

# Experience with Building a Rural and Agricultural Development Communication Network

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## Abstract

This paper presents our experience in building a rural and agriculture development communication network in Egypt to improve the communication among extension, research, private and public sectors and institutions involved in rural and agricultural development for the benefit of farmers and agrarian businesses at rural and village level. The paper describes the main components of the network: the web based information system, the rural communication network, and the mass media. The lesson learned and future plans are also introduced.

## Introduction

The goal of this paper is to report on our experience in building a Rural and Agriculture Development Communication Network (RADCON) to improve the communication among extension, research, private and public sectors and institutions involved in rural and agricultural development for the benefit of farmers and agrarian businesses at rural and village level. This Network was implemented by a project funded by the Italian/ Egyptian Debt Swap program and executed by Food and Agriculture Organization (FAO), and the Central Laboratory for Agricultural Expert Systems (CLAES) as the counterpart agency responsible for project implementation. The three direct objectives as described in the project document were: develop sustainable operational dynamic information and communication system that responds to the stakeholders' requirements including resource poor communities, identify and enable fifty resource poor communities to participate in the RADCON activities and benefit of its knowledge and information resources, and develop an innovative media communication program to increase the benefit of RADCON. The project started in April 2004, and terminated on March 31, 2008. In this paper we are going to assess the objectives achievements and what needs to be done for making full use of this leading project.

The rest of the paper is structure as follows. The second section describes the information and communication system development. The third section presents how the rural network was established to enable poor communities. The fourth section explains how mass media and multimedia played a role in the project. The fifth section summarizes the lessons learned.

## Information and Communication System Development

The information and communication system development included three activities namely identification of contents and database design and implementation, attractive graphical user interfaces development, and assess the contents relevance and the user interfaces.

The content identification was part of the study conducted to identify the information needs of different stakeholders. This study has identified five modules to be implemented in this phase of the project, namely: Youth, Women Corner, Environment, Marketing, and NGO's. . This was decided in a workshop in which all stakeholders were represented. A decision has also been taken to consider the Virtual Extension and Research Communication Network (VERCON) modules accessible from RADCON without changing them. The databases of the five new modules have been successfully designed and implemented.

Developing attractive user interfaces to different components, is very important for the clients of RADCON. In effect we passed through three stages while developing the user interfaces. The first phase was based on considering VERCON one unit with just one link from the RADCON interface. The second stage allows VERCON module and National Agriculture Research Information

Management System (NARIMS) modules to be accessed from RADCON web site dynamically and to include personalized page for each governorates like a link to growers problems reported in a certain governorate, researchers names and contact information who are working in the nearest research stations,...etc. This interface tended up to be very sophisticated. Based on the users' request, a simpler design was proposed without any dynamic information retrieved based on the location. The interface also allows the user to access any module in RADCON while working in another module without returning back to the home page.

Extension workers, researchers, facilitators at the governorate levels and at the village level, and university staff have been trained on RADCON information system. The contents of the new modules started to be populated with real data after the system modules had been developed, infrastructure had been installed and human resources had been trained. Asses user friendliness and information contents relevance of the developed system have been done while populating the modules. As explained in the previous activity the decisions taken to develop and/or change interfaces were based on interaction with the end users. The project team developed an initial design but through thorough interaction with all stakeholders these interfaces have been changed two times. This process continued after the project termination especially the contents relevance assessment

### Enabling Poor Communities

In this project 50 poor villages have been identified in seven governorates. The information needs of these villages are assessed. A knowledge management system has been established. This system is managed by an Information and Communication for Development (ICD) Unit. This unit works at three levels: ICD central unit which is located at the Agriculture Extension and Rural Development Research Institute (AERDRI), ICD governorate units which are located in the agriculture administration of the seven governorates, and ICD village units which are located in the fifty poor villages. The field preparation of facilitators and their training were the first step. In order to accelerate the training process, trainers have been trained at the governorate ICD units and in the Universities to conduct village facilitators training. Table-1 describes the training courses and the number of facilitators trained.

Table-1 Summary of the ICD training courses.

Theme	Trainee	# of attendees	# of courses	Training days	Training hours
Participatory communication	ICD groups (TOT)	25	4	30	150
Participatory communication and training	Sharing experience workshop	25	3	4	24
Operating and using RADCON systems	ICD groups (TOT)	25	2	10	50
Participatory communication	Facilitators	115	28	140	280
Operating and using RADCON systems	Facilitators	115	14	28	140
Convert video films to digital format and upload it to RADCON	Media groups	10	1	3	15
<b>Total</b>		<b>150 persons</b>	<b>52</b>	<b>215</b>	<b>659</b>

Establishing Procedures for the ICD units at different levels were established in parallel to the training activities.

The central unit (5 senior researchers/extension staff) is responsible for:

- Develop and implement participatory communication plan for RADCON.
- Coordinate and supervise multimedia production and dissemination.
- Conduct a monthly performance appraisal for all ICD groups.

- Monitor, direct and support monthly participatory communication work plans develop at the village level.
- Develop training plans for building the capacity of sub-units staff.
- Monitor, support and direct training activities at the governorate level.
- Monitor and evaluate the activities of communication, information content and flow of RADCON.
- Re-adjust the field activities according to the results of monitoring and evaluation.
- Report to AERDRI director and the executive committee the monthly progress, situation, problems and suggestions.

The main tasks of the ICD groups in the governorates (20 researcher/extension staff) are mainly:

- Conduct train courses for village facilitators on participatory communication, and community mobilization, and using RADCON systems.
- Follow up related sites daily activities to provide technical and moral support.
- Replace and train dropouts in facilitators.
- Monitor and review planning and implementation of the sites' monthly work plans.
- Conduct a monthly performance appraisal for their facilitators.
- Coordinate information inputs from local sources.
- Supervise preparing and documenting endogenous knowledge from the local community

Communication facilitators (115 facilitators) at the village level initial tasks are:

- Be available in the site for 3 hours daily to help rural individuals and groups get needed information from DARCON site and other related sites of development.
- Implement the participatory communication approach in the village by:
  - Conducting an awareness meeting for rural people to review related information in RADCON and other sites.
  - Conducting a needs assessment meeting to identify target groups problems
  - Conducting a group mobilization meeting to plan for solving the agreed upon problem.
  - Inviting an expert or official to help solving the problem or help implementing the solution.
  - Coordinate with local leaders and formal figures in the village
  - Help rural people to publish their endogenous knowledge, experience and success stories on RADCON.
- Report weekly and monthly activities using "RADCON monitoring system".

Monitor and evaluate RADCON activities and usage at the community level were achieved through: a web-based follow-up system, governorate monthly performance appraisal, the ICD monthly performance appraisal, the executive committee monthly meeting, and the steering committee meetings. The monitoring system was very effective in fine tuning the workflow of the network. The system helps to solve minor problems immediately at the lowest level and allow major problems to reach the top management level. The system facilitates reporting problems/suggestions about the information system modules of RADCON aiming to make it more user-friendly. On the other hand, this system in particular is the strongest tool in the hands of decision makers and top management of the network helping them in planning process and taking the right decision in the right time.

### **Media communication program to increase the benefit of RADCON**

The objective of using mass media, is to support and promote RADCON. Technical topics included in the mass media were selected from RADCON system, local experiences, the problems, the traditional practices and the successful stories of rural people. The publicity of this information helped in creating awareness on RADCON project, attracted people to contact the network, and the ICD units.

Receptiveness of aired and recorded A/V programs was investigated. Responses of listening and watching meetings were collected during the last three months of 2007 by communication facilitators in Kafr El-Shiekh, Daquahlia and Ismailia governorates. The results reported were as follows:

- More than half of the respondents (54.83%) said that the form of the A/V episodes was highly suitable, while 73.54% and 63.62% mentioned that timing and duration was highly suitable respectively.
- Episodes were highly understandable as seen by 72.85% of the respondents, yet 71.63% expressed their need for more information about the same topic.
- 77.46% of the respondents indicated that they gained new information related to the episode topic, 72.15% had a positive change in attitude towards the topic, and 70.15% showed their willingness to benefit from the information in future.
- Utilization or actual application of the episode information was indicated by 30.64% of the respondents.
- Only 27.68% mentioned that the topics of the episodes are not related to their activities.
- Respondents ranked their information needs in the fields of: youth, women, agriculture, marketing, environment and NGO respectively.
- Information about youth and women small projects was on the top demand by respondents as it was emphasized by 23.91%, followed by making and storing home recipes and food products (15.22%), non-traditional fodder (10.87%), easy ways to use RADCON (9.42%), and environment and NGO information 7.97% and 5.07% sequentially.
- Demonstration using films, tapes or CDs was preferred by 30.29% of the respondents, followed by presenting abstract information (29.19%), dialogue and discussion (25.86%), and lastly educational drama (14.66%).
- TV programs and RADCON were preferred by 74.93% of the respondents, followed by radio programs with RADCON (42.30%), and TV programs alone (40.2%).
- More than half of the respondents (53.44%) said that recorded TV and radio programs encouraged rural people to visit the ICD unit in the village more frequently, while 49.87% of them mentioned that these recorded programs increased contact with RADCON network.
- More than one third of the respondents (35.68%) were able to convey some of the information they knew from TV and radio programs to others.
- The number of rural people that visited the communication point in the village to hear or watch recorded programs reached 221 in Kafr El-Shiekh, 97 in Ismaillia, and 83 in Daquahlia, while 128 of the visitors asked to borrow the recorded CDs.

In addition, the results of the study on “Assessing the participatory communication methods supporting RADCON in some project villages to select the suitable communication mix” found no evidence that mass media production and transmission cost-effective, or appreciated by rural people or facilitators, and recommended to disregard it. While on the other hand, the same study recommended to use multimedia in group meetings either online or offline (stored on CD or PC) to support the topic in discussion wherever available. In short, multimedia approach was more successful than mass media approach and should be followed instead.

### **Lessons Learned**

In this section the lessons learned from implementing RADCON project will be presented in relation to three main categories namely: Information System Development, Information Dissemination at the Village Level, and Using Media to Support Communication.

### *Information System Development*

Our experience in developing the RADCON information system revealed the following:

- Software development of the different modules, and their integration in one web based information system did not represent any bottle neck for CLAES software developers and can be smoothly evolve along the years to come.
- The process of assessing of user friendliness and information content relevance must continue and be part of the routine work of the ICD units.
- More engagement of stakeholders are required, especially the NGO's as they were not enthusiastic about what has been developed. The continuous role of running the modules selected to be implemented out of the needs assessment study was not responding to their real needs.
- Measures are to be determined for monitoring the growth of the contents of all RADCON components from stakeholders namely: the technical information on projects for youth, nutrition and health information for rural women, business deals done, NGOs' activities achieved, environmental conservation

### *Impact of Deploying RADCON in Villages*

Our experience in assessing impact of RADCON in villages revealed that:

- The idea of using baseline data for the level of health, education, and income state of farmer households in the underlying villages was not practical to measure the impact of RADCON. Consequently there was no chance to measure the impact of using RADCON on the livelihood of small farmers during the project lifetime but we found out the best that can be done is to document cases in which using RADCON has made a difference in the livelihood of some farmers

### *Dissemination at the Village Level*

Conducting training of trainer and training facilitators in the ICD units at the villages' levels revealed that:

- Field preparation and coordination was a critical stage to build a team of motivated facilitators, flexible structure, as well as a strong communication plan. The field preparation of facilitators and their training are inevitable in the horizontal expansion of RADCON stage; it should be replicated for each site to work as communication point.
- In order to accelerate the training process, trainers have been trained at the governorate ICD units and in the Universities to conduct village facilitators training. However collaboration between ICD units and Universities was not very effective.
- The knowledge management system developed at different levels: village, governorate, and central have been proved to be successful but the followed procedures need to be well documented and integrated with the job description of all engaged institutions in the MALR.
- The success of using public forums and other media to motivate and encourage communities to exchange knowledge indicates that it should be replicated in each village targeted by RADCON.

### *Content identification and Identification*

Although the identification of relevant topics has been done while identifying the stakeholder analysis specific needs assessment, it was found that:

- More specific contents have been identified at the village level using participatory approach. We strongly believe that spreading the usage of this approach is required in the extension service and research institutions.
- More stakeholders should be included in either the steering committee or the executive committee. This is a very important action to guarantee the affiliation and support of all stakeholders, to populate RADCON information modules and share the follow-up activities among all partners

### *Mass Media Production*

The evaluation study done on the impact of producing mass media and transmitting episodes through RADIO and TV stations revealed that:

- No evidence that mass media production and transmission are cost-effective, or appreciated by rural people or facilitators, and recommended to disregard it.
- Use multimedia in group meetings either online or offline (stored on CD or PC) to support the topic in discussion wherever available was highly recommended. In short, multimedia approach was more successful than mass media approach and should be followed instead

### *Sustainability*

Now after finishing the project with one year and half, it was found that:

- The financial and administrative issues could continue by CLAES staff. CLAES has a national fund to continue the project technical activities but without horizontal or vertical expansions.
- The technical and operational cost at the village level needs to be supported by the government until the business model proposed in the project for self sustainability is activated or another business model is found

## Concluding Remarks

Improving the communication, among extension, research, private and public sectors and institutions involved in rural and agricultural development for the benefit of farmers and agrarian businesses at rural and village level, is a continuous development objective of the country. The RADCON project just started this improvement process by applying the ICT and participatory approach among all stakeholders in 50 villages. It also expanded the research extension component, VERCON, which has already been developed and is considered now as part of RADCON, to cover 19 directorates, 96 extension centers, 44 Research stations, and 8 Research Institutes. There is still a long way to go as Egypt has more than 4000 villages. The project covers most of the research stations and directorates but the grass roots are very tiny covered. The efforts needed at the central level and developing more information components do not represent any bottle neck and can be smoothly evolve along the years to come but the efforts needed to cover the whole country at the village level require political will and resources at the national level. We have included RADCON project expansion as one of the strategic components in the Agriculture strategy till 2030 and we are intending to launch a big project to cover 1000 villages in the coming 5 years.

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