we left the house, it could bring problems**

especially when we came back late. But when he saw that I was practically applying what we were being taught he became very happy and allowed me to go to the meetings anytime. There are occasions when he will even remind me of meetings to attend" (female respondent, focus group). Various focus group participants shared that quarrels and even domestic violence had been reduced. **"You know when there is no peace, it's actually poverty. Poverty really contributes to domestic quarrels where the wife takes off or the husband disappears. If there is food, if there is a good place to sleep, if the children are doing well, then relationships improve. If you have livestock that are well fed, then there will be peace. My husband had left but now he has come back"** (female respondent, focus group).

Interactions between men and women in ICT-related activities have had some influence on the culturally determined relations between genders, especially between in-laws, as put by female group member: **"For example before, a father-in-law could not touch his daughter-in-law's phone or sit next to her. Through ICT and gender trainings and discussions we were taught that you can communicate with anybody and nowadays my father-in-law can use my phone to call or send text messages on farming or general issues. But when I cook tea in my house and call my father-in-law he cannot come since it is culturally unacceptable"** (female participant, focus group).

In summary, the use of ICT tools and services has contributed to increased income and profit which men and women farmers and their children have benefited from. Moreover, the access to and participation in ICT-enabled solutions for both male and female farmers has been instrumental in improving relationships within the family. Some improvements include: there being more peace at home, women getting more space, the work and views of women being respected more, men tending to share domestic tasks, men involving their wives more in decision making, women being more involved in the sale of produce, women using land that was provided to them by their husband or through leases, and men starting to take women's views seriously in meetings. One female participant in the focus group said: **"It has made the men and the women to walk together, before then he would go alone but because we are both doing farming, we are both members of the association and attend some ICT lessons together, it has brought us together."**

Good Practice: considering the right ICT tool with which to teach and discuss agricultural practices and marketing to involve farmers of both genders

The experience generated by ADS Western and ADS North Rift in using ICT to reinforce value chain development activities is especially useful since it did not focus single-mindedly on one particular tool or technology. Experimenting with and combining the use of various technologies whilst paying attention to their relevance or effectiveness to men and women both young and old, allows for a multidimensional appreciation of what works for particular groups and for different purposes. ADS North Rift staff emphasised the importance of engaging farmers in discussions when choosing the ICT tools and services to get an idea of what would work or not work for them. The examples of radio-based listening groups and video-based learning sessions are illustrative of the approach as well as the combination of listening to radio programmes at home and discussions in smaller group meetings, and providing market information, such as prices of produces in regional markets, through both radio programmes and the M-Farm SMS service. Taking a broad approach to capacity building in the use of ICTs enables participating female and male farmers to experience which combination of solutions and services suits them best and allows them to harness the opportunities provided by each.

Both ADS Western and ADS North Rift took gender differences into consideration when developing and implementing their ICT-enabled

solutions. This is a fundamental good practice for gender responsive ICT-for-Agriculture programming. The above section on lessons includes examples such as suitable timing of radio programmes to allow women to listen and discuss topics with their husbands, producing extension videos with women and men farmers that show their own activities and crops, and dealing with the positive and negative sides of internet during ICT training activities, answering to the concerns of both young men and women. When ADS North Rift added the video-based training sessions on agricultural practices to the portfolio of services offered at the ICT centres, there was a huge spike in attendance at the centres by both men and women as compared to attendance levels at sessions that solely focused on basic ICT skills training.

Additionally, both organisations combined information seeking and technology skills with information on gender issues in learning sessions, which enhanced the recognition of women's rights, increased self-confidence, and encouraged women to seek leadership positions. A good illustration is the screening of agriculture-related videos followed by specific videos discussing gender-related issues. A young woman in one of the focus group discussions recounted a video screening on female genital mutilation: **"Before the ICT came, we did not have an interest in watching television and movies, but now that we are involved in the ICT we saw the importance. Through the news and the cinemas we saw that there are effects, we witness how they are dying and the urge of sex also disappears from the woman because it is very painful. These days this act has completely disappeared. [...] We are seeing change through the ICT"**.

This practice of combing ICT-based instruction with content on gender not only lead to higher levels of involvement by women and provided new means of access to sources knowledge, but also contributed to changing the attitudes and behaviour of women in exercising their right to information. Women learnt that they could obtain information on agriculture, family matters, and other social issues: **"Personally at first I knew that it is only men who listen to radio but through the ICT project, I came to learn that radios are not only meant for men. Nowadays when they start talking about market prices in the radios my husband always calls me to come and listen."** (Female participant, focus group)

Focus group participants also gave examples of how their involvement contributed to greater self-confidence and won the esteem of their husbands. One example that illustrates this comes from a woman who participated in video making. Being able to use tools such as video cameras increased her confidence in her own abilities and garnered her husband's respect for her technical skill. **"For me, at some point we had no idea on how a camera is operated, only men operated them. We now operate the camera, we take pictures, and we take pictures from our farms like for the tomatoes and upload them on the computer. My husband is impressed with my prowess in handling the gadget (camera)."** (Female group leader, focus group)

In conclusion, choosing the right ICT (as stand-alone tools and services or in combination with each other) to attract and reach both women and men has contributed to more equal participation of both genders. It has also created opportunities specifically for women to access information and learn skills that were out of their reach before.

4. CONDITIONS THAT FACILITATE GOOD PRACTICES

Evidently, good practices are context specific. In this case study, two critical factors were found that positively influenced the results. One factor was internal to the implementing organisations, the other, external.

Critical factor: gender responsiveness in programming

Both ADS North Rift and ADS Western give high importance to promoting gender equality in their work. For them, gender equality is seen in terms of participation and the sharing of benefits, an ambition shared by the Connect4Change programme. In terms of age, both organisations encourage youth[11] to participate. ADS Western and ADS North Rift have several key tools to help ensure that projects respond to the needs, interests, and opportunities of both male and female farmers. Some of these tools include: gender sensitisation, participatory discussion on gender needs and gaps with farmers of both sexes, affirmative action on representation in group or organisational membership and leadership, and leadership training for women.

Their previous work in these areas paved the way for a smoother application of equal participation of men and women in the Connect4Change programme. Over the years, women formed groups related to agriculture and increasingly subscribed as members of farmer associations. The number of women in committees has also increased although cultural inhibitions still form bottlenecks in more conservative areas. **"With sincerity, from my observation in the Kalenjin community, the women don't really want to come out in the presence of the men. In women only groups, women can really talk and you see the women participate a lot and fight for leadership positions, but when they are with the men there is some kind of fear, I think it has to do with the culture of women submitting to men."** (ADS North Rift staff member). The statements made in the focus group discussions provide evidence that men have started to recognise the importance of including women in decision making within the communities: **"Actually we used to sideline women, we never used to recognise them, but after going through some sessions, we did discovered that women are important in the community. We started to now work with them; we discovered they were important, even in the farms, just from 2008. We now work together and are seeing the benefits. We share."** (Male farmer association leader, focus group)

The organisations included in this study are not the only actors promoting women's development and empowerment or creating gender awareness in the sampled geographic areas. An increase in the confidence, self-esteem, and participation of women in public forums can also be attributed to increases in access to education, specific government programmes, progressive church discussions, and radio stations that air women-focused programmes in local languages on issues related to improving family life, how to raise children, the duties of women and men in the family, and the need for supporting each other.

The gender responsiveness of both ADS' projects has, however, been instrumental in promoting equal participation and benefits in ICT-enabled solutions. The link is clearly illustrated by the statements of a number of focus group participants such as: **"The women have gained courage and boldness to take up leadership positions. I was in a group and I did not have any say. My work was to go to a group and keep quiet. But when I came for the ICT and I saw the way they were teaching, they gave me a heart to continue and become a leader and I was appointed as a leader in the association. We used to sit back and say that it is the work of men to be leaders. In our cultures it was said that a woman cannot stand where a man is. But when we were taught that everybody is equal and both men and women can be leaders, we developed the interest and were given the opportunity to lead in the association."** (Female leader, focus group).

Some effects of the organisations' efforts which may have accelerated due to the ICT-focused project, came to the forefront in the focus group discussions. An example of this is the changes in the division of labour and group action on gender-related issues. **"We can come from the farm together then I tell her she prepares the vegetables as I light the fire or go to the Posho mill. Also, we now milk the cow - We used to believe it is the work of the wife to milk. Here, if a man milks the cow people used to say that the wife is controlling him"**(Male participant, focus group).**"Because of this project, we women of Cheptais have formed a gender-based violence group. This group advocates for the rights of the child, women and men, since most women were abused, and any abused woman hardly gets involved with farming. After the formation of this group, domestic violence has reduced. We even educate on issues around rape, disadvantages of Female Genital Mutilation (FGM) and encourage other women to advocate for gender equality in their groups."** (Female respondent, focus group)

11: Youth in this context refers to boys and girls between the ages of 20-35 years.

Critical factor: well-functioning and gender sensitive farmer groups/associations

Both ADS North Rift and ADS Western promote the establishment of farmer organisations. Participants in focus groups shared that before the ADS Western ICT project, people used to fight a lot because men were idle and drinking alcohol. Respondents also shared that there was little to no socio-economic development in their communities. Since joining the programme, respondents report on positive changes and people in the farmer group are able to give advice to families in conflict and encourage them to join the groups and benefit from the lessons they have learnt. Through the discussions on gender equality initiated by ADS and complemented by access to other information sources (see above), the leaders of the group are very aware of the importance of ensuring equal participation and opportunities for farmers of both genders. Some male leaders see themselves as role models for other farmers. **"We encourage people to join the association as a family, both the husband and the wife. This is an approach we are now keen on executing after receiving advice from ADS Western. It was not previously in our by-laws. In the association's by-laws, we need a balanced gender; people get to know their rights and when they get to the grassroots, they encourage other women to join. Also as a leader, when I invite people to my home and my wife is not a member, what picture would that portray? So I included her in the group. I encourage other members to do the same. They have seen increase in numbers in the association as other groups are joining. We have taught them and they can now stand on their own through us. These groups are balanced in terms of gender and age"** (Male leader, focus group).

Such strong farmer-based organisations are important as vehicles for integrating ICT-related activities and services. They are also important for the role they play in enhancing the participation of women as members and leaders. Male and female leaders explained that they use both computers for saving information and keeping records. **"Group records are also saved in the computers. Once we record them in the minute book (hard copy), we normally transfer them into the computer. We all participate in typing these records in the computer and have been taught how to do so through excel."** (Female leader, focus group) The representatives of the farmer-based organisations frequently use SMS and mobile-based messaging services for scheduling and calling for group meetings and discussions and to pass information to another group or community.

Critical factor: ensuring gender responsive systems and structures at the organisational level

In order to design and implement gender responsive projects, organisations need gender aware staff, monitoring and evaluation systems that capture what is happening on the ground, cooperation amongst staff with different tasks, and learning mechanisms to be able to respond to gender equality gaps as they surface. This requires gender sensitive leadership in the organisation that makes the right decisions on strategies, approaches, and budgets. In both ADS organisations, an ICT expert was hired (a man in one, a woman in the other) who was open to the social considerations implied in introducing and adapting ICT tools and services. This sensitivity, in combination with the ICT experts being part of the actual implementation team, contributed to teams' ability to make the adjustments in project approaches as described above.

In regards to monitoring and evaluation, both organisations collect sex-disaggregated data. However, staff explained during interviews that the analysis of this data is not done in a way that is adequately structured or systematic. In addition, staff made it clear that better analysis should be done to gain insight into two areas: gender dynamics amongst communities and what the impact of their work is on women relative to men. This insight, they maintain, would help them to make corrective measures when and where necessary.

CASE STUDY 2

Using ICT to Enhance Equal Involvement of Men and Women in Maternal Healthcare

Health Child | Uganda

1 INTRODUCTION

This case study presents the work and experiences of a Ugandan community health organisation which introduced ICT-enabled solutions in the provision of maternal healthcare. The study begins with a description of context then goes on to discuss what organisation staff and stakeholders learnt from using a variety of ICT tools and services to support women and men's engagement with maternal and child health in Ugandan communities. These lessons learnt are presented along with good practices and the conditions required for such practices to be implemented effectively.

I.I The context

Health Child, a Ugandan NGO established in 2006, has implemented child health programmes which aims to increase the access of pregnant women to health services. These programmes ultimately aim to reduce maternal, neonatal, and child mortality.

The goals of the maternal and child health (MCH) programmes are to increase antenatal care attendance, enhance birth preparedness, increase deliveries in health facilities, increase the uptake of postnatal care services, and support greater and more informed family planning. By partnering with Connect4Change (C4C), Health Child integrated ICT solutions into key interventions and activities of this MCH programme.

Until recently, Health Child's key approach to implementing these programmes in the communities was through Family Support Groups. In realising that women's access to health-related decision-making is greatly affected by their economic status, these Family Support Groups evolved into Village Saving Loans Associations (VSLAs)[1] to increase women's access to and use of financial resources to meet their health-related needs. In this case, these needs were specifically focused on pregnancy and postpartum care. In addition, VSLAs act as a platform for the communities to hold dialogues and learn about the core focus areas of Health Child.

Health Child works closely with health workers and community representatives to implement its activities. This includes working with Village Health Teams (VHTs)[2], health centre staff, and Community Based Trainers (CBTs) who support and monitor the VSLA groups.

On the topic of location and focus group participants, this case study was carried out in the Jinja district. The good practices and conditions for success came from focus group discussions with 34 female and 24 male participants. This included the staff of the implementing organisation.

1: A VSLA is a self-reliant group of people who save together and take small loans from those savings. The activities of the group run in cycles of one year, after which the accumulated savings and the loan profits are distributed back to members. The VSLAs run using the pooled sources of members, there is no external support. Most of the VSLAs are women only, a few are nixed or men-only. Health Child requires that in the mixed ones the ratio of women to men is 4: 1 and women hold leadership for the key positions.

2: Village Health Teams serve as the primary, village-level health contact for all villages in Uganda, the equivalent of a low-level health centre. The members should be capable of relaying basic health information to their neighbours, as well as pointing villagers to the right locations for various levels of health care.

2. GOOD PRACTICES THAT PROMOTED EQUITABLE PARTICIPATION AND BENEFITS-TAKING FOR BOTH WOMEN AND MEN

The good practices that have emerged from Health Child's work partly concern specific ICT tools and services and partly programme approaches. Programme approaches included the use of different ICT tools utilised in combination. Both are presented below along with the gender-related changes that are attributed to the ICT tools and services.

2a. Mobile phone SMS texting and voice messaging

Health Child used SMS and voice messaging to provide information and education on maternal healthcare, including messages on antenatal and postnatal care, birth preparedness, family planning, and messages encouraging male involvement in health-related activities. Village Health Teams (VHTs)[3] played a critical role in Health Child's SMS and voice-message supported interventions because of their ability to reach communities and influence gender–related change. An example of this was VHTs receiving messages instructing them to inform female community members about their scheduled antenatal visits. This was especially important for female community members who did not have a mobile phone. For those women who had phones, VHT members received messages simply to remind them to attend their antenatal visits.

The way messages were delivered turned out to be important. VHTs were encouraged to deliver messages at times when both the husbands and wives were at home which gave couples the opportunity to have in-depth discussions about maternal and child health issues and ask questions they might have. VHTs would also use these moments to encourage husbands to support their wives actively during pregnancy and in preparing for birth. In instances where the husband owned a phone, they too were signed up to receive messages so that VHT visits and discussions could be reinforced.

During the course of implementation, Health Child introduced some changes regarding the use of SMS messaging:

a. Health Child found out that the *sex of the person in voice messages* mattered. The community did not find the original man's voice appealing which resulted in Health Child changing to a female voice. Moreover, the community recognised the original person behind the voice and further objected since he had become controversial due to his behaviour. At that point, Health Child ended his involvement. Both men and women said they preferred the female voice because they felt it was more inviting.

b. Health Child also found that the *kind of messages that were sent and to whom* mattered. In analysing the success rate of text message sent to women about antenatal care, birth preparedness, and postnatal care, Health Child noticed an interesting occurrence: the outcome was influenced by the kind of messages that were sent and the extent to which they involved men as active players. **"Men did not seem to appreciate the messages and sometimes asked why they were being sent to them and yet they concerned their wives. We realised that we had to get men on board because many of them own the phones, control resources and make decisions in the households."** As men are the key players in enabling women's access to maternal health, Health Child adjusted the content of its messages to target them more directly. Specific messages are now sent to each husband referring to his wife's situation. Messages include information such as which trimester his wife is in, the need to remind her to get antenatal care, and the need to accompany her to the health centre. The messages for the woman would be directed to her and include content about her specific situation.

c. Health Child further found that *mobile phone ownership and use* influenced the uptake of messages. During the course of implementation, Health Child put more effort on ensuring that their records included *telephone contacts of those closest to the women or those who could pass on the messages to them*. To inform their strategies, Health Child conducted a survey on 'how text messaging supports mobilisation for family planning uptake and adherence'. The study showed that although 75% of the women who had

3: Health Child worked through VHTs to implement some of its interventions in the communities particularly the home based care programmes, facilitation of community dialogues, and awareness creation and knowledge sharing on maternal health issues. VHTs are respected community members who support local government health initiatives at community level. With the support of local community leaders Health Child identified both male and female VHTs to support their work in the communities.

received the SMS messages turned up at health facilities for family planning services, only 40.8% owned a mobile phone and received the messages directly. Upon further examination, it was found that the women who did not own a phone had received the messages from their husbands or from VHTs. Reflecting on this finding, Health Child noted the importance of understanding and working with the existing information networks around the women. To understand better the actual issues around the uptake of messages communicated via mobile phones, Health Child carries out specific surveys on on-going interventions to assess the effectiveness of a particular tool and to be able to respond appropriately and immediately to whatever emerges. Such surveys are conducted either through an interactive SMS-messaging platform or through a call centre where staff conduct exit surveys through mobile phone based conversations[4]. Additionally, Health Child holds focus group discussions and feedback meetings amongst cohorts of women and men.

d. Informed by feedback from the VHTs[5] and joint discussions on how to respond to challenges well, Health Child included specific ICT tools to better involve men. This included appropriate SMS messages and the use of other ICT tools (like community radios, videos, and board games - see below). For instance, VHTs (particularly women) had been the key recipients of SMS messages announcing family planning outreach activities that were organised by Health Child. They in turn sent the messages to men and women who owned a phone, followed by visits to the women to encourage and mobilise them to attend the activities. In one area however, a group of VSLA members recounted that the VHT, which had been informing and mobilising women to attend family planning meetings, began to experience hostility from husbands. This was likely due to the fact that women were targeted specifically whereas their husbands were not directly informed, a choice that women advocated as they did not think their husbands would support them. The husbands did not receive the VHT's activities well partly because it was done without their consent but also because they were apprehensive about the idea of family planning generally. After Health Child analysed the causes of men's reactions further, it discovered that in general, men were ignorant about family planning and actually wanted to be a part of the decision making process and help choose which planning method to use. In response to these findings, Health Child initiated a comprehensive training programme for men on family planning and on the use of the ICT tools mentioned above.

The adjusted practices on targeting the right people with messages tailored to their role and interest can be called good practices concerning mobile phone-based messaging. This is evidenced by the following findings:

- Both men and women expressed high appreciation for the SMS messages because of their frequency and feeling of 'personalisation'. People's biggest challenge in receiving messages was a lack of electricity to charge their phones. This seemed to be a bigger problem for women because men often leave their homes in the morning to charge their phones at trading centres. Women on the other hand, cannot leave home and have to depend on their children who go to school. This results in women missing messages or getting them late. The second major challenge has been regarding illiteracy. However, to overcome this, women often ask their friends or husbands to read the messages for them. Alternatively, they were happy with voice messaging because it allowed them to understand messages accurately.
- The VHTs said that being 'carriers' of the SMS messages about antenatal care made their work easy especially because the messages were specific for each woman and both women and men felt special receiving a message from Health Child. According to the VHTs interviewed, **"the community members, especially the husbands accepted us, received us with respect, and were comfortable to ask questions or seek any other support they needed."** The VHTs delivering the messages enabled discussions that would otherwise probably not take place. This is because they provided a safe environment for conversation between spouses. Men were even challenged by their fellow men to discuss issues related

4: Both means of conducting surveys were administered by Connect4Change (C4C)'s technology partner TTC Mobile
5: Health Child had encouraged VHTs to note the responses of both men and women as they did their work, and as community members who understand the context very well they were able to provide feedback to Health Child.

to maternal health which broke 'gender taboos' in a positive way considering that these are traditionally seen as a female domain.

- Male involvement in supporting expectant mothers increased. Examples of this include men accompanying their wives to health centres for antenatal care and delivery, taking responsibility to provide financially for their wives in regard to preparing for birth, and participating in decisions such as where to give birth and ensuring antenatal care attendance. This can be attributed to sending personalised and relevant SMS and voice messages to men. Some men even began taking their children for immunisation to support their wives who had other children to take care of at home.
- Men's knowledge about maternal health increased, as did their appreciation of family planning. These increases were attributed to intensified sensitisation about family planning through the use of text messages and other ICT tools, which took place after Health Child discovered that the knowledge levels of men were low and their attitudes negative.
- Amongst women, results show that they are more informed about their health, are able to prepare for childbirth, are able to attend antenatal clinics, and are more empowered to make health-related decisions at home because of the messages and the support from VHTs. Female respondents noted that several things were especially important: 1) the better preparation for birth through being able to finance the mama kit[6] and 2) the regular attendance of the antenatal clinics.

Because of the success of the messaging programme, Health Child also used these tools to enhance participation in VSLAs. In practice, this was done by encouraging attendance, saving money for mama kits, and participating in community dialogues. SMS text messages were sent to VSLA members reminding them about key principles of the VSLA including a reminder of the next meeting day. Through the VSLAs, both women and men committed a percentage of their weekly savings to health care which enabled them to meet their needs and those of their families.

Moreover, Health Child has begun the process of developing a new mHealth solution – the Star Life Card – which is a digital smart card that allows people to save money for health purposes on the card and use it to access health services at participating private clinics and hospitals. This will enable members to access needed health services faster since they will not need to wait for weekly group meetings during which cash withdrawals take place.

6: A mama kit contains plastic sheeting, razor blades, cotton wool (gauze pad), soap, gloves, cord ties, and a child health card. It includes an instruction sheet in both English and Luganda. All of the supplies are sealed so that they remain sterile until needed.

2b. Video-based instruction and basic computer training

At the start of the ICT integration programme, Health Child provided ICT training to VHTs (and health workers - see below) in order to build their capacity to support their communities on issues of maternal and child health. The training used a lot of practical video clips, provided VHTs with basic computer skills and taught them how to use the internet to access maternal health related information. Male VHTs showed more interest in the computer training than the female VHTs, although the interest of some females increased over time and they kept on using the skills acquired. Reasons for women's lower attendance included their heavy workload, low literacy levels and their unfamiliarity 'machines'.

The trainings were housed at Health Child community resource centres with computers and internet provided by Health Child which the VHTs could access easily. However, Health Child was required to move the centres from community locations to their offices which resulted in VHTs and health workers finding it difficult to access computers and search for information. That said, one female VHT in Soweto village shared that she extended her skills to access websites on her phone and occasionally uses it for reference.

The combination of computer skills training and video-based instruction for both male and female VHTs can be considered a good practice as evidenced by the following findings.

- The VHTs who attended the trainings said the experience had enabled them to increase their knowledge and understanding of maternal health: **"what we learnt from the computer stayed with us because it was pictorial, pictures imprint themselves on the mind and do not go away easily. I could recall them whenever I was training the community members."**
- The computer and internet training also enabled the VHTs to gain confidence to respond to questions asked by community members; **"when the community asked difficult questions, we would write them down and search for them on the internet in the next training."**
- The mixed training of the male and female VHTs contributed to respect and cooperation between the two genders. The men felt their female counterparts were at the same level with them. The training also demystified conversations about sexual and reproductive health leading to male VHTs being able to teach and address 'sensitive issues' and increase male involvement in areas traditionally known to be the exclusive domain of women.

The training has not only built the capacity of VHTs but has also had a broader effect: the VHTs' work in communities has earned them respect and built the confidence of the female VHTs. Their emerging leadership was evident during the study. The female VHTs (as well as VSLA leaders) reported that they were now bolder and could speak in public with confidence. Two female respondents said that they were now able to speak confidently on radio talk shows whilst another said she frequently asks pastors for the opportunity to give talks in churches. Another female VHT provides support to a health centre's maternity ward in her area as well as providing assistance to an HIV focused NGO (TASO) in its work on Prevention of Mother-to-Child Transmission. These personal and professional advances are examples of increased aspiration of VHT members to serve community health goals as well as their increased ability to act on their aspirations.

2c. Interactive community events – radio and video

Health Child used community radio and video shows to sensitise and educate large numbers of people with key messages on maternal and child health, sanitation, and hygiene. The people participating in the focus group discussions highlighted the positive role of community radio because of the excitement it created, its use of local languages, and its being interactive and reaching everyone at the same time. These ICT tools also seemed to get more people interested in Health Child's activities more broadly.

When Health Child gained new insight on the critical role men play in enabling or limiting women's access to maternal and child health care, they further adapted both tools to maximise their usefulness:

a. In the rural areas of Uganda, markets are popular places where men often converge. With this in mind, the project organised *community radio events on market days* as organisers could be sure that a good number of male listeners would be there. At these events, which are moderated by VHTs or health workers, loud speakers are used to sensitise people on health-related issues. People calling in with questions or issues were usually men whereas women (typically young) mostly came in person or wrote their questions down on paper for privacy reasons. Such community radio events using loud speakers provided opportunities for dialogue and sensitisation on issues that men and women struggle to discuss together such as family planning.
b. They developed *quiz SMS texts* which were sent to those who attended the events to facilitate further participation and information sharing within the community. These SMS quizzes were specifically targeted at couples and the couples that won the contests received prizes. This seemed to attract men to participate and supported couples to engage in discussions about the issues as they attempted to respond to the questions.
c. They developed *special radio talk shows targeted at men* and conducted by health personnel, Health Child staff, and VHTs. This was done because men are most likely to own radios or to listen whilst in the company of other men in bars.
d. They began to *screen videos in video halls* where men were likely to be found for entertainment purposes. Health Child staff would request the local video hall owner for a few minutes before a movie or game to show the video and facilitate a brief discussion on the subject addressed in the video.

2d. Other non-technological ICT tools

In addition, Health Child developed various non-ICT tools to attract and inform community members, especially men. Examples of this were board games and playing cards that were designed with messages about family planning and health and especially designed for men to use at their regular meeting places. The games were designed in such a way that they generated discussions on the issues. Some, for example, had questions that players would have to answer which would spark off a discussion or conversation. Health Child also put up 'inspirational corners' at strategic points in health centres such as close to antenatal care rooms and immunisation rooms. These showed the best and worst practices of real-life community cases and were illustrated by testimonies and a picture of the actual person and his or her experience.

Two types of good practices have to do with programme approaches in which a combination of the ICT tools mentioned above are used: tailoring ICT solutions to address the needs of men as key actors in access to maternal health and working in partnership with health institutions and designing relevant ICT tools for them.

Good Practice: Tailoring ICT-based solutions to address the needs of key actors (particularly men) in access to maternal health

When Health Child initiated its maternal and child health programme, it mainly targeted women and so did its ICT solutions. SMS texts were sent to expecting mothers to remind them about preparing for childbirth, attending antenatal clinics, and taking on family planning after giving birth. The messages were sent directly to the women who had phones and in the case of those who did not have phones, were sent to VHTs and the respective contacts the women had given when they joined the programme. Through monitoring, feedback, and review processes, Health Child noted that the outcome in terms of numbers, level of preparedness, quality of care, and sustainability were not only dependent on the women. It was noted that their husbands had a key role to play because they were still the key decision makers at the household level and in most cases, owned the phones. One of the staff reported **"we saw that when you visit the community, it is men who come out first so they have a lot of influence. We discovered that men still dominate ICTs so we had to work through them, they still dominate decision making so it is important that they are involved right from the start. We saw the need to develop approaches that reduce resistance from the men, we needed to win them over first. Even if the women were our target, we needed to involve the men. We needed to develop an ICT package for men that addresses their needs and obligations including finding them in the places where they are - in trading centres, on market days, that is places where there is money"**. Therefore, men were seen as critical players in women's access to maternal and child healthcare, including the provision of money to meet their wives' needs for birth preparedness or decision making around family planning uptake and methods. Health Child made various adjustments in the ICT tools and/or the way they were using them to attract and involve men. Having analysed the needs of men and their preferences for certain tools/methods (for example Health Child found that men were not enthusiastic about attending community dialogues), they made adjustments. Most are mentioned under the ICT tools and services above:

a. *Personalising SMS messages* for husbands to support their wives to access good maternal healthcare.
b. *Looking for places where men are likely to be found*: market days to hold community radio events, video halls to show videos with a short discussion thereafter, radio shows broadcast in bars, and the like.

We call this tailoring of ICT-based solutions a good practice in view of the experiences and views brought forward in the study which hinted at significant gender changes in the communities related to health. These include:

- The willingness and cooperation of men to support their wives because the personalised messages made them feel respected, challenged, and motivated to take action.

- Significant changes in male attitude about maternal health and in regard to supporting their wives as described above. The fact that a male VHT dealt with so-called women's issues or issues that were considered taboo had a positive impact on the willingness of other men to engage in these issues as well.
- Reduction of domestic violence resulting from conflict around family planning issues. This was mentioned by both male and female members of VLSAs in one specific area The involvement of both men and women in family planning discussions has resulted in better relationships between men and women and 'lightened' the burden for women particularly around issues of child spacing.

Good Practice: Building the capacities of health-related partner institution staff and designing relevant ICT tools for them

In implementing its programme of increasing access to maternal health and uptake of family planning, the community health centres in particular were critical stakeholders. Through surveys and feedback from the VHTs and community members, Health Child noted that health centre staff attitudes, skills, and levels of confidence had a negative influence on the possibilities of expectant mothers to access good services. Therefore, Health Child included capacity building for the health workers (midwives and nurses of both genders) using videos, having them participate in the community radio events and radio talk shows, and in running and managing family planning outreach. Some of the centres also had inspirational corners where Health Child put pictorial and narrative experiences of community members on issues of maternal health. The health centre workers were also amongst the recipients of SMS texts especially the interactive, promotional and quiz messages on issues of maternal healthcare. Based on the views of the few health workers participating in the study, the use of the ICT tools had a more lasting effect in general and also on the relations between midwives and the husbands of expecting/new mothers.

- The messages kept issues of maternal health in their minds **"They challenged us and got us discussing issues related to maternal health care, they helped us recall some things that we had forgotten"**. Others, who had been involved in a training on caring for the new born and the new mother, said that **"the video is still imprinted on my mind, it helps me to visualise the danger signs, as a male health worker who did not do midwifery. I saw great benefit in this because for the community, whoever is working at the health facility is seen as a doctor who can help, whether male or female so they call you. This has helped me and I am sure the male nurses to have more confidence to help the women"**.
- The work of health workers has been made easier and more efficient. Due to the text messages with information from Health Child and from the government (alerts on epidemics and other issues), they do not physically have to inform the communities. The health workers also send the data they collect weekly to the district health offices using text messaging.
- Midwives said they felt more confident now, have been able to reduce neonatal mortality, and are more responsive to the needs of pregnant women and to those of their male partners. They 'respect' men who accompany their wives for antenatal clinics and attend to them first knowing that they have done something 'special'. This has motivated more men to accompany their wives to the clinics and challenged other men to do the same.

3. CONDITIONS AND PROCESSES THAT FACILITATE THE GOOD PRACTICE APPROACHES

The ICT-related practice approaches that were described above have enhanced equal participation of women and men in maternal healthcare programmes and have increased equitable benefits for women and men at the household level. The case study also shed light on a few factors that are critical to the success of these ICT-related good practices, especially those that are related to conducive organisational practices and processes. The ICT programme appears to have triggered organisational change and the urge to take more action to increase the organisation's and programme's gender responsiveness.

Critical Factor: Existing gender sensitive programme approaches

Health Child is strongly aware of the importance of learning from its experiences and using the lessons to influence new action. With that in mind, it uses an action research based methodology to implement its programmes. Programme interventions are carried out and continuously reviewed through various activities and processes which include, but are not limited to, 1) reviews with community members after an activity is implemented by field staff or VHTs, 2) joint analysis of field reports by staff, and 3) analysis of quantitative data collected on that particular activity. The data collection tools used during these review processes are sex disaggregated so they enable Health Child to note the gender-related trends or emerging issues regarding that particular issue. All the information is shared, analysed, and interpreted during organisational meetings. In practice, this takes place in several ways, one example being weekly organisation-wide Skype meetings to enable inclusion of staff of all the offices in the different locations. The adjustment of ICT approaches described above was the result of Health Child's gender sensitive action research based methodology.

Critical Factor: Openness to gender dynamics during programme implementation

Through Health Child's monitoring and learning systems, certain gender-related challenges emerged. Amongst these in particular, was that the ICT tools were not addressing the needs and interests of other critical stakeholders, particularly those of men. Health Child saw the importance of knowing and using relevant gender statistics, assessing what ICT tools were accessible, who the most common users and owners of the ICT tools were, and how willing they were to participate in Health Child programmes. As one staff member put it; **"We realised that in working with ICT, it was critical to get feedback on a routine basis to know the existing or changing needs of the men and women."** For obtaining feedback on a routine basis and for that information to be useful, Health Child had to make some key organisational changes:

- First, it had to strengthen its *mechanisms of collecting and analysing the information* in an organisation-wide context. Health Child did this by ensuring that the VHTs collected the relevant information and shared it through reports and monthly meetings with the programme staff responsible. Staff who carried out field activities also compiled reports and shared them. Weekly staff meetings were designed to include participatory reflection on key emerging issues brought forward by the teams responsible for an activity, ensuring that all staff, including the ICT officer who presides over the quantitative reports, participated in addressing issues and concerns.
- Second, *the routine monitoring and evaluation processes* on activities needed room to

make adjustments at each stage in terms of strengthening the gender aspect in collecting and analysing information. For example, the VHTs would ask what men thought about some of the trainings or issues in order to bring out their questions and concerns. This enabled Health Child to respond with new ICT-supported actions that were gender responsive in that particular context.

- Third, there is a need to further *build staff capacity* in understanding gender dynamics and using gender analysis skills. As one of the staff members highlighted: **"Because we work on issues of maternal health and involved men in the process, there was an assumption that we are all well versed with gender issues, I think we can benefit from training on gender sensitive programming. In the beginning when it was mostly about capturing numbers it was not critical, but as time went by and there was a need for deeper analysis especially in regard to getting men on board, we saw that we needed more gender competence."** The need for these skills became even more apparent as Health Child had taken on new initiatives like the VSLAs in which maternal health issues are integrated. The SMS texts and voice messages related to the VSLAs are gender neutral and mainly focus on motivating participation in the VSLA. VSLAs are beginning to surface existing and emerging changes in current gender dynamics as a result of women beginning to own resources. One of the women groups that was visited expressed bitterness towards men and shared how even though they have money now, they cannot tell their husbands about it or even use it for household needs which the man is supposed to provide. This is indicative of potential conflict around resources which Health Child has realised and which could eventually have an effect on women's health too. The upcoming innovation of the Star-Life Card will likely influence both men and women and issues of access and control may come in affecting women's access to and use of health services. At the moment, Health Child does not have a particular tool to enable dialogue around gender issues within the VSLA. It will require more knowledge, skills and competence on gender programming for staff to enable them to develop and integrate gender responsive ICT solutions in these innovations at the appropriate time. In this respect, according to Health Child, the ICT programme contributed to capacity building through learning forums organised by the wider Connect4Change programme in which organisations doing similar work to Health Child came together every 6 months for ICT-related information-sharing events to jointly draw lessons from what they were doing.
- Fourth, Health Child realised that it needed to *develop a more holistic gender approach* in its interventions as opposed to addressing the particular needs of only one group: **"We saw that it was important to be on top of gender dynamics in the field and address them as they arose, and for any ICT solution to be successful, it must take into account both women and men"**. This need became visible when Health Child's analysis of field data showed that even when women had relevant information about accessing maternal health, many of them did not have resources to do so and neither could they negotiate in a situation of lack or total dependency on men: **"We saw that gender empowerment especially in poor communities should be seen in partnership with economic empowerment"**. This eventually led to forming the VSLAs particularly for women, although Health Child insists that men too are members.

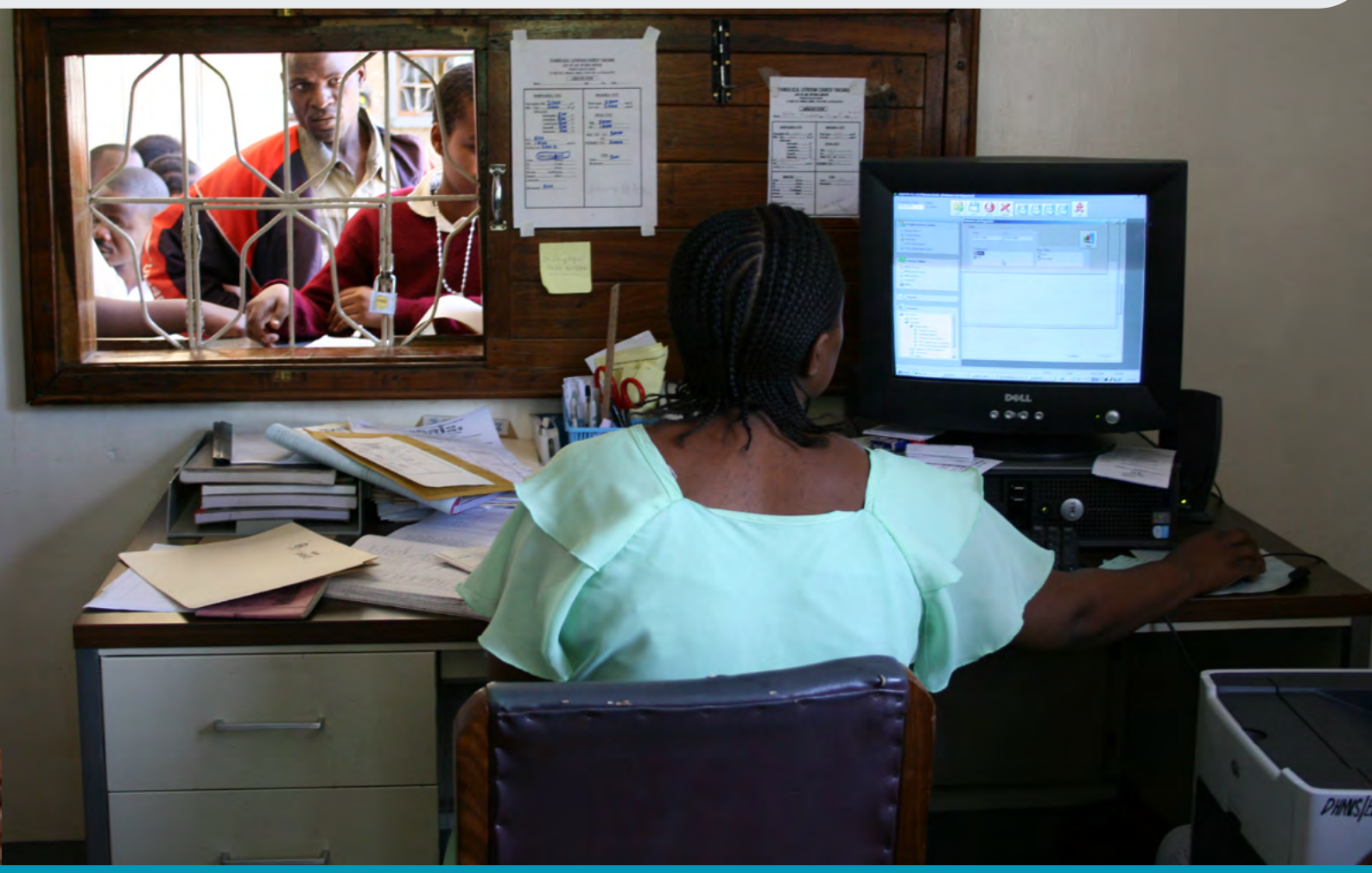
Critical Factor: Strong leadership in increasing gender responsiveness at the organisational level

The role of organisational leadership in enabling the gender focused data collection and analysis cannot be underestimated. Health Child noted that they have had to learn to make time particularly during the weekly meetings (which sometimes stretch through the morning) even when they have very busy schedules. Such a strong organisational leadership role is also imperative when it comes to facilitating staff development and other human resources issues, budgeting, and the like.

Health Child felt the need to balance the gender composition of its staff better and took efforts to do so. Since then, the ratio female to male changed from 11:2 to 13:5. The staff believe that female dominance amongst employees has influenced the interventions: **"Everything had a very feminine face, the community would note and comment, our partners too had noted it. It was sometimes difficult for women to appreciate the views of men in the communities or convince them about male-related issues."** In the process of bringing in more male staff, they discovered that the men brought on board aspects and views previously missing in the organisation: **"we were able to see the different paradigms and perspectives of men and their views were very instrumental in formulating SMS texts targeting men"**.

Some of the programme staff expressed the need for Health Child to institutionalise gender approaches in its work further by developing a gender policy for the organisation. Such a policy should include how it works with the community and staff members feel strongly that it needs to be developed using participatory methodologies that include the communities they work with. Having such a policy in place will enable a common understanding of the organisation's approach to gender issues and provide guidelines for developing interventions, including ICT-based ones. It would also enable budgeting for the ICT solutions in the planning stages of new programmes as Health Child was not able to sustain some of its ICT-supported programmes due to the end of Connect4Change project funding.

CASE STUDY 3



Enhancing Equal Opportunities and Benefits for Women and Men in Implementing Hospital Management Information Systems

AfyaC4C | Tanzania

I INTRODUCTION

This case study presents the work of a Tanzanian NGO specialised in the implementation of electronic Hospital Management Information Systems (eHMIS) in Tanzania's Lake Zone region.

The study shares good practices derived from the lessons learnt after implementing eHMIS systems at three different hospitals. It also outlines the conditions that are required to implement the good practices effectively. The study ends with suggestions on how to further enhance equitable participation and benefits for women and men alike.

I.I The context

Afya Connect4Change Lake Zone (AfyaC4C) is a local Tanzanian NGO established in 2010. It provides ICT services to 20 health facilities situated along the Lake Zone in the northern part of the country. These facilities are run either independently by faith based organisations (FBOs), or in partnership with the government of Tanzania.

Thus far, the bulk of AfyaC4C's work has been in software installation, user training, monitoring progress, and system maintenance and upgrades. These processes have been guided by a change management plan that was developed based on AfyaC4C's and IICD's experience in implementing eHMIS systems. Individual change management plans are tailored to the needs of a particular health facility together with the facility's management. Capacity building interventions in the health facility are provided for the staff in each of the outpatient and inpatient departments, separating the different hierarchical levels to avoid sentiments of superiority and inferiority[1].

In 2006 in response to local needs, Tanzanian IT specialists with the support of IICD developed *AfyaPro* - an electronic Hospital Management Information System (eHMIS). This eHMIS is a software package that offers patient and health records management as well as hospital administration features and is based on the Tanzanian Ministry of Health guidelines. The different modules in the system enable staff to register patients, record examination results and diagnoses, bill patients, dispense drugs, monitor stock, manage laboratory requests, manage results and costs, generate reports at all levels (including administration), and manage projects. The system is fully interlinked from the moment the patient comes into hospital up to the time he or she is discharged - both for outpatients and inpatients. Successful use of this eHMIS results in offering more efficient and effective health care as well as increasing finances available to the facility through reducing fraud and increasing income. AfyaPro can be used by small, medium, and large hospitals.

The good practices and conditions for success found below were identified through interviews and focus group discussions held with 20 women and 23 men who directly used or managed the HMIS and who belong to different departments in three selected health facilities. One small health facility was located at the outskirts of Mwanza City and two were district hospitals in two different districts in the Mwanza region. Additionally, the practices and conditions build on the experiences of AfyaC4C staff, of which 4 women and 5 men participated as respondents in the study.

1: Not all facilities included in the study had both outpatient and inpatient departments, and modules installed at particular facilities reflect their organisational set-up.

2. GOOD PRACTICES THAT PROMOTED EQUITABLE PARTICIPATION AND BENEFITS OF BOTH WOMEN AND MEN

This case study identified three main good practices, all regarding AfyaC4C's working approach in the health facilities. They are presented below with the gender-related changes that can be attributed to the implementation and use of the eHMIS.

Good Practice: designing inclusive capacity building processes and creating a safe environment in which both women and men can participate

In order to implement the eHMIS successfully, training of key users amongst staff is the first requirement. AfyaC4C's main focus is to ensure that each member of the department is equipped with the necessary skills to enable them to use the system effectively regardless of their age, experience, or sex. Building on a needs assessment, AfyaC4C designs the content of the training to address the individual job function requirements as well as the needs of the specific department, taking account of the department's role within the overall context of the health facility. This approach was highlighted by case study respondents as ensuring that both women and men were included in the training from the start based on their individual job functions and responsibilities.

Participation in training does not automatically mean that trainees learn or become willing to use a system. AfyaC4C created a friendly learning environment by joining colleagues and co-workers of the same department in the same training session. This caused the participants to see each other as peers in learning to adopt and integrate the ICT solution, starting from the ground level and with a joint goal to improve. The AfyaC4C staff approached the training participants in a supportive and tailored way as they were very familiar with the inner workings of Tanzanian heath facilities and the roles and tasks of individual facility staff. AfyaC4C's Executive Director had trained his staff in basic facilitation skills to support their delivery of training sessions focusing on, for example, how to support people who had little previous engagement with ICT and basing training design and delivery on the belief that everyone is capable of learning regardless of their age, sex, or experience.[2]

Both male and female staff who were interviewed in the hospitals felt that the 'safe' environment and respectful support helped them to participate without inhibition, ask questions, and challenge and support each other. It also created a supportive environment for those who had never seen or touched a computer, of which many were women of all ages and older male staff. With this environment, even they were able to become more comfortable, gain courage, and learn. According to AfyaC4C employees, female staff (both young and old) participated more actively during the basic ICT and eHMIS training activities than men did. They also more commonly expressed their excitement and enthusiasm for learning IT-related skills. This was contrary to the initial expectations of the AfyaC4C team. The possible reasons given for this were:

I. Women felt relaxed and comfortable to express themselves and learn. As one middle-aged female staff member said **"I was learning with people I knew so I was not afraid to ask for their help whenever I got stuck"**.
II. The fact that some of the women were using a computer for the first time whilst men (mostly the younger ones) were more likely to have at least used one before.
III. Stereotypes around typical behaviours of women and men in the region where women are known to be more expressive than men.

Broadly speaking, when this all-inclusive approach to designing and conducting training was coupled with the creation of a safe learning environment, improvements were made in the equitable participation and benefits-taking for staff of both genders. The training approach not only resulted in staff being skilled in using the ICT tools related to their work, but also led to changes in organisational culture at the health facilities. More specifically, it contributed to enhancing shared values and cooperation amongst staff which in turn positively influenced gender relations on the

2: AfyaC4C's executive director has been implementing eHMIS systems in Tanzanian hospitals in collaboration with IICD since 2006, generating a wealth of insight into what to consider when introducing HMIS systems and supporting associated organisational change processes.

work floor. Such changes in organisational culture and staff relations are evidenced by the following points that came forward during the case study focus group discussions and interviews:

1. The training at the department level seems to have enhanced a sense of ownership from the staff of each department and a desire to play their part so that the entire system works well. Staff see problems that arise from using the system as departmental ones, not as problems of particular employees.
2. Building on this sense of common ownership, both female and male staff said that they support one another whenever they face challenges. Contrary to the manual system, the eHMIS requires staff to consult others when they are stuck or not sure how to record something. It has increased teamwork and mutual respect for each other as one male respondent said: **"whenever I struggle with something, I can approach my colleagues- even female ones for help because they may have an idea on how to solve the issue"**. Requesting help from the other gender shows a change in the attitude of men towards women, because traditionally, the respondents reported, men in this area are 'supposed to know everything' or 'not show that they do not know something'.
3. The overall effect of this inclusive approach to training on the eHMIS and other ICT skills and creating a safe space for participants to learn together is that the facility staff are more confident about their work. All staff members that were interviewed reported that the eHMIS system has made their work easier and more exciting.
4. In one health facility at least, decision-making in the regular departmental meetings is more consultative than it was before the eHMIS-related training activities took place.
5. The facility administrators, both male and female, shared that they are able to keep the facility operating efficiently by **"observing what is going on from the computers in their offices"**, and that the facility revenue has increased greatly. The changes are seen to have boosted the image of facilities as community members have, more than previously, expressed their trust in the hospitals. Staff from two of the three facilities reported that patients and community members openly express admiration for the female staff who work with computers. Such acknowledgement is rare and thus made them happy, particularly the older female staff members.

Good Practice: encouraging health facilities to institute on-going learning opportunities and sustainability mechanisms

A key component of the change management plans developed by the health facility and AfyaC4C was to have each facility introduce and implement internal mechanisms to enhance sustained use of IT without external support. The precise mechanisms selected differ to fit the particular context and resources of each health facility. Where these mechanisms were in place, they were also seen as an avenue to enable staff who displayed interest and the ability to get more exposure to IT and to develop more technology-related skills that are put to use within the facility. According to one hospital administrator, it was realised during the process that such exposure was benefitting women more and that women seemed to be taking more advantage of the opportunities provided.

The internal mechanisms for learning and embedding the use of ICT that worked well in the facilities studied were the following:

- Designation of an individual in each facility who supports the eHMIS system and works with the AfyaC4C team. Staff who were trained or had prior knowledge about the *AfyaPro* system took up the role – in the three facilities this IT support role was taken up by two male and one female staff member. The three IT staff highlighted that these roles were a big responsibility but that taking them on has strengthened their self-confidence and they feel valued in the facility.
- Inter-departmental peer learning and support: although the initial training included staff on a departmental basis, subsequent learning and support mechanisms were set-up on an interdepartmental basis bringing together all key users of the eHMIS system to exchange experiences and provide peer support. Facilities that already had internal meetings in place included the open eHMIS/IT experience sharing structurally on the agenda thereby ensuring that the experiences of both male and female staff were brought forward and included in the reflection.
- One facility made a provision for further IT skills development after the initial training by encouraging those who were interested in approaching the staff in charge of IT for further support.

Looking at its effects, we can call this institutionalisation of learning opportunities and support in the health facilities a good practice to enhance equal opportunities and benefits for men and women. These benefits go beyond developing new skills only and were reported to affect staff members' sense of personal worth positively. The effects that were highlighted included:

1. The female IT staff member (a nurse by profession) who was appointed in one of the facilities, visibly developed more interest than other staff and was able to receive more training about the IT systems beyond her department's needs. Currently, in addition to her role as a senior nurse, she provides support to her colleagues on managing the eHMIS. The role she now plays has been recognised by all her colleagues including the management who refer to her as "*our expert*".
2. The inter-departmental peer learning and support has offered both male and female staff the opportunity to practice further, learn from each other, and gain more knowledge and skills in using IT tools. Such mechanisms seem to have benefitted especially the women, particularly the older female staff because they previously had the least amount of exposure to IT. In contrast, several male staff, particularly the younger ones, did not feel a need to learn more and stated that **"work and private life should not be mixed, therefore all we are required to do with computers in the facility is use AfyaPro to facilitate the work"**. It is also possible that men could have taken advantage of the provision and benefitted but were not willing to share this openly. As mentioned earlier, culturally, men in this region do not want to show that they have had to learn something new.
3. The peer support further fostered better working relationships and respect for each other. Male staff said they could rely on female colleagues for support and vice versa. The IT staff in one of the facilities shared: **"sometimes when I am overwhelmed with work, I find it easier to call on some of my female colleagues for support because they provide it willingly and I know they are capable of managing the issues."**
4. The provision for continued learning seems to have given women in the facilities an

opportunity to gain more skills and exposure to IT, which they feel they otherwise would not have had. Some spoke excitedly of the benefits in their personal lives such as the ways they had diversified their knowledge, skills, and use of IT beyond AfyaPro. These benefits, they maintain, generated respect and admiration from other people and increased their confidence and self-esteem. One young woman shared; **"I did not learn computer, and I was not here when the staff were trained. When I came to this facility I was helped to learn AfyaPro, but I also noticed I could learn more from the IT staff and he helped me. Now am able to help my younger brother with his assignments and a doctor in my neighbourhood. This doctor used to ask for support from the IT staff but now he asks for me to help because I am nearer and capable. My friends envy me, but in a supportive way, they say I am lucky."** For some of the women, particularly the older ones, the AfyaPro training demystified the computer for them and inspired them to improve their skills in using one. One elderly nurse shared with confidence: **"I learned how to use computer at my old age and I am proud of it. I knew about computers and had a desire to learn, but I thought it was only for those who have studied in recent times and that it is very difficult to learn. Now I have the basics and I am very proud of myself, I have brought my family, my children and husband, to the hospital to see how I can do it."** The administrator of the facility in which this female staff engagement was particularly prominent also stated that he had observed an increase in the number of female nurses who enrolled for further studies after the AfyaPro related training. According to him, they seem to have a sense of self-belief and more confidence that they can comfortably use the computer in their studies, as now it has become a requirement in education at their level.

Good Practice: ensuring management buy-in, ownership, and accompaniment of the implementation strategy and process

Since the successful implementation of the eHMIS in the different health facilities hinged on a change management plan, the AfyaC4C team began by creating awareness within the facility's management team and provided opportunities for them to share their questions and needs. The plan's main components included preparing and designing the infrastructure according to the needs and resources of the institution, capacity building for all the key users, and regular update meetings between the management and AfyaC4C. These update meetings enabled joint monitoring of the process and change of implementation plans where needed. They also included feedback and joint reflection between the AfyaC4C team and management about the progress and performance of the different users and departments. This approach, which stressed advice giving and coaching, gave management a sense of ownership and enabled them to make decisions about how the facility uses and benefits from the system. Prior to this, management might not have felt qualified to take on such a role.

This building of ownership and promotion of management's active role in the implementation process is also a good practice that contributed to enhancing equal opportunities for both genders. The manner in which the management of each facility oversaw the implementation process and adhered to or adapted the change management plan influenced whether and how the staff (of both genders) was able to participate and benefit actively from the use of the ICT tools. Examples from the study include the links that were made to staff placement and opportunities for further exposure and skill building for both men and women. Only with management's close involvement in the implementation process were they able to note (together with AfyaC4C) how individual staff performed and which staff could benefit further or could be promoted to support the facility better in the use of the eHMIS. In one facility for example, a male staff member was promoted from keeping stock in the pharmacy to being in charge of IT. Another example was of a woman who was a laboratory attendant when she received the training and was then promoted to managing the IT system because of her exemplary performance. Eventually, with the support of the management team and AfyaC4C, she was trained as a 'trainer of trainers' to also support the implementation of eHMIS systems in other facilities. She went on to do a degree course and is now on the management team of the facility as the head of quality control.

Differences in the management style and IT-related vision of hospital leadership was seen to translate into the extent to which real opportunities existed for staff's further development in the use of ICT. The management team of one facility noted the need for staff to gain more exposure to the use of ICT and in addition to providing them with an opportunity for further IT exposure internally, they instituted

a loan scheme through which staff could buy and own personal laptops. Both men and women were reported to have bought personal laptops through the scheme. Owning the laptops again had an additional influence on the personal lives and confidence of the staff, as one young female nurse shared; **"I learnt AfyaPro after I had my computer certificate training though I had not practised much. AfyaPro inspired me to learn more - I realised I could do it, I bought my own laptop, and now I am able to use the internet to find information, exchange ideas with others, and even play music in my home where we have no electricity. My family is very proud of the fact that we have a computer in the home"**. One elderly nurse also highlighted; **"After exposure to the computer through AfyaPro, I decided to learn more and so I bought my own laptop. My children and husband respect me because I have learnt to use a computer at my advanced age. We use the laptop at home and I am able to help my children with the basics"**.

The AfyaC4C change management plans did not include considerations to address gender gaps or specific gender needs of women or men. However, during implementation, some management teams became aware of emerging inhibiting factors or positive triggers and acted on them. In one of the facilities for example, male participation and attendance in eHMIS training was poor. Some of the male staff complained about the length of the training sessions and the lack of allowance. After AfyaC4C had shared this challenge with the management during a feedback meeting, the management decided to '*re-envision*' the men about the need for the training in the context of the institution and took a strong stance by writing official letters urging them to attend the training. When asked what prompted them to do this, the facility administrator answered that **"sometimes men in this area respond best when there is an order from above, they respect that more than being encouraged and convinced to do something."**

3. CONDITIONS AND PROCESSES THAT FACILITATE THE GOOD PRACTICES

In relation to the good practices described above, the case study showed two factors to be critical for success. Both factors related to organisational aspects of the health facilities that were involved.

Critical factor: Committed leadership that inspires a shared vision and ownership of the ICT solutions

Leadership commitment to the entire process was a key driving factor in enabling equal opportunities for male and female staff to participate in and benefit from the integration of the eHMIS and other ICT related tools. In the hospital where equitable opportunities and benefits were especially prominent, the (male) leadership had held special sessions with all staff in which they sold the vision of how the ICT tools would benefit the facility and staff's professional and personal lives. It appears that if the leadership style with staff is more participatory, issues related to ICT are better addressed and more ideas for improvement are brought forward. An example of this would be weekly meetings in which the experiences and challenges of staff relating to the use of the eHMIS and ICT in general are openly discussed. The same leadership also reached out to the community and other key stakeholders through local radio talk shows when they were about to introduce the eHMIS. Female and male staff employed in that facility both shared that this public announcement challenged them to commit themselves to the process and hold one another accountable. It also inspired them to encourage and support each other particularly during the training sessions, although women attested to this more than men. The leadership in this facility continues to play a very active role in the on-going monitoring of staff progress as they use the eHMIS and works closely with the IT department on addressing arising issues. This close involvement also allows them to know who is doing well and who is encountering challenges.

One hospital's leadership highlighted that **"many of the female nurses' performance is impressive and we find ways of encouraging them even more"**.

On the contrary, in situations where the leadership role in managing the eHMIS did not stand out as strongly, it appeared to be difficult to inspire staff ownership and commitment. In one such facility it appears that staff members are simply fulfilling a task, as both men and women stated **"we only use the computers for AfyaPro, and that is it"**. Organisational development changes, such as increases in peer cooperation or staff development, are much less prominent. Where the leadership seemed to be focused only on what the eHMIS has done for the institution in terms of efficiency gains, there was an apparent lack of awareness on how individual staff of both genders could be participating in or benefitting from exposure to ICT in general.

Critical factor: a conducive internal working environment in the health facility

The effectiveness of implementing an eHMIS in a health facility, especially as a process that is gender-responsive, is greatly influenced by internal factors within the facility which need to be recognised and addressed. AfyaC4C noticed, for instance, the hindering influence of conflictual relationships that exist amongst the staff, including tension between higher and lower cadre staff or apathy and a lack of conviction amongst some staff about the work they do and the facility as a whole. In instances where the internal working environment was relatively healthy, the situation was seemingly the opposite allowing opportunities for noticing differences in needs amongst different genders. Having experienced such differences in organisational working environments, AfyaC4C states **"We now know that implementing an eHMIS is not a mathematical formula, it is not what you see on the surface. There are deeper issues in the facilities, especially around relationships that affect its success and one has to make time for them."**

4. RECOMMENDATIONS TO FURTHER ENHANCE EQUITABLE PARTICIPATION AND BENEFITS FOR WOMEN AND MEN

Based on new or confirmed insight derived from their participation in the case study, AfyaC4C formulated some lessons learnt related to the implementation, use, and management of eHMIS by the health facilities that they feel will further enhance equitable participation and benefits for women and men. These include:

- ***Ensuring gender awareness at both the implementing organisation and its partners:*** an implementing organisation needs to be aware of the probable existence of different gender needs from the start of a programme. This must be reflected in its strategies and implementation and monitoring plans so that mechanisms and means to bring to light, analyse, and address such different needs and opportunities can be established. Although AfyaC4C implemented its support activities to health facilities on the basis of an all-inclusive approach, not all AfyaC4C staff were equally aware of such gender-related differences themselves. Gender issues that arose in the process were either not noticed or took them by surprise. Some examples include the eagerness and willingness of women to do as they were told compared to men who more often resisted eHMIS-induced changes, elderly women learning quickly, and women generally taking up an interest in learning computer skills beyond what was required to use the AfyaPro eHMIS. AfyaC4C staff appreciated that their own lack of gender awareness could have affected their ability to provide maximum support for both men and women in the facilities. This self-reflection by AfyaC4C indicates that such organisations would do well to improve further their own competence in gender-responsive programming. Ensuring that all staff have this competence will enable the organisation to support its partner facilities, facilitate meaningful conversations to bring gender issues to light, and jointly identify actions to address them. It will also be able to support the partner facilities to develop appropriate monitoring and evaluation tools that capture comprehensive gender-related data for analysis.

- ***Carrying out a participatory gender-sensitive assessment*** before starting to implement the eHMIS, exploring gender inequalities in the light of key facility processes, and associated roles and responsibilities. Such an assessment should look beyond the obvious including the quality of existing professional relationships at the health facilities, participation in decision-making processes, and access to facility organisational development activities including who benefits from such access and involvement. Conducting such an assessment initiated by the implementing organisation would enable the facility to surface and address areas that could potentially influence the implementation of the eHMIS. It would further provide a conducive environment to raise awareness on, and enable response to, gender issues throughout the implementation and change management process.

- ***Institutionalising organisation-wide gender-responsive learning processes within the implementing organisation and its partner facilities:*** such processes will enable the organisation to bring to light and address key issues (including gender issues) in a systematic and continuous manner. Having its own effective gender-sensitive learning systems, will enable the organisation to have the capacity to support its partner facilities to develop and institutionalise their own. Although AfyaC4C holds staff meetings every two weeks to share experiences from the field and to plan for follow-up activities, they acknowledged that if these meetings had been designed to include learning with gender lenses, their responses to some of the experiences would likely have been different. The learning processes would have enabled organisation-wide and deeper analysis of issues leading to yet more inclusive and sustainable solutions. For instance, when they experienced challenges with the level of male participation in some facilities, participatory reflection and learning around the issue would have provided an opportunity to bring to light underlying causes for this behaviour and could have brought out more appropriate and less directive behaviour change focused actions to take.

- ***Inter-facility gender-focused learning interventions for the partner facilities*** that regularly bring together key users and IT staff from different facilities implementing eHMIS systems in joint reflection sessions, will provide opportunities for collective responses to emerging gender issues. The learning forums would also be able to offer a positive challenge and motivation to staff involved with similar work in different hospitals and health facilities. AfyaC4C was not able to hold such shared learning forums consistently but they believe that the few that were held had an impact in terms of more widely sharing knowledge acquired through implementation. Purposefully including gender issues on the agenda of such learning forums and feeding such joint reflection with data from the work floor would ensure that gender issues are brought to light and discussed as an on-going aspect of change management.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