Participatory communication:
a key to
rural learning systems

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in collaboration with the
Extension, Education and Communication Service
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ACRONYMS

AIOU	Allama Iqbal Open University
AKIS/RD	Agricultural Knowledge and Information Systems for Rural Development
AMARC	World Association of Community Radio Broadcasters
CATS	Community Audio-Tower Systems
CESPA	Centre for Audio-Visual Production Services
CESPAC	Audio-Visual Teaching Services Training Centre
CIDA	Canadian International Development Agency
DE	Distance Education
FAO	Food and Agriculture Organization of the United Nations
FFS	Farmer Field School
ICTs	Information and Communication Technologies
IDRC	International Development Research Centre
INADES	African Institute for Economic and Social Development
IPM	Integrated Pest Management
IPPM	Integrated Production and Pest Management
KAP	Knowledge, Attitudes and Practices
NGO	Non-governmental Organization
PRCA	Participatory Rural Communication Appraisal
PRODERITH	Programme of Integrated Rural Development in the Tropical Wetlands Project
RBM	Results-Based Management
RCTs	Rural Community Telecentres
SADC	Southern African Development Community
SDRE	Extension, Education and Communication Service
SoA	School of the Air
UN	United Nations
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFPA	United Nations Population Fund
VERCON	Virtual Extension, Research and Communication Network
WAICENT	World Agriculture Information Centre

FOREWORD

During the past three decades, the role of communication has undergone a dramatic change from a one-way, top-down transfer of messages by technicians to farmers, to a social process which starts with farmers and brings together both groups in a two-way sharing of information among communication equals. This approach, known as participatory communication, highlights the importance of cultural identity, concerted action and dialogue, local knowledge and stakeholder participation at all levels: international, local and individual.

In recognizing that rural people are at the heart of development, participatory communication has become the key link between farmers, extension, and research for planning and implementing consensus-based development initiatives. Increased food production implies the need for new technologies, new skills, changed attitudes and practices, and new ways to collaborate. All of this requires that farmers have access to what they consider to be relevant information and knowledge.

Along with communication, a parallel investment in "human capital" through education and training of adults is essential for project success and for effective development. The focus is on having farmers become active partners and key actors in their own development projects. The process begins by "listening to rural people" and a shift to farmer-led identification of learning and training needs through critical reflection based on practical experience.

This publication was prepared by Gary Coldevin in collaboration with FAO's Communication for Development Group. It is an attempt to focus on some issues in the vast field of communication and education for development. It provides an overview of the tools and methodologies of participatory communication as well as some of the most significant experiences of FAO's Communication for Development Group, arguably one of the foremost practitioner of applied communication for agricultural and rural development over the past thirty years. Many practitioners are frequently confronted with a myriad of participatory communication approaches; we hope they will find in this publication a useful conceptual tool to guide their work in developing countries.

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A WORLD FREE FROM HUNGER

The need for knowledge and improved skills to increase food production in developing countries is clear and present. Recent FAO statistics note that more than 65 low-income countries (90 percent in Asia and sub-Saharan Africa) suffer from inadequate food security, with about 790 million people living in hunger. Another 34 million undernourished people have been identified from countries in transition, mainly in Eastern Europe and the area of the former USSR. All told, as the twentieth century ended, about one in seven people were going hungry. And the prospects for erasing hunger during the first quarter of the third millennium appear daunting. From a current base of slightly over 6.2 billion people, using the high fertility path, the world's population may exceed eight billion by 2025 and food needs in developing countries – which will account for 98 percent of the population increase – will double.

The 1996 World Food Summit set a target of reducing by half the number of hungry people in the developing world – about 400 million people – by the year 2015. The progress achieved during much of the 1990s, however, has tended to cast this goal as being too optimistic. In the 1990/92 period for example, out of a group of 96 developing countries, the number of undernourished was estimated at 830 million people; by 1995/97 this had dropped to 790 million or a decrease of 40 million overall, a seemingly positive result. A closer look at the data revealed that only 37 countries out of the original 96 had actually reduced the number of undernourished – by about 100 million people combined overall. Across the rest of almost two-thirds of the developing world, the aggregate number of undernourished actually increased by 60 million. The resulting total net reduction of eight million per year hence reached only 40 percent of the proportional rate of 20 million per year needed to reach the objective. The problem is particularly acute in sub-Saharan Africa. These sobering results dramatically suggest that unless more effective solutions are found for increasing food production, and better distribution of it, the 2002 World Food Summit's repeat goal of halving the number of hungry people by 2015 – with a concomitant rate of 22 million per year needed to do so – may again fall short. Continuing at the current level would take more than 60 years to reach the Summit's target.

Improved communication to strengthen rural learning is one of the immediate methods in which the problem of food security may be addressed. Indeed, over the past thirty years, research findings have consistently demonstrated that audience-oriented communication strategies can play a catalytic role in accelerating the rate of agricultural technology transfer through providing relevant information, changing negative attitudes, and skills training. Initially, "small media" were mainly used (e.g. video, radio, flip-charts, illustrated pamphlets, village theatre) with content tailored to a given community, province or region. Communication approaches ranged from multimedia campaigns to support for group meetings conducted by extension agents,

and materials to strengthen interpersonal communication. Over time, participatory methods were refined to bring in the views of the intended beneficiaries from the start in designing project goals and selecting appropriate communication and adult learning methods to support implementation.

At the turn of the twentyfirst century, as wireless infrastructures span the globe, a growing number of development specialists and agencies argue that appropriate use of information and communication technologies (ICTs) offer alternative solutions to erasing chronic food deficits. Using the Internet to seek out research-based recommendations, combining them with indigenous practices, and then rendering messages for farmers into locally-friendly formats such as vernacular radio, are currently seen as blending the best of older media and emerging technologies.

The challenge in assisting farmers to produce more food implies the need for new technologies, new skills, changed attitudes and practices, and new ways to collaborate. All of this requires that farmers have access to what they consider to be relevant information and knowledge. Participatory communication and education have thus become what many consider to be the key links between farmers, extension, and research, for planning and implementing consensus-based development initiatives. Too often, however, they have been missing links and many projects have failed as a result.

To redress this oversight, the World Bank and FAO have jointly proposed a framework for reforming agricultural knowledge and information systems for rural development (AKIS/RD) wherein farmers are considered to be at the heart of the "knowledge triangle". Communication and education, research, and extension consequently become services designed to respond to farmers' needs for knowledge to improve their productivity, incomes, welfare and sustainable natural resource management.
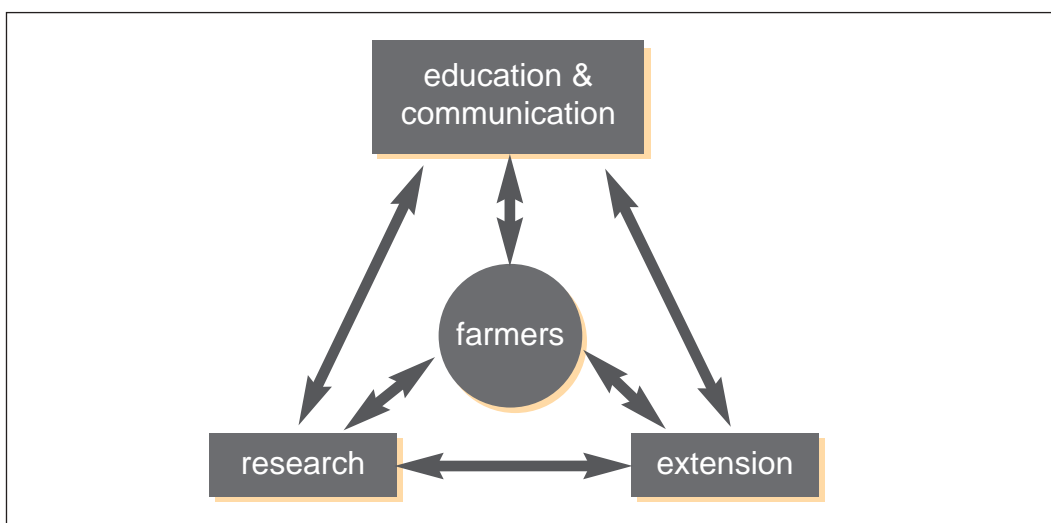
The Knowledge Triangle
Adapted from: FAO/World Bank (2000) **Agricultural Knowledge and Information Systems for Rural Development**. Rome: FAO.

COMMUNICATION-BASED RURAL ADULT LEARNING SYSTEMS

FOCUS OF RURAL LEARNING SYSTEMS

In carrying out its field work, much of FAO's early activities in applying communication for development and rural learning were subsumed within two main areas: 1) information dissemination and motivation, and 2) education and training for field workers and rural producers. In practice, the activities are often considered to be interchangeable, as part of a common rural learning strategy. Information dissemination and motivation as the most basic areas of communication were concerned with simply informing rural people of new ideas, services and technologies, and changing attitudes toward improving their quality of life. The outcomes of education and training, however, rested more in the acquisition and development of new or advanced skills, whether intellectual such as the comprehension of concepts and processes, or physical such as the mastery of tools and practices. The movement toward participatory audience involvement, which was recommended as standard practice during the 1990s, is currently assumed to be a pre-requisite in designing each area.

PRINCIPLES OF ADULT LEARNING IN RURAL SETTINGS

Most of adult learning in rural settings falls under the rubric of non-formal education which can be defined as **any organized, systematic educational activity carried on outside the framework of the formal system to provide selected types of learning to particular subgroups in the population**. Formal systems are highly organized and based upon selective entry dependent upon prior success, with content built around a fixed curricula, and with termination or graduation based upon external standards set by a teacher, organization or governmental certifying body. Non-formal education, in contrast, is flexible, open to anyone, with content dedicated to concrete issues for application in day-to-day life – in short, a continuous learning process highly relevant to the immediate environment. At its best, it is founded on a participatory and interactive approach with farmers becoming partners and key actors in their own development projects. The emphasis is placed on sharing of knowledge between technical experts and rural people. The process begins by "listening to rural people" and a shift to farmer-led identification of learning and training needs through critical reflection based on practical experience. Knowledge sharing among researchers, communicators, extensionists, educators, and farmers thus recognises the importance of indigenous knowledge bases as a priori conditions to examining how new research recommendations might best fit into them, and before grafting on new technologies.

"**Farmers are the ones who must control the learning and be able to access information according to specific needs, times and means**."

(Ramirez, R. and Stuart, T. 1994. *Farmers Control Communication Campaigns* ILEIA Newsletter, March.)

Along with the levelling of extension services to match farmer demands, a shift from teaching them to learning with them – through practical applications – has assumed vital importance. Labelled as a "constructivist" approach to education, continuous learning is always a unique product "constructed" as each individual combines new information with existing knowledge and experiences. And because learning from a constructivist view is so entwined with one's experiences, the primary role of the extension worker in farmers' learning processes thus becomes one of facilitating problem definition and prioritizing technology solutions as prerequisites to designing training packages for presentation back to them. This has prompted a rethinking of the design of formal learning systems for extension workers, particularly at the post-secondary level. To ensure relevance to field operations within academic programmes, participatory curriculum development is being advocated among the key stakeholders themselves, the farmers. The farmers' role in the development of education and training courses is especially important because farmers can voice their needs based upon practical experience and gain a direct benefit from the outputs.

"**It is important to recognize that local people are always involved in active learning, in (re)inventing technologies, in adapting their farming systems and livelihood strategies. Understanding and supporting these processes of agricultural innovation and experimentation have become an important focus in facilitating more sustainable agriculture with its strong locality-specific nature.**"

(FAO. 1997d. *Extension's Role in Sustainable Development*, in Improving Agricultural Extension: A Reference Manual, By Roling, N. and Pretty, J. Rome)

COMMUNICATION DELIVERY SYSTEMS FOR RURAL LEARNING

Communication approaches for rural learning currently range from interpersonal exchanges, group processes (including farmer field schools), mass media (principally radio), mixed-media campaigns, conventional media combined with Internet delivery available from community telecentres, and distance education.

INTERPERSONAL COMMUNICATION – INDIVIDUAL LEARNING

Interpersonal communication is fundamental to learning and change in rural areas and no amount of media can supplant it when it comes to adding persuasiveness and credibility to messages. Whether it be in the form of a skilled extension worker making his/her rounds, or farmers learning from other farmers, when it comes down to making a decision with regard to a new technology or changing farming practices, interpersonal sources often make the difference between adoption or rejection. Methods to improve farmer to farmer and extension agent communication include simple, mostly visually illustrated pamphlets, and leaflets. Spontaneous drama, poems and songs based on farmers' own experiences have also proved effective.

R. Faidutti/FAO/19300

Training for extension workers has been mainly directed toward perfecting their interpersonal communications skills, and, more recently, in facilitating participatory involvement of farmers in defining their own problems, reaching consensus on actions to be taken, information and skills development required to carry out the actions, and mechanisms for seeking research assistance on technical problems for which there is no ready solution available locally. In this cycle extension workers have the responsibility of helping farmers to articulate their problems to research agencies and then assisting them to adapt and apply the results.

GROUP MEDIA – GROUP LEARNING

Training for rural producers, typically involving extension or subject matter specialists as vital interpersonal links, has tended to rely on group media such as slides, film-strips, audio-cassettes, flip-charts, village theatre, and video. In the hands of a trained facilitator these media add punch and authority to a presentation. Perhaps the most advantageous aspect of group media is the possibility for immediate feedback from the audience and establishment of a two-way flow of information. Participants' level of understanding can be tested, central points can be repeated where necessary, and discussions can be started with a view toward initiating action on agreed upon development problems.

Cases abound where FAO has produced film-strips and slides with audio commentaries for extension meetings. Normally the presentations are reinforced by booklets which depict the visuals used in the script with accompanying dialogue. Routinely, the booklets become manuals in their own right. The pre-recorded audio-cassette is another low-cost medium, which FAO has promoted extensively. The cassette's chief advantage over radio is the control that a group facilitator has over the information flow and the ability to start and stop at will, and repeat messages. In addition, cassette recordings are a convenient way to bring farmers' questions and information needs to the attention of extension and research. Folk media in the form of popular singers and musicians have also proven highly effective for focusing community attention on a range of topics, including population education and HIV/AIDS mitigation and prevention.

Flip-charts have proved particularly useful as extension discussion tools. Although research at the field level is scarce, a 1998 FAO study in Namibia showed that the use of two flip-charts to explain the benefits of using certified millet seeds along with recommended agricultural practices was positive. When compared to farmers who had not been exposed to the visual materials and extension agent explanations, farmers who were part of the extension communication programme increased their planting of certified seeds by 24 percent, and seeding in rows and use of fertilizers each by 23 percent. Equally impressive, almost half of the participating farmers agreed that the use of flip-charts by extensionists "helped them greatly to understand the improved farming practices".

Of all the group media, however, video has emerged as the lead medium of choice for supporting participatory farmer training in a variety of FAO rural development projects. Its many advantages are unequalled by any other medium, namely, its production "immediacy" with instant replay in the field to check on shooting details, its ability to add commentary in local languages, its ease of editing, and its "show anywhere, anytime" flexibility using battery or generator operated playback equipment where electricity is lacking. During extensive long-term projects in Peru, Mexico, and Mali, FAO has perfected a complete learning package – often referred to as a model for international reference (see Cases 1 and 2) – which

combines video with discussion, simple printed materials, and practical work. A more recent example reported by FAO involved a CIDA funded project for training women farmers in Jamaica wherein video was supported with drama performances, oral testimonies and printed materials.

G.Bizzari/FAO/18195

An application of group learning using a variety of media along with direct field experience, one which has proven effective and is growing in popularity, is the Farmer Field School or FFS pioneered by FAO in the Indonesia National Integrated Pest Management (IPM) Programme in 1989. IPM has since evolved into Integrated Production and Pest Management (IPPM). The guiding principal for a given FFS is that farmers meet on a regular basis to carry out practical learning exercises that combine indigenous knowledge with scientific recommendations. Courses take place in the field, field conditions define the curriculum, and real field problems are observed from planting of a crop through to harvesting. An FFS is usually initiated by someone who has had experience in growing the crop concerned. For this reason, most IPPM initiatives have begun with training extension field staff in basic technical skills for managing all aspects of crop production. Each school lasts for one cropping season, with a group of about 25 people meeting on a weekly basis to study and make decisions based on the cropping calendar (e.g. seeding, fertilizing, weeding, curbing pest encroachment). Instead of listening to lectures or watching demonstrations, farmers observe, record and discuss what is happening in the field. This hands-on, discovery-learning approach generates a deep understanding of ecological concepts and their practical appli-

Case 1: Video for Training at the Grassroots Level in Peru

From 1975 to 1986 FAO supported a farmer-training project in Peru as an integral part of its agrarian reform programme. Operating out of CESPAC or the Centre for Audio-Visual Services for Training, a training methodology dubbed *pedagogía audiovisual* was developed based on the rural proverb, "What I hear I forget, What I see I remember, What I do, I know". Audiovisual pedagogy used video as a lead medium in a training package, which also included printed materials (Guide for Trainers and a heavily illustrated Guide for Course Participants), discussions, and practical work with a field technician. Content for the course material was generated from interviews with farmers and integrated indigenous knowledge with up-dated scientific research provided by the technicians who were subject matter specialists. Topics included agricultural and livestock production, natural resources, health, mechanization, forestry and aquaculture.

Prior to mounting the project, field workers and facilitators were given a one-week course in group dynamics for adult learning and exposed to the range of training materials. In the field, each farmer-oriented course consisted of an average of six to seven classes spread over three months. The format for each class involved viewing a video programme, holding a discussion with the technician and then performing practical work. The video equipment, which was portable and battery-powered, allowed the training to take place in situ where farmers lived and worked.

Overall, some 1 000 videos of about 20-minutes duration were produced and used with more than 153 309 small farmers. Some of the communities contributed to the costs that worked out to US$30 per farmer per course over the life of the project. Support was provided by UNDP and FAO, but the project also generated US$1.5 million on its own. The project was later adapted in Mali through UNDP assistance with the creation of the Centre for Audio-Visual Production Services or CESPA. CESPA not only handles materials production and farmer training in Mali but services clients across West Africa. CESPA was granted parastatal status through national legislation in 1993 that allows it to generate and retain income, and eventually to become self-sustaining. Starting out at a 50/50 ratio between internal and external funding, by 1996 it had moved into a 70 percent internal versus 30 percent external funding formula.

A follow-up project from 1993 to 1996 was carried out in four Latin American countries (Bolivia, Brazil, Nicaragua and Chile) under an expanded training methodology renamed *pedagogía masiva audiovisual*. Upwards of 500 audio-visual producers and facilitators were trained, who in turn trained over 25 400 farmers in various agricultural topics. A World Bank study indicated that costs for these audio-visual training activities have been 1/3 to 1/5 of the cost of traditional extension training.

From: FAO. 1987b. *Pioneering a New Approach to Communication in Rural Areas: The Peruvian Experience with Training at the Grassroots Level.* By Fraser, C. Rome.

Case 2: Start-Up of Participatory Community Planning in Mexico

What might be coined FAO's first concerted venture into participatory planning by intended beneficiaries of a project, occurred in Mexico under the PRODERITH (Programme of Integrated Rural Development in the Tropical Wetlands Project), funded by the World bank and technically backstopped by the Development Support Communication Branch. The first phase ran from 1978 to 1984 and was concerned with improving agricultural development in Mexico's wetlands that make up 23 percent of the country's total land area.

Prior to PRODERITH, a large-scale integrated rural development project had been launched in the wetlands which drained 83 000 hectares, built roads, new villages, schools and medical centers, yet was never successful. The peasants never identified with it nor did they use or maintain the infrastructure properly. This was attributed to "a lack of effective mechanisms for the participation of the beneficiaries".

The objectives of the new project, budgeted at US$149 million, were to increase agricultural productivity in the tropical wetlands, improve the living standards of peasant families, and conserve natural resources. People in the targeted communities were involved in the planning process from the start. The mechanism to do this was imbedded in a Central Rural Communication Unit created for the project. It worked principally with video and support print materials to cover three types of communication needs: a) situation analysis and participatory planning with peasants, b) education and training for peasants, and c) information for project coordination and management. Outreach field units were set up to work with communities. Video was used to record local people's attitudes and perceived needs and then played back to individual communities as a basis for promoting internal dialogue about its past, present and future, and options for improvement. People began to articulate the realities of their situation, their priorities, and what they felt capable of doing. This was followed up with a synthesis of collective perceptions and elaboration of a "local development plan" for project concentration. During its implementation, video was also extensively used for orientation and farmer training in a wide range of agricultural and rural development topics.

At the end of its first phase in 1984 incomes of some 3 500 families in a 500 000 hectare zone had increased by 50 percent over 1977 levels. And perhaps most significantly, it had put in place a methodology for replication in a second phase involving 650 000 people in an area covering 1.2 million hectares.

The World Bank considered PRODERITH to be among the most successful projects they had supported up to that time, attributing much of its success to the participatory approach adopted by the communication units in synthesizing community development priorities, with follow-up skills training for farmers in its implementation. As for the bottom line, the communication component for the first phase absorbed only 1.2 percent of the total costs, while the internal rate of return, a measure of the economic success of the project, was 7.2 percent higher than originally foreseen.

From: FAO. 1997c. *Communication for Rural Development in Mexico: In Good Times and Bad.* By Fraser, C. & Restrepo-Estrada Rome.

cation. In the process, farmers are transformed from recipients of information to generators and manipulators of field-validated local data.

FFSs are always held in the community where the farmers live, with the extension officer traveling to the site on the day when the school meets. The field used for

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Case 3: Comparison of Inputs and Outputs of ten IPM versus ten Non-IPM Rice Farmers in West Sumatra, Indonesia

A controlled study was conducted in West Sumatra, Indonesia, during the wet season of 1992-1993 (December to May). The study compared costs of rice farming inputs and outputs among ten farmers who had participated in IPM farmer field schools during the previous wet season with practices and outputs of l0 farmers who had never participated in FFSs. The two groups of farmers were matched by location, farm size and land tenure. The only treatment variable was the IPM-FFS training.

Observations and discussions with both sets of farmers were held on a weekly basis. IPM training had stressed "Growing a Healthy Crop" (improved seed varieties, balanced fertilization, proper plant spacing in straight rows), Conservation of Beneficial Insects" (low pesticide use), and Weekly Field Observations to Determine Management Actions. The foregoing training focus was determined to be the major difference between IPM and non-IPM farmers.

The comparative results on a number of key variables based on actual harvests are tabulated below.

Variable	Average Budget for 10 Non-IPM Farmers (In Rupiahs)	Average Budget for 10 IPM Trained Farmers (In Rupiahs)
Pre-Harvest Labour/Ha	414 660	384 656
Harvest Labour/Ha	657 730	659 851
Total Inputs/Ha	163 268	139 819
Total Production Costs/Ha	820 998	799 670
Total Output in Kg/Ha	5 741	6 953

Overall, the IPM farmers achieved 21 percent more rice harvest yield on a per hectare basis (6.9 tons versus 5.7 tons), for 97 percent of production costs, when compared to their non-IPM farmer counterparts. The significantly lower "input" costs for IPM farmers were largely attributed to minimal usage of commercial pesticides. Labour costs were also slightly lower for IPM farmers, possibly because of better management actions.

From: FAO .1993. *IPM Farmer Training: The Indonesian Case*, Jogyakarta: FAO – IPM Secretariat.

study is usually small, and either provided by the community or some other arrangement so that farmers can carry out risk-free management decisions that they might not otherwise attempt on their own farms. All FFSs include field-based pre- and post-tests for the participants. Those with high attendance rates and who master the tests are awarded a certificate. Graduates from an FFS may also take over the job of extension facilitator by doing farmer-to farmer training or most of the functions in a follow-up season's training.

Empirical studies of IPPM-FFS compared with conventional practices show that IPPM methods increase both production and profits. Case 3 presents one such example. Since 1990 FAO estimates that more than two million farmers have graduated from FSSs in more than 40 countries drawn from Asia, Africa and the Americas.

G.Bizzari/FAO/19632-A

MASS MEDIA – MASS LEARNING

Learning through Radio
Given that one-third of adults in the developing world are illiterate, and particularly those in Africa (44 percent), the broadcast media and principally radio have performed a major service in information dissemination. Not surprisingly, with the advent of the transistor receiver, and lowering of prices, radio, either battery operated or wound-up by hand, became the ubiquitous medium for rural communication, a status that it is likely to retain well into the twentyfirst century. Much of the early emphasis in the 1970s, however, was on open broadcasting for unorganized

audiences within a national or regional reach, and typically carried out in isolation from direct involvement of farmers or extension in its programming. In the face of the criticism that by "attempting to reach everyone, it reached no one", open broadcasting for educational purposes, including agricultural programming, was given low priority, averaging less than five percent of total broadcasting hours. As a stand-alone medium, however, its main value was in reaching a lot of people quickly with fairly simple messages.

Attempts to improve the educational value of open broadcasting as a "magic multiplier" to enhance extension included the creation of **radio farm forums** directed to organised farming groups, built around the format "listen, discuss, act". A seasoned leader introduced each broadcast topic, initiated follow-up discussion after the broadcast, and coordinated action on its recommendations. The idea was originally developed in Canada during the 1940s and subsequently adapted in a number of developing countries including Ghana, Zambia, Guatemala, Thailand and Senegal. A common problem experienced in most was the difficulty in maintaining active group attendance over an extended period of time since the farm forum was initiated when radio sets were expensive and access was limited. With the advent of cheap transistor sets individual ownership became more common, lessening the appeal of regular attendance using a shared village radio. A trend toward a mix of private and public sector broadcasting, as a result of deregulation in many countries, also provided competition through a broader range of channels and topics for rural audiences. Radio farm forums mostly disappeared during 1980s, and were replaced by **listening groups** for specific themes (e.g. rural women's communication needs). Typically, these include groups of about 15 people who meet to listen to and discuss a weekly half-hour radio broadcast, under

the direction of a trained group leader who is supplied in advance with programme guide manuals. An accompanying textbook with each chapter covering a specific radio programme is provided to each participant as a reinforcer. Other materials might include posters, T-Shirts and dresses bearing topic-related logos.

With the current surge of **community radio** on the one hand and decentralization of capi-

tal city-based networks to include regional and local stations on the other, a radio rejuvenation appears to be under way, one that depends upon active audience participation during production and for feedback. Based on the outcomes of a regional workshop in Africa during 1996, FAO remains firm in its conviction that "Radio remains the most popular, accessible, and cost-effective means of communication for rural people. Radio can overcome the barriers of distance, illiteracy and language diversity better than any other medium".

"**In 1985 there were fewer than ten independent radio stations in all of Africa. By 1998 literally hundreds of independent and community radio stations had emerged.**"

(AMARC. 1998. *What is Community Radio?* Montreal: AMARC, p. 9)

MULTIMEDIA CAMPAIGNS

Early Approaches

Radio, whether national, regional or localized-community in reach has also formed the main stay for many multimedia campaigns, the most powerful of strategies in disseminating information and building motivation. Communication theory has tended to support the case for multimedia use based on the premise that having access to at least two channels allows a production team to present and reinforce the same points in different ways and with varied emphasis. Individuals also differ in their processing of information from different media; some learn better from and prefer visual media than audio and vice versa. In general, evidence from controlled classroom studies suggests that providing a
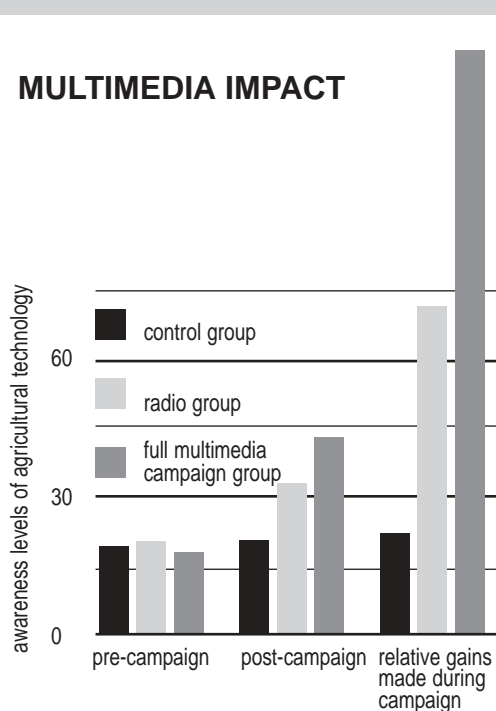

G. Coldevin

Case 4: Multimedia Advantage in Communication Campaigns

During 1988 FAO was asked to assist the mountainess Kingdom of Lesotho in southern Africa toward increasing sorghum production, a drought resistant crop grown by farmers in a dry region of the country. An assessment of their information and skills upgrading needs was undertaken by extension officers and subject matter specialists through group discussions. Priorities which emerged were to increase farmers' knowledge of recommended seeds, better methods of sorghum production, and reduction of post-harvest losses. A baseline KAP and media use survey was then taken with a stratified sampling of 161 farmers who were later classified as belonging to one of a) the full campaign communities, b) radio only communities, and c) a "control" community where the campaign was not held.

The full campaign which ran for nearly four months was kicked-off by a nutritionist who gave cooking demonstrations and explained the nutritional value of sorghum. This was followed by radio programmes aired once per week, distribution of illustrated leaflets, and communication teams using slide-tape programmes as a basis for follow-up discussion with small groups of farmers. Posters and handouts were also given during these sessions and practical demonstrations were held when possible.

An impact survey was taken immediately following the campaign. When compared with baseline levels, farmers who participated in the "full campaign" achieved a relative gain of 130 percent in their knowledge of recommended sorghum seeds, production methods, and post-harvest loss reduction. The "radio only" group achieved a solid knowledge gain of 70 percent, while the "control group" which did not experience the campaign directly, had a relative increase of about 20 percent, ostensibly through spin-off or secondary word-of-mouth effects with neighbours and friends who were part of the radio only group. The almost doubling of the impact of the multimedia approach in relation to the single medium effects of radio brings into sharp relief the power – and wisdom – of using a mutually reinforcing multimedia mix backed up with interpersonal support at the village level.

From: FAO. 1990. *Communication Strategies for Rural Development: A Case Study of the Use of Campaigns in Lesotho.* By Coldevin, G. Rome.

MULTIMEDIA IMPACT

awareness levels of agricultural technology

- control group
- radio group
- full multimedia campaign group

60

30

0

pre-campaign   post-campaign   relative gains made during campaign

variety of reinforcing channels caters to both learning styles and learning preferences. More practical findings from the field, however, especially in rural development, are rare but convincing where systematically documented (see Case 4).

Campaigns have been used in virtually every facet of rural development, particularly in agriculture. One of the better known case studies, *Masagana 99*, was undertaken in the Philippines during 1974. *Masagana* translates as "bountiful harvest" with the project objective being to increase rice production up to 99 sacks (50 kg) of unmilled rice per hectare. The channel mix included radio broadcasting, a variety of print materials (bulletins, posters), and intensively trained farm technologists. Radio was used in three ways: a) jingles and spot messages for motivation, b) information through a daily 30-minute farm programme, and c) instructional courses through the existing Farmers' University of the Air. Prior to the campaign the Philippines had to import a substantial part of its rice to meet national requirements. Following the campaign, rice yields had increased by 28 percent over the previous year and by 1976 a 40 percent rise was registered over 1973 pre-campaign levels. During 1977 national requirements were more than met and the country began exporting its excess harvest.

FAO has accumulated a strong legacy in implementing and validating this powerful delivery strategy in a variety of topics ranging from increasing maize and sorghum production in Lesotho to stamping out rinderpest viruses in thirty-four countries across West, Central and East Africa. One of its first campaigns, carried out during 1984 in Sierra Leone, was directed at increasing swamp-rice production. A baseline survey of knowledge, attitudes and practices (KAP), and media access and preferences was undertaken with a stratified sample drawn from both swamp cultivators and uniquely upland farmers. A nation-wide two-month campaign was then designed and launched involving a mix of four 15-minute "farming magazine" radio broadcasts per week reinforced by posters, pamphlets, and sound-slide presentations led by extension workers in targeted villages near swamp areas. Post-campaign results showed that, on average, all farmers had increased their knowledge levels by 60 percent over baseline scores. The highest gains were made by upland or non-rice farmers whose after campaign scores were over three times higher (307 percent) than baseline levels. This group also indicated a significantly positive shift in their intention to start swamp-rice farming. And farmers who tuned in regularly to the radio broadcasts gained almost twice the amount of information when compared with non-listeners.

Well documented campaigns have also been supported by FAO for rat control in Bangladesh and Malaysia, for integrated weed management in Malaysia, and for pest surveillance in Thailand. In each campaign KAP baseline surveys as well as focus group interviews for additional qualitative information were undertaken. An interesting variation in setting campaign objectives, which set

a standard for future reference, was the use of a targeted estimate of how much the campaign should accomplish in terms of shifts in each indicator included, e.g. post-campaign knowledge levels and practices. The rate of success of the campaign could then be judged by the gap between targeted and actual achievements.

Overall, the results of all campaigns were impressive. For example, the rat control campaign in Bangladesh during 1983 raised the adoption of rat control practices among wheat farmers from ten to 32 percent, resulting in an average harvest gain of 54 kg/hectare in treated fields. A follow-up campaign in 1984 with all types of farmers showed 47 percent practicing rat control before and 67 percent after the exercise, with average harvest gains of 44 kg/hectare.

Evolution of a Participatory Model
The importance of popular participation in planning and executing rural projects was first postulated during the 1970s when it was suggested that the "dominant paradigm" of top-down planning would shift toward self-development wherein villagers and urban poor would be the priority audiences, and self-reliance and building on local resources would be emphasized. The role of communication in this process would be 1) providing technical information about development problems and possibilities, and about appropriate innovations in answer to local requests, and 2) circulating information about the self-development accomplishments of local groups so that other such groups might profit from others' experience. Despite these early predictions, rural communication systems continued to service the transfer of technology or "TOT" model in which information passed from researchers to farmers though the extension system. At least a decade would pass before participatory methodologies began to gain acceptance. And where they were tentatively introduced, most projects up to end of the 1980s were mainly concerned with having beneficiaries discuss how to implement projects or "functional participation" (see Box on Participation Typologies). The practice of full "interactive participation", a product of the 1990s, started with beneficiaries deciding which development initiatives should be pursued, whether the initiatives were feasible and prioritising those that were, and only then deciding how to carry them out, all the while keeping in mind the requirements for sustainability and possibly "self-mobilization" upon project completion.

One of FAO's first exercises in "interactive participation" in communication and learning for community development was carried out over a three-year period in the Philippines from 1991-1994. Building on the mounting literature in participatory rural appraisal (PRA), and refinement of its methodology, the over-riding goal of the project was to take each of five pilot-communities or *barangays* (selected because of their physical isolation and ranking as economically depressed) through prototype exercises in setting priorities for technology transfer. This involved bottom-up needs assessment through a number of PRA tools (social and

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A Typology of Participation

- **Functional participation** – People participate by forming groups to meet prede-termined objectives related to the project, which can involve the development or promotion of externally initiated social organization. Such involvement tends to come after major decisions have been made, rather than during the planning stage.

- **Interactive participation –** People participate in joint analysis, which leads to action plans and the formation of new local institutions or the strengthening of existing ones. It tends to involve interdisciplinary methodologies that seek multiple perspectives and make use of systematic and structured learning processes. These groups have control over local decisions, and so people have a stake in maintaining structures or practices.

- **Self-mobilization** – People participate by taking initiatives independent of exter-nal institutions to change systems. They develop contacts with external institutions for resources and technical advice they need, but retain control over how resources are used. Self-initiated mobilization and collective action may or may not challenge existing inequitable distributions of wealth and power.

From: Pretty, J. 1995. *Regenerating Agriculture, Policies and Practices for Self-Sustainability,* London: Earthscan.

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livelihood mapping, seasonal calendar, problem trees, key informant panels, media access and preferences) and quantitative baseline KAP surveys, which served as diagnostic profiles for the framing of communication and learning objec-tives. A variety of multichannel communication approaches were then implement-ed, spear-headed by a new lead-medium in the form of community audio-tower systems or CATS, in each participating barangay. Each CATS consisted of a karaoke system, two microphones, and a 500-watt amplifier housed in a studio and connected to four 100-watt loudspeakers attached to a metal tower. Total cost of each complete unit was about US$2000 provided that construction of studio housing and towers were undertaken through local voluntary participation. "Broadcasting associations" were subsequently formed by each community to manage, produce, and broadcast programmes created by thematic sub-commit-tees, e.g. agriculture, health, cooperatives, and youth, on a weekly schedule. "Broadcasts" reached up to a 2-kilometer radius, more than adequate to blanket most *barangays*. Case 5 provides a snapshot of a typical CATS-led communica-tion campaign in one of the five project sites.

Networking through Village Telecentres
While the call for "networking" has become highly popularised, sub-Saharan Africa in particular has faced deepening marginalisation. According to data provided by

Case 5: CATS-Led Multimedia Campaign Propels Barangay
to Record Rice Harvests

The barangay of Tulungatung, Zamboanga City, on the island of Mindanao, was chosen as one of the project sites principally because of its classification as an agriculturally depressed barangay, with low annual rice yields. In 1992, the year leading up to the launching of the communication activities in 1993, average rice yields in Tulungatung were only 46 cavans (44 kg per cavan) as opposed to 77 cavans for the larger Ayala District in which it was located. During the multimedia campaign to promote increased rice production, a 4-month School of the Air (SoA) was run with three CATS broadcasts per week, along with print support and field demonstrations by specialists covering all facets of rice farming, including integrated pest management. Knowledge level scores among the rice farmers rose from an average of 55 percent prior to the campaign to 92 percent following it, while practices of recommended technologies rose from a baseline level of 46 percent to a post-campaign high of 68 percent.

The impact of the first few months of the campaign was reflected in rice yields for the 1993 wet season harvest (the dry season runs from about December to May, and the wet season from June to November). Of particular note, however, was the 1994 wet season harvest that reflected the impact of the full communication campaign. From a meagre beginning of 43 cavans per hectare during the wet season in 1992, immediately after the campaign in 1994 the wet season harvest yield in the barangay had more than doubled to 90 cavans per hectare, only six short of that produced in the district at large (see Table next page). Translated into monetary terms, at the going 1994 selling rate of 3.5 pesos per kilo, the wet season harvest increase per hectare in 1994 over 1992 levels amounted to Ps7,238, or about US$290.

Community project implementers were quick to point out that the growth in the rates of technology adoption were mostly due to low-cost practice changes. For example, one of their first challenges was to control a severe infestation of "black bug" which had been a major rice pest in the area during the previous six years. A cheap but effective repellent in the form of neem-leaf abstract was recommended and a vigorous effort was made to increase the local supply of neem plants. By the end of the campaign the outbreak of the pest was brought well under control, largely through the information and motivation provided by the CATS.

RICE PRODUCTION LEVELS

(Source: Zamboanga City Agricultural Office, Ayala District, December 1994)

Year	Dry season Average/hectare (In cavans)	Wet season Average/hectare (In cavans)
1992 Barangay full campaign area*	49	43
1992 District level non-campaign area	78	76
1993 Barangay full campaign area*	48	58
1993 District level non-campaign area	85	82
1994 Barangay full campaign area*	58	90
1994 District level non-campaign area	101	96

* The full campaign area contained 94 hectares of rice land.

From: FAO. 1995b. *Farmer-First Approaches to Communication: A Case Study from the Philippines*. By Coldevin, G. Rome.

IDRC, in 1999, excluding South Africa, the so-called "digital divide" was reflected in only one African in 9 000 having access to the Internet, while around the world the average was one person in 40. IDRC has responded with project "Acacia", designed to encourage access to ICTs by low-income groups in cities and the countryside, to provide tools and techniques that make it easier for low-income groups to use ICTs, and to adapt applications and services to meet community needs. The vehicle for doing this is through the establishment of community multimedia centres or telecentres accessible within an hour of home by foot. Most of its emphasis has thus far been on urban telecentres – which have been mushrooming – with typical services offered consisting of telephone, fax, photocopying, e-mail, Internet, and small group training in ICT proficiencies (e.g. information data navigation, networking, designing Web pages). Pilot telecentres are also being tried out in a limited number of rural settings (e.g. Mali, Uganda, Mozambique and South Africa).

FAO/SDRE has been actively supporting the use of ICTs for agricultural development through rural telecentres, and other means (such as cooperatives and farmer associations), although the pace has been much slower than the explosion in urban settings. Rural community telecentres (RCTs) have much or all of the capability of their urban counterparts as well as access to more traditional media such as audio and video playback equipment. Typically, they can also serve as

venues for formal and non-formal distance education training for extension and subject matter specialists. As information "depots" or "hubs" they can place regional, national and international information at the fingertips of agricultural development workers – information on markets, weather, crops, livestock production and natural resource protection.
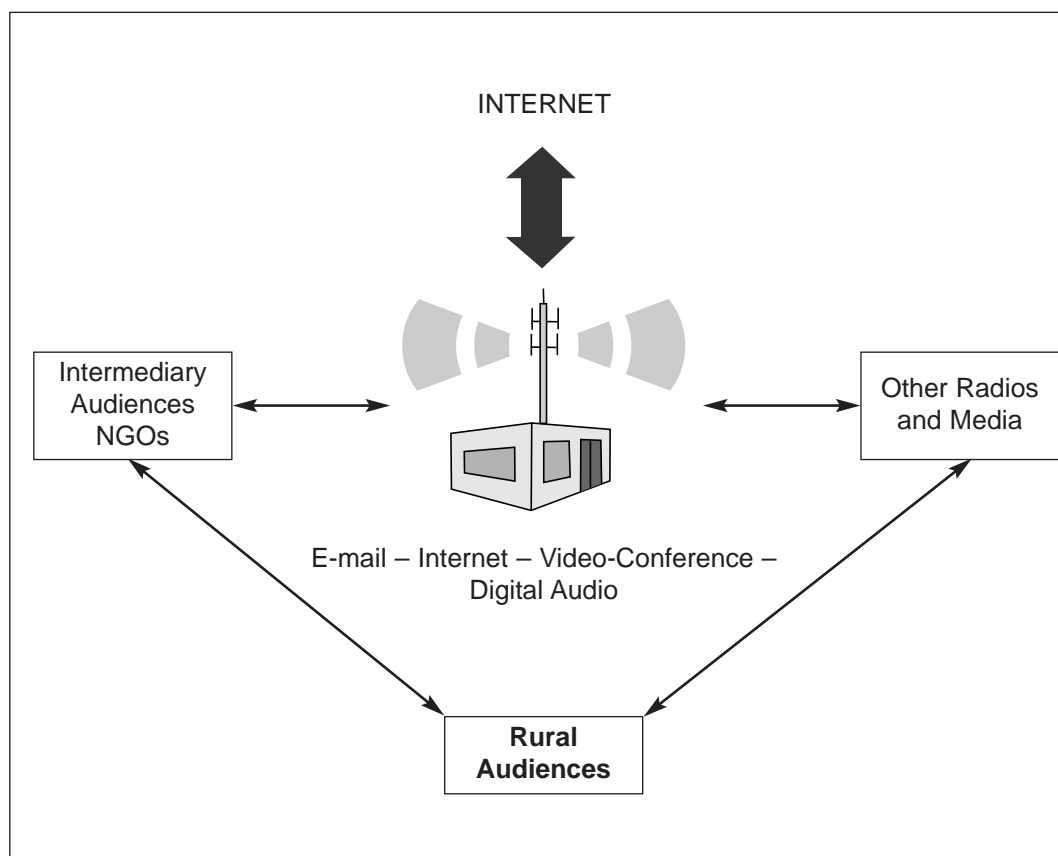
Much of the debate revolving around RCTs has been in establishing the link from the global networks to national, town, and finally to village levels, the latter referred to by some as "the last mile" of connectivity and others as "the first mile". Costs appear to be the main constraint. IDRC estimates that if a wired land-based network is to be put into place, the expense for connecting rural subscribers in Africa will be five to ten times higher than that of city dwellers. The cost of equipment, and training of those to operate it, must also be factored in. But the issues of connectivity, start-up costs and sustainability can be solved, according to the World Bank, through establishing rural telecentres as a "Community Utility", accessible on a pay-to-use basis. Based on IDRC's experience, however, the report card on making RCTs financially viable is still in the making. FAO, more optimistically, suggests that the trend is clearly wireless, mobile, multimedia and broadband ICTs, with costs dropping appreciable.

Undoubtedly, a strong case can be made for using participatory methods to bring crystallised farmer group's technology information needs to telecentres, tapping the relevant data bases available through the Internet that provide useable recommendations, and then packaging the results to respond to local demands and disseminating it through a variety of conventional media, and especially community radio, for maximum reach. Sustainability, in turn, will increase in direct proportion to client's satisfaction of the service. The Internet has to be clearly and immediately useful or people won't have the motivation to use it. Clearly, the lessons learned through past communication experiences should be applied to current investments in rural telecentres. Approaches that harness the power of ICTs with unique local needs will undoubtedly significantly strengthen the contributions that telecentres can make to rural development.

FAOs initial experience with using the Internet for rural development started in Latin America in the early 1990s when farmer-operated information networks were established in Chile and Mexico. Operating under the banner of FarmNet (the term that has been applied to initiatives growing out of the Latin American experience), linkages were established with agricultural producers, farmer associations, extension services and NGOs using conventional media, such as rural radio, and appropriate use of the new ICTs. The networks provide data on crops, inputs, markets, weather forecasts, and credit facilities, among other essential topics. All told, it has proven an efficient and cost-effective way for farmers to access local, regional, national and even global sources. For example, transmitting price and market information through computer-based networks has

proven to be 40 percent more economical than using traditional extension meth-ods. And by knowing market price information in larger centers, it has also increased farmers' profitability in setting local crop selling rates, and a base for better planning of quantities to plant in the future. In one case, by using market information provided through the network, a farmer association was able to sell cotton for US$82 per quintal as opposed to US$72, the price local buyers were trying to impose. FarmNet is being piloted in Uganda to facilitate information dis-semination among national, district and local levels of the Uganda National farmers association.

A more recent FAO development, as part of its World Agriculture Information Centre (WAICENT) initiatives, has been the Virtual Extension, Research and Communication network or VERCON, designed as an open network to improve communication between research and extension and, for those with access, farmers themselves. Prototype software is being developed which can be read-ily adapted locally to improve the flow of information between extension and research departments. And by linking a FarmNet to a VERCON, farmers can have better access to technical expertise. At the same time, researchers and extension workers can gain a better understanding of the local, site-specific problems that farmers face and the practices that they apply in their farming systems. A pilot project is currently under way in Egypt to test and refine the VERCON system.

INTERNET

Intermediary
Audiences
NGOs

Other Radios
and Media

E-mail – Internet – Video-Conference –
Digital Audio

**Rural
Audiences**

DISTANCE EDUCATION

While distance education (DE) has been recognized as the most significant educational innovation of the latter half of the twentieth century, its application has been mainly in the formal areas of instructional delivery. Initially building on correspondence for home-based study largely using self-instructional print materials, sophisticated institutions such as the Open University in Britain now use a variety of mixed-media support, along with tutorial counseling and library materials available at study centres geographically accessible to virtually all students. Increasingly, the Internet is being harnessed to delivery complete on-line courses as well as to provide rapid learner feedback and counselling.

R. Jones/FAO/19272

Within rural development projects, the potential exists for literally thousands of extension agents in Africa, Asia and the Americas to upgrade their credentials from one or two-year post secondary Certificates or Diplomas to B.Sc. first degrees, and even beyond to Masters level qualifications through in-service distance education. And by using participatory curriculum development methods, these programmes could be tailored to specific needs of extension workers based on their years of practical field experience. The same potential holds for providing pre-service qualification at all levels (Certificate, Diploma, B.Sc.) at a distance. Emerging examples where DE is being applied to extension training include the Open University of Bangladesh which has a B.Sc. Programme in Agriculture and Rural Development targeted at extension agents; Sir Arthur Lewis College in St. Lucia is also developing a post-secondary Certificate programme in Agriculture at a distance for Caribbean extensionists.

Most distance applications in agricultural education and training thus far, however, have been at the non-formal level, mainly using radio and text materials for both individual and group learning at the farmer level, what FAO has recently coined as "distance extension". Short courses at a distance for professional upgrading of extension agents have also been mounted. INADES-Formation, as a case in point, offers both farmer and extension level training. Founded in 1962 by the Jesuits and headquartered in Abidjan, it now provides self-study texts supplemented by radio broadcasts, study groups led by extension agents, a quarterly journal on agriculture (Agripromo), and occasional seminars for farmers and

extension agents in nine French speaking African countries as well as an English wing in Kenya and the United Republic of Tanzania. The course is primarily aimed at small farmers with little or no schooling, mostly studying in small groups, and extension agents who lack basic agricultural training. Certificates are provided to farmers at the end of the second and fourth years. A fifth year is designed exclusively for extension agents who receive a promotion upon completion. Up to the early 1990s at least 50 000 people, roughly divided between farmers and extension agents, had completed INADES-Formation courses.

Other examples of distance learning for non-formal education include the G.P. Pant University of Agriculture and Technology in Uttar Pradesh, India, which has offered print-based correspondence courses to farmers and rural youth since 1973. About 500 learners are enrolled each year; individual students can select four courses from a list of seventeen options (mostly on cultivation of particular crops, dairy production, and insecticide and fertiliser uses). A network of 20 District Extension Centres are available for individual counseling and study support. Non-credit certificates are issued to students passing end-of-term examinations in each course.

And the Allama Iqbal Open University of Pakistan (AIOU), established in 1975 as the first open university in the Region, has been offering correspondence courses in income generation activities for rural women since 1986. Practical course topics range from Poultry farming and Garment Making, to Selling of Home Made Products. Tutorial support is provided through local study centers. The popularity of the Programme is reflected in an enrollment, as of 1996, of about 4 000 learners per semester.

The **school of the air** (SoA) is another popular variation of using radio for non-formal distance education. Used extensively in the Philippines and Latin America (Escuelas Radiofonicas), the technique lends itself to both mass broadcasting and to participatory community radio for individual as well as group learning. Courses cover a variety of areas including literacy, numeracy, and basic education (usually up to primary qualifications). In the Philippines, seasonal courses spanning a cropping period of four months are offered to farmers on topics such as organic farming methods. Typically broadcast out of local municipal radio stations, a "community-focused" approach is stressed wherein a local farmer, and subject matter specialist work with radio broadcasters in scripting and production. In general, 30-minute programmes are aired five days a week over a four-month season. Print materials serve as complementary resource materials.

SoAs have proven both efficient and effective. In the municipality of "Infanta" in Quezon province in the Philippines, for example, a programme is presently underway to transform 3 000 hectares of chemically-treated farms to chemical free farms. More than 5 000 farmers will have been trained in two years through a combination of SoA broadcasts and farmer field schools over five seasons using

four teams of two extension workers as field facilitators in each. Using only FFS methods, at 40 farmers per school, would require eight extension teams, each composed of two persons, over 15 seasons or about seven years overall.

HARD LESSONS LEARNED
FOR THE ROAD AHEAD

1) The most potent lesson learned to date is that to be most effective, a partic-ipatory communications and adult learning component should be built-in from the start of a project. Unfortunately, all too often when communication and training are included, they are treated as an "add-on" component to assist project objectives that may be well off the mark. Simply stated, communica-tion with target groups in the planning stage gives a better project design and better chances of making it successful.

> "**Access to and control of information sources are essential for poor people to participate fully in decisions affecting their lives and communities. Sustained social change is impossible without their full participation.**"
>
> (Rockefeller Foundation .2000. *Special Programs: Communication for Social Change.* New York: www.rockfound.org.

2) Associated with getting participatory communication and adult learning start-ed early on in project formulation is the **importance of incorporating indigenous knowledge and practice**. The adage of "start with what people already know and build on what they have" subsumes the notion that indige-nous knowledge can provide a different understanding and analysis of a sit-uation, such that projects are formulated in harmony with the environment and relevant cultural issues. Experiences from around the world have shown that new "scientific technologies" are not always the best strategy to adopt. Farmers' indigenous agricultural practices offer many answers and the best of both knowledge areas needs to be considered to meet local needs.

3) A third lesson relates to **providing adequate funding from the start for communication and learning components**. A rule of thumb estimate is to budget ten percent but large projects may require proportionately less and smaller ones more. And based on the limited evidence thus far, training and technical support for ICT related projects will need substantially more funding than previously allotted for conventional media. For example, in a recent World Bank project with an information technology component, an average of 24 percent of the component was spent on training and technical support.

4) Fourthly, and although not a new theme, **building human capacity takes time**, usually much more than provided for in a typical five-year project. The

most successful of FAO's projects with a communication and learning component have had a running time of seven to ten years. World Bank staff go even further when suggesting that support to extension systems should be designed with a long-term perspective (15 years at least). The continent of Africa, which is littered with five-year projects abandoned on "completion" by farmers, provides strong testimony to the value of longer-term planning.

5) Given the location-specific nature of the best applied examples of participatory rural appraisal, a "small is beautiful" **focus of projects should be at the community level**. While a number of communities may be included in a given project, individual attention should be stressed such that each would build on its own strengths and unique opportunities. And undoubtedly, it is much easier to encourage and facilitate the four pillars of collaborative development at the individual village level, namely, multistakeholder involvement or pluralism, transparent negotiations, representational participation, and accountability. Interactive participation and self-mobilization are also best initiated at the individual community level.

"**Most extension successes are still localized. They are simply islands of success.**"

From: FAO. 1997d. "Extension's Role in Sustainable Agricultural Development", in *Improving Agricultural Extension – A Reference Manual.* By Roling, N. and Petty, J. Rome, p. 181.

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6) **Planning for gender sensitivity in communication and learning strategies** continues to be haphazardly applied, particularly with regard to rural women's concerns. Women farmers are responsible for half of the world's food production and in most developing countries produce from 60 to 80 percent of food destined for household food consumption. The "feminization of agriculture" means that rural women are key actors on the development agenda. PRA applications should address social, economic, cultural, and time constraints faced by women in producing and preparing food and factor these into the design of communication messages, appropriate channels to use, and best timing and locations for delivery.

7) The issue of **the lack of evaluation continues to undermine the perception of the value of participatory communication and learning** project components. Assessing and taking credit for outcomes and longer-term impact which rightly accrue from communication and learning activities, such as changes in awareness, knowledge, attitudes, skills and behaviour, should be applied more frequently. **Building in both qualitative and quantitative baseline measures** ensures that progress toward achievement of project

objectives can be measured during implementation, upon its completion, and well after to probe longer-term impact. Inferences as to the effects of media and learning strategies on agricultural production levels – as a result of practice changes – can also be made (e.g. results of IPM-FFS on increases in rice production in Indonesia). In short, we need to consolidate a portfolio of validated best practices to better enable project decision-makers to harness the power of communication and learning interventions.

One way to encourage more evaluation, and to curb the contention that it is such a time consuming process, is to choose and **apply only those PRA tools that will yield useful information**; and **the turn-around time for baseline quantitative surveys can be reduced by choosing smaller, but representative, samples and asking only what needs to be asked** for formulating a communication and training strategy.

The issue of **evaluation is taking on mounting importance since** the day is rapidly approaching when **donors will want hard evidence of the results of their project investments**. Anecdotal, narrative descriptions of outcomes and impacts will no longer do. **Results-Based Management** or RBM which sets specific inputs, activities, outputs, outcomes, and impact performance indicators is already being applied by a number of bilateral and UN agencies. Many, if not most, development agencies will follow. Mainstreaming gender into RBM and factoring it into the evaluation grid of project indicators is another very positive step in this movement.

8) **The question of how to best achieve sustainability following project completion** remains a constant challenge but some answers are starting to emerge. Among these:
   - a community focus with beneficiary participation is essential for setting achievable project objectives and creating local buy-in from the start;
   - extension communication and learning approaches should build on indigenous know-how and consult research on technical problems for which there are no effective local solutions available;
   - sufficient time should be allotted to routinise project objectives;
   - follow-on activities should use local resources (staff, media equipment and facilities) and fall within the means of extension, and the community, to afford them.

Experience has clearly demonstrated that researchers, educators, extensionists, communicators, and farmers must act as a dynamic unit in synergizing and complementing each other toward getting the best out of methods and practices of participatory communication and learning. This implies each sector taking the lead at a given stage (e.g, communicators facilitating PRA; farmers setting development priorities and their information and training needs; extension and media producers packaging research recommendations; skills training provided by educa-

tors and extension workers; and farmers training other farmers), but all working toward a common set of objectives.

Most of the guidelines developed for participatory communication and adult learning thus far have been accumulated over three decades. The current rush to network the rural areas of the developing world, and to apply the inherent global resources of the Internet toward meaningful community progress, would be well served by observing the rather more slowly accrued hard-earned lessons from traditional learning approaches gradually incorporating emerging communication technologies.

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