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INFORMATION AND COMMUNICATION TECHNOLOGIES FOR AGRICULTURE AND RURAL DEVELOPMENT

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Foreword

The Food and Agriculture Organization of the United Nations (FAO) estimates that during 2012 to 2014 there were 805 million chronically undernourished people. Agriculture is facing unprecedented challenges such as climate change impacts, loss of biodiversity, reduction in the amount of arable land, drought, floods, insect and pest attacks. Coupled with the challenge of participating in emerging markets these debilitating factors put smallholder, resource-poor farmers at a huge disadvantage. Sustained political commitment at the highest level is a prerequisite for hunger eradication. It entails placing food security and nutrition at the top of the political agenda and creating an enabling environment for improving food security and nutrition.



The growth of information and communication technologies (ICTs) over the last decade has been phenomenal. The number of cellular phone connections surpassed the world's population in 2014; now the user has greater power to choose content and demand more services at higher speeds at costs much more affordable than in the past. In this context ICTs can be used to play a crucial role in trying to offset some of the challenges faced by agriculture. The role that ICTs can play as an instrument of change is transformative.

The task of feeding the ever-growing population is not going to be easy. Telecommunication networks, geographical information systems (GIS), remote sensing, precision farming and many other technologies or processes supported by ICTs hold great promise and form part of our arsenal in the fight against hunger, malnutrition and in the efforts to feed the world.

The case studies showcased in this publication use ICTs to address problems in agriculture and rural development. This work is an effort to promote sustainable and usable ICTs for agriculture.

I would also like to mention the FAO-International Telecommunication Union (ITU) e-Agriculture Strategy guide which is under development and will be released in 2015. This is an excellent guideline for countries implementing sustainable, efficient and effective e-agriculture services.

A handwritten signature in black ink, appearing to read 'Hiroyuki Konuma', with a long horizontal stroke extending to the left.

Hiroyuki Konuma
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Introduction

Family farming remains the predominant form of agriculture in Asia and the Pacific. There are more than 570 million farms in the world of which over 500 million are family-owned. They are responsible for at least 56 percent of agricultural production. These smallholder resource-poor farmers are confronted by many challenges – the negative impact of climate change, increased frequency of natural disasters, loss of biodiversity, crude oil price hikes, rapid expansion of bioenergy development, increasing food price volatility, inefficient supply chains and others. The information needs of farmers will only increase as they have to make more and more complex decisions on the use of their land, selection of the agricultural commodities they plant, choice of markets to sell their agricultural products and other necessary decisions that impact the livelihoods of their families and society. Indeed, agriculture is becoming increasingly knowledge-intensive.





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Conversely, we have witnessed the development of information communication technology, or ICT, as a major driver of economic growth. In addition, emerging ICTs have provided new opportunities to address the challenges faced by agriculture. For example, increasing use of mobile phones for information exchange, such as disease surveillance and pest tracking, is now common practice. Linking knowledge to innovation is also crucial to addressing the information and knowledge gaps in the agriculture sector. Therefore, ICTs can also play a very important role in bridging information gaps.

FAO has been promoting the use of ICTs in agriculture and has focused on ICT innovation for improving agricultural production and enhancing value chains. This publication is an effort to share success stories on the use of ICTs for agriculture and rural development. A follow up to the FAO publication *Information and communication technologies for sustainable agriculture* (<http://www.fao.org/docrep/019/i3557e/i3557e.pdf>), this knowledge-sharing effort helps to ensure that innovations are widely shared and a wide range of stakeholders is benefited, thereby contributing to efforts for creating a ‘world without hunger’.

This publication showcases a few case studies where innovative use of emerging technologies together with capacity development has brought about rich dividends. Digital Green’s experiences in knowledge sharing among rural communities to Nano Ganesh’s innovative use of technology in switching on irrigation pumps have the potential to contribute significantly to the livelihoods of farming communities.

Case Study 1: Digital Green: Leveraging social networks for agricultural extension

*Rikin Gandhi*¹

Philosophy and strategy: Participatory video to improve existing agricultural extension systems

Overview

Digital Green's early roots were formed as a Microsoft Research Project in Bangalore. Founded in 2006 by Rikin Gandhi, the project was part of an effort to test different ways of using technology for social development. More specifically, the project focused on testing the use of participatory videos as a means of agricultural extension. The approach was substantially more effective as a means of extension than existing conventional agricultural extension programmes.

The use of video for agricultural extension was by no means a new approach and Digital Green was inspired by a number of different projects. These can be broadly categorized as information technology for agricultural development, video in agricultural extension and mediated instruction for effective training with video. Digital Green weaves together the best of these three strands into a novel system that maximizes the impact of agriculture extension workers and adds the critical element of community engagement and participation throughout the process. Based on the success of the project, Digital Green was formally established as an NGO in 2008, with offices in Bangalore, Karnataka in India and Berkeley, California in the USA.

Background and context: Agricultural extension systems in India

Small-scale farmers make up about 70 percent of India's farming community, but experience deep economic and social inequities in comparison to large land-holding farmers. Indeed, recent studies have revealed that most small-scale farmers no longer view farming as a sustainable livelihood source. Even Mr Santosh Sharma, who is regarded as a relatively well-off farmer in his village, says, "Farming is no longer a dependable source of income. It was during my father's and grandfather's generations, but now everything is changing, from the market to the environment. Now I tell my children that they should study well and get jobs outside the village, because that is the only way they can have a good life." Mr Sharma's story is related in Box 1.

¹ Digital Green, India: contact@digitalgreen.org

Box 1: A farmer's story



A farmer explains the effects of the climate on his crops

In January, the wheat fields sown in the previous year all over Rajgarh District of the Indian state of Madhya Pradesh are flourishing. Their long stalks sway elegantly in the breeze and the ears of the grain are ripening into plump seeds. However, the picture is not as rosy as it appears to the untrained eye and the changing weather has wreaked great damage on the crop. Everywhere, large patches in wheat fields have been flattened by excessive rain and wind. The kernels of wheat are full of water from dew and fog, and the seeds inside are rotting from the uncharacteristic lack of sunshine.

Despite the obvious problems caused by the weather, Mr Santosh Sharma, a long-time farmer from Biaorakala village (Khilchipur block, Rajgarh District) remains positive about his own wheat fields. When prompted, he explained that this year he has chosen to plant a different variety of wheat. This newer strain, called Variety 322, is more resistant to climate change in addition to giving a higher yield of grain. Each seed produces a greater number of individual stalks – about ten per seed as opposed to about six per seed in the older varieties and each stalk is thicker than earlier varieties. Variety 322 is better able to withstand the wind, rain and excessive moisture that the region is facing this season. While Mr Santosh still anticipates a lower yield than if the weather was more amenable, he is grateful that his crops have managed to withstand the climatic challenges to some degree.

Santosh is one of the few farmers from his village who has managed to cope with the weather this year, and attributes this to the videos on wheat cultivation that he watched. These short eight-to-ten minute documentaries, developed by Digital Green along with its partners in the local NGO ACCESS, as well as the village community, demonstrate best agricultural practices for farmers. The videos are

made in the local language by the community, for the community, using members from the community as actors. Santosh has not only seen most of the videos developed in his district, but also featured in some of them. He has adopted several of the practices, and is a strong advocate of the video-based learning process amongst his peers.

Explaining what he finds successful about the approach, Santosh says, “Not only do videos allow farmers to see a visual demonstration of the entire process, they also feature practices that can easily be tested. For example, I planted Variety 322 on a small part of my land last year. When I saw that it gave me a bigger yield than the other variety, I decided to plant more of it this year. I am lucky, because it is also stronger and better at surviving in this bad weather.” Furthermore, he adds, “Farmers are always keen to learn new and better ways of growing their crops. The videos are helpful because the entire process is visually demonstrated and explained in our own language by farmers from our own community. All this makes it easier for us to understand.”

Public investment in agriculture has also fallen over the past few decades. While some of this decrease has been offset by the private sector, these investments tend to concentrate on larger, more mechanized farms. The largely traditional approach to agricultural extension in countries like India has further isolated and increased the vulnerability of small-scale farmers. During India’s green revolution of the 1970s and 1980s, the most commonly used method of extension was the Training and Visit method (T&V method), which followed a top-down approach to information dissemination. The purpose of the T&V approach is to encourage farmers to increase production of specified crops. However, planning is controlled centrally and field personnel tend to be dependent on central resources; there is a rigid pattern of visits to farmers and in-service training of field staff. While the approach provides scientific and technical support, it lacks genuine two-way communication and the flexibility required to make it responsive to the local situation. The T&V approach gave way to extension programmes that have focused instead on developing more participatory, decentralized, demand-driven services. These approaches are also better tailored to addressing the diversity of culture, language, geography and other socio-economic and environmental factors, tailoring information to the local context.

Despite several efforts to reach small-scale farmers, however, India’s current extension system often fails to effectively communicate with them. This is largely due to issues such as generic, top-down content to which the farmers cannot relate. While the content may be scientifically accurate, it may not be presented in a way that the farmers can easily grasp, either due to language barriers or because it is presented in brief or abstractly. Mr Narsingh Lal, another progressive farmer from Santosh’s village says, “Earlier, people

from NGOs or the government used to come and visit us and tell us about good farming practices. While it was helpful, it was sometimes difficult to understand exactly what they meant, because they were explaining everything verbally. The videos are better, because we can see the entire process on the field, which makes it easier to understand and also remember all the information.” Figure 1 shows the orange trees planted by Mr Narshingh Lal after watching a Digital Green video.



Figure 1: Mr Narshingh Lal, an orange farmer, proudly showing the orange trees he planted after watching the video from Digital Green

Even in cases where field demonstrations are part of the extension system, restrictions of resources and personnel mean that the demonstrations take place at wide intervals with little or no interaction with farmers in between. The lack of a local facilitator or resource person who can assist farmers in implementation often means that these extension efforts do not result in actual adoption.

Digital Green has demonstrated that a participatory process of engagement combined with simple technology solutions can enable small-scale farming communities to produce and share information on best practices for improved productivity and sustainable livelihoods. Initial pilot studies not only indicated a higher uptake of practices through the video-based approach, but also revealed that the Digital Green model was more cost-effective than classical systems of agricultural extension. Gandhi et al. (2009) state that the Digital Green approach was at least ten times more efficient and seven times more likely to encourage farmers to adopt new practices compared to conventional agricultural extension systems.

The Digital Green approach: Technology, partnerships and community engagement

The Digital Green approach is essentially a technology-enabled means of behaviour change communication, which is cost-effective, scalable and brings together researchers, development practitioners and rural communities to produce and share locally relevant information. Digital Green's participatory, video-based learning approach aims to engage the community to the greatest extent possible within the extension system. To do so, Digital Green integrates its processes within existing private and public extension systems to build the capacity of rural communities to produce and share short videos, i.e. it serves as a digital exchange platform.

The hub-and-spoke model

Typically, Digital Green partners with government agencies, independent NGOs or private sector agencies that help to identify progressive and enthusiastic members of the community, who then serve as champions for the extension efforts. At the block level, teams of three or four individuals are trained in video production skills using simple, handheld cameras. The skills encompass the entire gamut of processes for creating a video: from the development of a storyboard, to shooting the video with appropriate lighting, ensuring that it is culturally and aesthetically appropriate, editing and incorporating a soundtrack, and so forth. These video production units at the block level act as a kind of hub for the production of content. This content, in the form of short eight-to-ten minute videos, is then shown to small groups of farmers in different villages across the block. At the village level too, selected community resource persons (CRPs) are trained in facilitation skills. These CRPs are responsible for screening videos in three or four villages within the block, and directly liaise with the community – answering their questions, clarifying doubts and assisting farmers in the adoption of new practices. This forms a hub-and-spoke model, wherein content is developed at the 'hub', or block, and distributed across all the 'spokes', or individual villages.

Partnerships

Partnerships are critical to the success of the Digital Green approach; its partners are carefully chosen, particularly for their strong integration and relationship with the community. In Madhya Pradesh, for example, Digital Green's partner, ACCESS, has been working in Rajgarh District for over 15 years, bringing information about better agricultural- and livelihood-generating practices to farmers. Similar strategic partnerships enable Digital Green to work around the challenges and pitfalls of working in unfamiliar contexts, while also amplifying the reach of its government, civil society organizations and private partners through efficient dissemination methods. Additionally, as Digital Green's approach leverages community groups such as women's self-help groups or farmers' groups, some of its partners, such as JEEViKA in the Indian state of Bihar, are seeding new social groups and initiating livelihood programmes. In

sub-Saharan Africa countries as well, where community groups did not previously exist, Digital Green's implementing partners are experimenting with the formation of farmers' groups and strengthening community bonds.

Local relevance of video content

The videos are produced in the regional language, ensuring easy comprehension and immediate connection with the local community. They are then screened among small groups of farmers on a regular basis using portable, battery-operated pico projectors. About once every two weeks, the CRPs facilitate screenings to engage groups of farmers with the videos and one another in an interactive learning process. During these screenings, members of the community not only watch videos about new practices, but are also encouraged to discuss and debate the featured practice, ask questions and clarify doubts. The CRPs are key within this process, and facilitate the discussion by asking different community members to share their opinions and experiences. They clarify doubts, ask participants to recall what they saw in the video and even repeat the screening, if required. The CRPs also record the main questions and points of discussion at each screening, which are later shared with partners, uploaded as comments on the Digital Green Web site and even used as feedback to inform further iterations of the videos.

The content of the videos is generally chosen based on both top-down and bottom-up decision-making. While government, civil society organizations or private partners usually bring subject matter expertise, farmers are sounded on their specific requirements regarding the practices they would like to learn about. The final content, therefore, is tailored to be locally relevant, while still maintaining scientific accuracy. In Rajgarh, for example, Santosh and other farmers from the community are regularly asked to share their areas of interest, and as a result, most videos feature wheat and soybean cultivation, as they are the most important cash crops of the area. However, Santosh indicates, "Recently, when the price of onions was very high, we realized that onion cultivation would also be profitable. Therefore, we (the farmers' group) asked the ACCESS team for a video about the best way to transplant onions, since that's the tricky part of the process. They responded quickly, and since then all of us have adopted this new way of transplanting onions."

Community participation and engagement

Community participation is essential to the success of the approach, since the information being given to the farmer comes from a familiar source, leveraging the principles of homophily, also described as the tendency of individuals to learn and bond with that which they share mutually. This element of sameness, or deep similarity, allows for better learning and engagement with the topic. In other words, the farmers are better able to relate to the actors in the video (Figure 2) because they come from the same community, and perhaps even the same village. This, along with the visual,

demonstrative medium of video, is a powerful mode of communication. The additional layer of facilitation by a trained community member, moreover, has been proven to be even more effective than simply showing the farmers the video, or having the screenings facilitated by an external expert.



Figure 2: A local video production team in the process of creating a video using local actors

Mr Jitendra Singh Rajput, the programme director of ACCESS, feels that the deep community engagement is one of the most successful aspects of this approach. Elaborating on this, he says, “Previously, the extension workers in the programme would get to interact with farmers only around once in two or three months. Now, they get to attend screenings as often as once a week, and the facilitators are from the surrounding area and are much more approachable. This has been a massive change, and has helped build greater trust within the community, which in turn has helped raise the number of adoptions.”

Mr Kushal Dange, the CRP for Biaorakala village, where Santosh Sharma lives, prepares for the evening screenings by watching the video once or twice in advance. He also makes sure that all the necessary materials are in place, including the paper form to record the names of those who attended, the pico projector, the speakers, mats for the viewers to sit on and so forth. During the screening itself, Mr Kushal pauses the video at intervals and invites the group to reflect on what they’ve seen, ask questions, voice their opinions and share their experiences. In his opinion, “Watching the video more than once, or asking the farmers to discuss the video among themselves is very useful. It helps them absorb and retain the information more effectively, and also helps me (the facilitator) gauge the interest within the group.” Mr Kushal notes down the names of those who seemed most interested, and over the course of the next week, he visits

them individually to check the practice adopted, verify that it has been implemented as instructed and discuss the best way to take the adoption forward.

This degree of engagement with the community throughout the screening and adoption process is an extremely important facet of Digital Green's work. The fact that the CRPs are from within the community means that villagers are able to reach out to them for assistance even outside of the formal video screening sessions. This helps build greater trust between the local partner and the community, as well as within the community groups themselves, therefore not only increasing their willingness to adopt a new practice, but also helping to create a stronger community support system for the farmers.



Figure 3: A vibrant discussion amongst the community, following a video screening in Ghana

These community groups are invaluable to the learning process because of the lively discussion and sharing of experience that they enable (Figure 3). As Mr Jero Gelgelu, a farmer from the Arsi Negelle Woreda (district) from Ethiopia says, “Before the end of the video dissemination, there is an active and open discussion among group members. Farmers are able to ask as many questions as they like. This discussion helps to minimize any doubt farmers may have with regard to the new technology or farming practices. Through the video dissemination process, farmers learn new practices from three sources: the videos, the development agents and the farmers themselves.” Speaking more about the enhanced learning through group discussions, Mr Jero adds, “The group environment of video disseminations increases peer to peer interaction between farmers and promotes the exchange of experiences and best practices.”

Mr Teshale Amde, a development agent who works within the Ethiopian Ministry of Agriculture's agricultural extension programme, is a big supporter of the Digital Green approach. Citing community participation as one of the main elements of success, he says, "The discussions at the end of video screenings are one of the most important parts of the process. Not only can farmers clarify their doubts easily, but the discussion also helps to increase trust between them, and creates a spirit of healthy competition in implementing practices. When a farmer hears about a neighbour implementing a practice successfully and improving his livelihood, he thinks: if he can do it, why can't I?"

Achievements and possible impact

To date, Digital Green has produced nearly 3 000 videos in more than 20 languages, and reached more than 300 000 farmers across more than 3 900 villages² across India, Ethiopia and Ghana. These videos have been collectively screened more than 200 000 times and have resulted in more than 370 000 adoptions.³

Strengthening local communities

The Digital Green approach is designed around building the capacity of local communities in producing and sharing knowledge products, specifically short videos, for improved livelihoods. As its geographic scope scales up, its training strategy has evolved to include building the capacity of a cadre of master trainers (within the partner staff as well as community level), with a special emphasis on enhancing the facilitation skills of these trainers. In addition, by modularizing its own training sessions into short videos, the organization plans to add a layer of accessibility to global partners interested in leveraging the Digital Green approach.

Digital Green focuses on increasing the efficacy and cost-efficiency of agricultural extension. The criteria for measuring the success of its approach are based on factors such as the number of videos produced, the number of community members engaged and the number of new practices adopted by farmers. The organization's technology stack helps to track these parameters accurately and efficiently. At the core of the stack is Connect Online Connect Offline (COCO), a data management tool which is specially designed for use in areas with little or no Internet connectivity. Partner staff at the block or district levels is trained to use this software to upload information on a near real-time basis. These data can be easily accessed by anyone from anywhere in the world through an analytics dashboard, and are completely open-source, allowing partners and supporters to view, analyse and use them.

² Statistics as of April, 2014.

³ Please see Digital Green Analytics for more details (www.digitalgreen.org/analytics).

Social empowerment

Apart from these tangible factors that can be tracked using numbers or percentages, it is also worthwhile to note the other 'social' effects of the Digital Green approach on the community. The most significant is the community's sense of empowerment through exposure to new skills and technologies. Most of the villages where Digital Green functions have little or no access to electricity or even basic technology like television, computers or mobile phones. Yet, the younger generation is interested in accessing them and is enthusiastic about learning the new 'modern' skills, and becoming more 'tech-savvy'. Digital Green allows them access and training in using technology such as video cameras and projectors, as well as the software for editing the videos, and for recording and uploading data to COCO.

Mr Ram Prasad, the young and enthusiastic block coordinator for the Khilchipur block of Rajgarh District, is one of these young persons who feels empowered with his newly acquired knowledge of videos, projectors and the Internet. He explains, "I had never even held a camera before I started working with Digital Green, but now I don't even have to think about it. Now I can use computers and the Internet with ease." Mr Kushal Dange also feels that the training he has received, and the role he now plays, have contributed to his social standing within the community. He explains, "Before I started working with Digital Green, I was just another farmer. Now, everyone knows me as the video wallah (the video man), and they come to me to ask about not just their crops, but even when they have problems with their cell phones and other technology!" Women such as Ms Pinky Devi have experienced a great improvement in their social status, and are now even consulted by the men in the village about better agricultural practices (Figure 4).



Figure 4: Improved social status – a group of empowered women farmers with Ms Pinky Devi (centre)

Mr Bawa Kurubie, a community extension agent from the New Edubiase District of the Ashanti Region of Ghana, also experiences this sense of empowerment. Describing how the videos have helped him his work, Bawa says, “I initially doubted the Digital Green approach and was worried it would only add to my workload. But now, I can say with confidence that the videos have helped make my work simpler. For farmers here, seeing is believing, so the videos are a powerful way of giving them information in a way that it is truly useful for them. Now, I have to do less talking and explaining, and they have made my work much easier.” For Mr Kurubie Bawa, the video production training has even been useful at the personal level. He used his newly acquired videography skills to create a short video of his birthday celebrations, which he then proudly showed to his family and friends.

Lessons learned

Strong community groups are essential for the success of the approach

Digital Green first began working in villages where its partner organizations already had established activities working with local community groups such as self-help groups, women’s groups and farmers’ groups. As such, deploying the Digital Green approach in these villages was a straightforward process. As it expands, however, the approach is being taken to areas that are new to both Digital Green and its partners. This has meant that Digital Green has had to reconsider the way in which the approach is operationalized in new villages. To address this challenge, Digital Green has begun working with its partners to share content related to mobilizing community groups and building grassroots-level institutions in advance of agricultural messaging. In Ethiopia, for example, existing social groups, such as farmer development groups, were not as strong as those in India. Digital Green, therefore, supported and provided training in social mobilization to its partners in Ethiopia to help strengthen them. In addition, it is also exploring means of leveraging other existing community groups, such as student groups, youth networks and womens’ groups, for its work.

Staying flexible is necessary to be relevant within new contexts

The Digital Green approach is now being extended in the health and nutrition sectors through projects in India and Ethiopia. Initial results show that the approach is malleable enough to be effective in the new domains as well, albeit with minor changes. For instance, one area of discussion is the definition of adopting a health behaviour. In the agriculture sector, adoptions are typically more tangible and visible. In the health domain, however, behaviours are far less evident and can often be private in nature, which can make them more difficult to track. The way in which adoptions are defined in health, therefore, has been expanded to not only include actual changes in behaviour, but also gains in knowledge.

New partnerships require handholding support

As Digital Green expands its network with new partners, it has found that different partners have varying levels of competence in terms of their domain expertise, their familiarity with technology, their ability to engage the community and their ability to track progress and manage data, for example. Therefore, it is necessary for Digital Green to provide a higher degree of support to new partners, especially in the initial phases of a partnership. For instance, when Digital Green first began its work in Ethiopia, there was far less traction for the approach until Digital Green invested in local human resources that could provide the necessary technical and process-related support.

Learning, experimenting and iterating the approach for maximum impact

Another major learning curve, as Digital Green applies its approach to new sectors, concerns the tracking of social impact. Videos focused on health and nutrition have a wider target audience: instead of solely targeting those members of the community who can adopt a practice, outreach extends to community members who can act as promoters and influencers. An example of this can be seen in the case of Ms Malli Lohar, a member of a women's self-help group in Odisha. Ms Malli's group is part of a project that provides video-based nutrition-specific messaging to pregnant and lactating mothers. While she is neither pregnant nor lactating herself, and hence not the primary target of this messaging, she is an active and influential member of the community. She has watched all ten videos produced within the project and is keen to take the information to other women in her village. "I see that children in the village are not so healthy and if I can help new mothers with useful information, then I feel it is my duty to do so," she says. Ms Malli is an excellent example of the kind of wider social impact that is enabled through the Digital Green approach, and indeed this concept of 'promoters' is one that the organization also plans to track and study further as it works more extensively in the health and nutrition domain.

Maintaining the quality of content at scale is a challenge

As Digital Green expands, the importance of ensuring high-quality content has come to the forefront. In order to ensure that only rigorously vetted content – from both audio-visual production and scientific standpoints – is shared with farmers, Digital Green has found it necessary to bolster its Technical Advisory Committee (TAC), comprised of domestic and international researchers and practitioners, and is recruiting subject matter specialists to review videos under the guidance of TAC members. These specialists, who are experienced agricultural researchers or scientists, are responsible for vetting both individual videos and bundles of agricultural best practices across the variety of domains in which Digital Green operates.

Innovative solutions are required to maintain the quality of training

As Digital Green operations expand, it is becoming necessary to rethink the ways in which mediators are trained in order to maintain high quality standards. In order to accomplish this, Digital Green is working to create a cadre of master trainers who have been selected from among high-performing mediators working with its existing partners. Once Digital Green staff has ensured that the master trainers are capable of conducting high-quality training without supervision, they take over new training by themselves. However, quality assurance responsibilities with regard to dissemination quality and adoption verification will continue to remain with Digital Green, as will quality oversight for the mediator training process.

Digital Green is also in the process of creating a learning platform for mediators that will be available globally. The platform will build upon and improve the quality of Digital Green's existing training curriculum, incorporating both technical skills on specific subject areas as well as process-related skills such as video production, dissemination facilitation and data tracking. The learning platform will combine both on- and offline components, in which master trainers who work within Digital Green partner organizations might facilitate the presentation of videos through the learning platform to groups of mediators. Usage data and feedback from trainees can be leveraged to improve the quality of future training programmes. In essence, the learning platform will function as a hybrid Massive Online Open Course for mediators affiliated with Digital Green partners that combines technical elements with in-person facilitation and assessment.

Conclusion

Digital Green is currently in a phase of rapid growth and has expanded its approach to new sectors and geographic zones. The simplicity and flexibility of this video-based approach has allowed for its effective application in multiple and different social, economic and cultural contexts.

In India, Digital Green's network extends to eight states⁴ along with government and social sector partners. The organization has recently signed an agreement with the Government of India's flagship National Rural Livelihoods Mission to act as its national-level support organization to help empower rural communities across the country through increased access to information. In Ethiopia, Digital Green works with the Ministry of Agriculture to strengthen its extension system as well as those of other NGO partners. In Ghana, it partners with the World Cocoa Foundation and other commodity trading groups such as the Ghana Cocoa Board.

⁴The eight states are: Andhra Pradesh, Bihar, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Odisha and Uttar Pradesh (as of April 2014).

Digital Green has plans to expand its reach across 11 000 villages in India and involve more than a million farming households by 2015, building the capacity of local individuals to serve as community knowledge workers. The organization is gradually working toward leveraging its global network of partners and supporters to create an e-learning and knowledge-sharing hub for rural development, taking the concept of learning to the virtual world.

Recommended reading

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