SOCIO-ECONOMIC METHODOLOGIES FOR NATURAL RESOURCES RESEARCH BEST PRACTICE GUIDELINES

IMPROVED COMMUNICATION STRATEGIES FOR RENEWABLE NATURAL RESOURCE RESEARCH OUTPUTS

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COMMUNICATION AND THE RENEWABLE NATURAL RESOURCE RESEARCH CONTEXT

Introduction

These guidelines are intended for the use of the natural resources (NR) research programme and project managers and staff in the UK and overseas. The aim of the guidelines is to help:

- programme managers ensure that a communication strategy, targeted at intermediate and end users, is incorporated into project design by giving them an overview of the kinds of processes and activities that need to take place and the issues that need to be addressed;

- project managers make decisions with whom to collaborate in relation to communication activities and products, to understand the processes that go into a communication strategy, the issues to be addressed, the kinds of skills needed and where they might come from, the nature of the collaborative links that need to be made if communication is to succeed, and the ways in which different media and methods can be used when communicating NR research outputs to intermediate and end users.

Box 1 below provides a summary of terms used.

Renewable natural resource research occurs within a wider framework of development, where there has been a shift towards policies focused on poverty alleviation and strengthening sustainable livelihoods. Within the research process, communication and information dissemination are considered to be key components. This has led to a heightened awareness of the need for better

BOX 1: Definition of terms

Research outputs – findings or results of the research process. This may be a visible product or technology, an invisible piece of information, a methodology, or a conceptual model.

Pathways – the route or channel through which the research output reaches the end user. This normally means the institution through which dissemination happens (e.g. CGIAR centres, local NGOs, local schools, a radio station, etc.).

Media products – the actual packaging in which the research output is contained, or by which it is communicated (e.g. video, journal article, radio programme, etc.).

Communication activities – activities developed and used in the process of communication (e.g. PRA, focus group discussions, workshops, training, etc.). These activities may or may not involve the use of a media product.

End users – farmers and others (e.g. individuals, households, communities, companies and associations) engaged in productive activities using renewable natural resources (RNR).

Intermediate users – those who use the outputs of research to produce information, technology and products for end users (e.g. researchers in international/national agricultural research centres, NGOs, private sector, technology transfer or extension agencies, bilateral and other donors).

Source: based on Garforth (1998)

communication strategies for the dissemination of research results to intermediate and end users.

Communication is no longer seen as simply a top-down flow of information, the delivery of messages through the national mass-media to mobilize populations behind government development programmes, or the didactic approach to extension in which agents deliver regular messages to 'passive' populations. Audiences are now seen as discerning groups of people with differing needs and perspectives, rather than as one 'mass' to be blanketed with the same message. Note however, that differences remain amongst institutions involved in research and development over both the role and most appropriate strategy to generate outputs and their dissemination.

Developing an effective means of communication entails the precise definition of the target audience and characteristics therein, as well as the change one is hoping to bring about through communication. What is the communication objective? Is it to bring about a change in knowledge, attitude or practice? Effective communication depends not only on what you are communicating, but also an understanding of with whom you are communicating and for what purpose.

BOX 2 Choice of media and target audiences

A project on integrated Food Crops Systems: crop protection component to develop/promote improved methods for the control of weeds, insect pests, diseases and nematodes in market gardening and commercial horticultural enterprises in Brong Ahafo Region, Ghana focused on the production of a manual in which various vegetable pests are described, with recommendations on how best to control them. Although it was expensive to produce, the manual was appropriate for the identified target audience, i.e. scientists, researchers, and the higher level staff within the agricultural extension service and literate people with purchasing power. The objective of communication was to inform users of the manual about various vegetable pests. If the target audience had been farmers, however, and the objective of communication, to demonstrate improved farming practice, the same information could have been more appropriately communicated through farmer field days and illustrated posters.

Identification of communication objective and indicators

Identification of the NR research output, past and future stakeholders, and intended target audience are all important factors in any communication initiative. But perhaps the most critical factor on which effective communication depends, is the identification of what we hope to achieve through this communication. What is the desired change that we hope to bring about? Is it raising awareness on a given topic, is it to change attitudes towards a certain issue or is it to alter people's behaviour in a given way?

There are many reasons for wanting to communicate with people, for example:

- to raise awareness on a given topic
- to change attitudes
- to change behaviour
- to give or receive information
- to make, maintain or develop relationships

- to achieve a goal (action on the part of others)
- to reach decisions
- to gain commercial benefit/advertise
- to educate/for learning
- to share experience.

Determining the reasons for communication and understanding what is to be achieved are best done in consultation with intermediate and end users. It is also important in determining which communication pathways and media products are most suitable to develop, given that different communication products lend themselves to different outcomes (see the Annex for advantages/disadvantages of various communication products). For example, radio is good at raising awareness on certain issues and can be instrumental in changing attitudes. It is far less effective at communicating technical and detailed information. Participatory workshops, on the other hand, if run well, provide a good forum for sharing experiences, findings and building up teamwork or for learning how to carry out a practice. Posters may be effective at publicizing an event or delivering a slogan but alone will not go far in changing behaviour.

Programme communication strategies

There are a number of practical ways in which incorporating a communication strategy into the research process can be facilitated by RNR research programmes:

- 'Invitation to Bid' packs, issued by research programmes, can emphasize the requirement that an integrated communication strategy, which has addressed the steps outlined below, should be presented as part of the tender;

- programme managers may consider including a list of advisory organizations or individuals who can be consulted at this stage for advice relating to communication of NR research findings;

- reporting requirements for concept notes, project documents, and monitoring and evaluation reports need to be designed so as to ensure that a communication strategy is in place and being implemented throughout the project cycle;

- programmes could incorporate communications expertise into their advisory committees.

Making a communications advisor available to programmes can help to ensure that a proposed communication strategy is in place right from the start of a project, even if that strategy changes as the research process progresses.

Project communication strategies

To be successful, communication and dissemination need to take place within an enabling research project environment. This will be facilitated if the following, wider principles are observed:

- the project is demand-led
- the project is participatory

- the project has an understanding of those with whom it wants to communicate
- the project has a strong and active working relationship with collaborators
- collaborators have dissemination capacity of their own
- collaborators have a good track record of two-way communication with intermediate/end users
- collaborators have access to, and use effective promotion pathways
- the project/programme has developed strong linkages with other relevant institutions (e.g. other donors, Department for International Development (DFID) bilateral programmes, NGOs, commercial sector, etc.).
- good information flows exist between the RNR bilateral and research programmes.

These guidelines focus on putting in place a communication strategy from the design stage of a project. They can apply whether strategic research or adaptive research is being carried out. Most of the examples used here, however, have been taken from the more adaptive end of the research spectrum, as this is where the need arises most.

DEVELOPING A COMMUNICATION STRATEGY

A communication strategy is more than straightforward dissemination or message delivery. It is an iterative, two-way, multi-directional process involving a range of stakeholders and their needs. It should take communities into account as generators, transformers and users of information, in developing skills and education, both for their own benefit and for working with outside agencies which can facilitate their moves towards change.

A communication strategy should be put in place at the design stage of the project. The elements for research where participatory approaches are fully integrated are listed below. However, it should be noted that differing levels of participation and participatory methods may be appropriate depending upon the research context (see Sutherland, 1998).

Participatory activities to identify:

- RNR research output(s)
- stakeholders and target groups
- communication objectives and indicators for evaluation
- needs of target groups
- communication context of stakeholders.

Participatory methods for:

- developing communication products and activities
- pre-testing media products and communication activities
- monitoring and evaluation of communication products and activities
- monitoring and evaluation of the communication strategy.

When developing a communication strategy, the following questions are key:

- What is the subject matter we are communicating (messages/issues/topics)?
- Who are our audiences?

- What information does our audience need?
- What information do we need from our audience?
- From whom do we need input?
- What are the objectives of the communication strategy?
- Why communicate?
- What are we trying to achieve by communicating?
- How should we communicate in order to best achieve our objectives?
- How do we get feedback?
- When should we communicate?
- Who should do the communicating?

Steps to be taken when creating a communication strategy

While the following list of steps to consider when drawing up a communications strategy may at first appear daunting, a number of the activities will already be ongoing as part of the research project. For example, researchers will periodically re-assess the anticipated research output; they will have a clear idea of the characteristics and strengths of their collaborators; they may also carry out their own needs assessment with intended project beneficiaries. However, as indicated above, the degree of needs assessment and other participatory components will vary depending upon the nature of research involved.

Much of what follows can be integrated into existing project activities, however, managers will need to review what is feasible in terms of the human and financial resources available to their projects. While these steps are roughly chronological, they are issues that need to be revisited periodically during the life of the research project, thus ensuring that communication is a cyclical, iterative process:

- identification of the anticipated or actual research output
- identification and participation of stakeholders
- identification and understanding of target audience(s)
- identification of, and collaboration with intermediate organizations
- assessing the communication context
- needs assessment of target audience(s)
- identification of the communication objective.

Figure 1 shows how these steps provide the foundations for developing appropriate media, as well as their pre-testing, monitoring and evaluation.

1. Identification of the anticipated or actual research output

What is the issue, topic, message that we wish to communicate? In the case of a straightforward, add-on dissemination project concerned with communicating a given set of findings from previously undertaken research, the identification of findings to be disseminated will not be difficult. More difficult is to anticipate research findings right at the start of the research process, especially where work is of a more strategic nature, or where there are strong participatory and action research components which mean that outcomes may not become clear for some time into the research process. These findings will be refined as the research process develops, in collaboration with users of research. This activity will normally occur within the research project, regardless of a communications perspective and should, therefore, be of no extra cost.

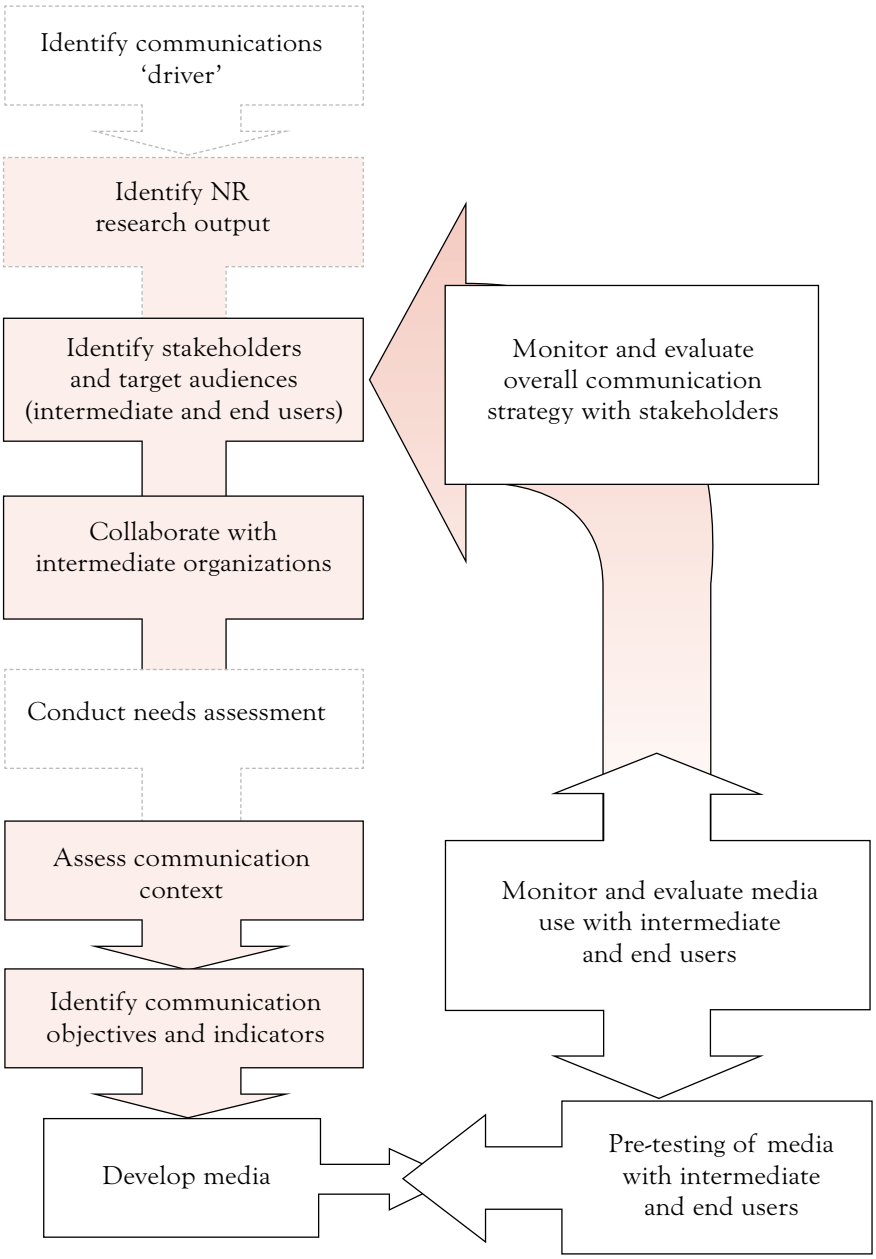

Figure 1: Communication activities and the project cycle.

2. *Identification and participation of stakeholders*

Stakeholder analysis may be recommended at the start of a research process in order to draw out the interests of stakeholders in relation to the problems that the research project aims to address (see Grimble, 1998). In the context of a communication strategy, such analysis may identify those with whom the project should communicate, as well as all those who want to communicate with the project. Stakeholder analysis can also identify and involve those who will facilitate communication and dissemination, and carry it on during the project and after the research is over. Stakeholder analysis is not always a component of research projects and may, therefore, represent an additional cost.

With add-on dissemination projects, it is worth taking a retrospective look at who the main stakeholders within the research process have been and what has been their role, not just with regard to dissemination of the research output, but also with regard to their participation in the research process. Such an assessment will help determine:

- lines of communication so far established in the course of research already undertaken
- participation so far, by whom and with whom
- gaps in communication
- with whom findings should be communicated
- when findings would be most appropriately communicated.

3. *Identification and understanding of the target audience*

Although all stakeholders are potential target audience(s), these guidelines focus on intermediate and end users. Precise identification, and the development of an understanding, of these groups with whom information is to be shared are important. At the early stages of a research project, understanding of the target audience may be broad, and will need to be refined as the project develops. It is unlikely that intermediate and end users are homogenous groups. Audiences may have different communication requirements, depending on age, gender, state of knowledge, location, wealth and so on.

As the research project develops, it may be useful to draw up audience profiles. Project managers will need to decide what is feasible in terms of project resources – clearly the more diverse and dispersed the audience, the greater the cost is likely to be of developing a representative sample. In this context, targeting final consumers of research outputs may be more expensive than focusing upon intermediary bodies. There will need to be an individual who takes responsibility for co-ordinating data. This may also be done in collaboration with intermediate organizations identified (see below). Basic criteria to consider will include:

- gender
- age
- occupation
- wealth
- location
- level of education/literacy
- livelihood system
- access to, and use of media
- importance of differing sources of information (word of mouth, radio, press, etc.).

4. *Identification of, and collaboration with intermediate organizations*

Collaboration with intermediate organizations is essential if the impact of RNR research is to be optimized. These are the organizations which provide the vital links in the pathway to the end users. The effectiveness of RNR research communication activities will be dependent on collaborators' communication capabilities, unless researchers and their institutions take responsibility for these activities. For effective communication strategies, collaborating organizations should be chosen for their

communication and dissemination capacity, reach and track record. In practice there may not be many alternative bodies from which to choose and the available institutions may lack some of the desirable characteristics indicated below. In these circumstances project managers will need to make pragmatic choices.

The following questions should help in determining options.

- Is there in-country experience of communication strategies and dissemination activities? If so, was it successful, who planned it, and could the same organization be called in to help to plan the present communication activities? Possible useful sources for this information may include:

  – university schools of communication or extension
  – private communication/advertising organizations
  – NGOs
  – agricultural information or communication units.

- Who has carried out communication activities and designed and produced the media and materials? Were they successful? Can they be called upon and do they need strengthening? Likely sources for this information may include:

  – agricultural or research information or communication units
  – NGOs with good grassroots links (training, PRA or other participatory networks newsletters)
  – community-based organizations
  – local video producers and drama teams
  – local facilitators for workshops, for PRA/PLA
  – national/local mass-media producers (TV, radio, press).

- Do these organizations have mechanisms for ensuring that decisions about what is needed (e.g. training materials, information) are made in consultation with the full range of stakeholders?

- Can they offer support for the use of information (e.g. provide or link into training, transform and adapt information to local conditions)?

- Do they have the capacity to work with different groups/sectors of the population and are they able to facilitate joint learning and analysis (using PRA/PLA, etc.)?

- Are they able to work directly in local languages/literacies?

- Do they carry out routine pre-tests of communication activities and products for comprehension, relevance, etc.

- Do they keep track of the use of information (monitoring and evaluation capacity)?

- What information distribution systems exist?

- Are they active seekers of information both within their own country/organization and from outside?

5. *Assessing the needs of the target audience*

A needs assessment is necessary to find out the target audiences' interest in, knowledge, perceptions of and behaviour, concerning the anticipated or completed research issue. Ideally, it should be carried out in the early stages of the research process in order to inform researchers of beneficiaries' and other stakeholders' needs regarding the research output. It will help to identify and include major stakeholders in the research to be undertaken, thus, not only ensuring that the research is meeting clients' needs, but also improving the communication process, by involvement and participation of stakeholders. In most cases needs assessment will already have been covered in research budgets, however, this is not always the case and additional costs may need to be covered.

In the case of follow-up projects it may still be worth conducting a needs assessment, in order to ensure that the research output in hand is appropriate to the needs of the target audience, both in terms of content and treatment.

Not only does a needs assessment help to ensure that the 'message' being communicated is appropriate, it will also give some baseline data, which can in turn provide part of the means to monitor the effectiveness of the communication strategy (be it an information campaign or a participatory learning process) at a later stage.

BOX 3: Development, validation and promotion of appropriate extension messages and dissemination pathways – Kenya

The Livestock Production Programme is a research project that aims to research the effectiveness of comic-booklets and their distribution pathways in delivering livestock-related information (already researched) to rural populations in the highlands of Kenya. At the start of the project a needs assessment study was carried out to establish the livestock information needs of poor rural communities in a densely populated, agriculturally high potential area of Eastern Province, Kenya. Through a series of focus group discussions with both men and women farmers, livestock information needs were identified as follows.

Bees:	how to attract and retain a swarm in areas where flower numbers are declining.
Poultry:	how to exploit local cures and indigenous preventative medicine/management for local and improved birds.
Rabbits:	information of multifunctional uses of rabbits (e.g. culinary, skins), so as to stimulate local demand and supply.
Goats:	upgrading strategies for local goats so as to improve milk yield for human consumption.
Sheep:	prevention of, and local cures for diseases causing diarrhoea.
Pigs:	alternative feeds (i.e. not commercial feeds) for improving sow performance.
Draught cattle:	better harnessing for humpless cattle.
Dairy cattle:	disease prevention and diagnosis

Below are some of the issues to consider when conducting a needs assessment. Broadly speaking, questions relate to the target audiences' knowledge relating to a given topic, their attitude to, and interest in it, as well as their behaviour. Without this information, it will be difficult to identify which are the appropriate messages to develop and deliver.

In summary, therefore, why conduct a needs assessment?

- It will reveal the gaps in the target audiences' knowledge.
- It will reveal the extent to which an audience knows about an issue, but is not acting on that knowledge.
- It can provide baseline information with which to assess the effectiveness of intervention (and communication of intervention) at a later stage.
- If conducted in a participatory way, it will engage the target audience and increase the likelihood of effectiveness of communication.
- It can reveal reasons why a group may not act on information they already know (e.g. taboos, cultural issues, etc.).

6. *Assessing the communication context*

An assessment of the communication context will not only tell us about the target audience's access to, and use of media, but will also reveal the coverage and reach of different types of media. This recommended activity is likely to be additional to those within existing research projects, but should not normally be an expensive or particularly time-consuming exercise. Again, it may be possible for an individual on the research team to undertake this activity, for example, the individual responsible for communications, possibly working with intermediate organizations. As indicated earlier, much will depend upon the diversity and dispersal of the potential beneficiaries of research.

The following need to be addressed in relation to different sub-sections (e.g. women, men, young, old) within the target audiences who may have differing access to information sources.

- Which means of communication do people and organizations prefer?

- What are national/local figures relating to reach and coverage of different media?

- What is the target audiences' ownership of, or access to mass-media (e.g. radio, newspapers, community TV, etc.); this will be affected by literacy levels and language preferences according to gender, age, wealth and urban/rural livelihood systems.

- What other sources of communication do people have access to (e.g. friends, neighbours, marketplaces, schools, religious bodies, folk media, training centres, etc.)?

- Which members of the community have respect and authority in the community (e.g. chiefs, religious leaders, politicians, extension workers, commercial company representatives, etc.)?

BOX 4: The East India Integrated Aquaculture Project

The research component of the East India Integrated Aquaculture Project has developed a communication strategy for aquaculture recommendations in eastern India. It focuses on the rural poor who have limited access to perennial ponds, fish seed or the recommended level of inputs. As part of the communication strategy and development of the communication context, a study was made of existing media and how accessible these media are to farmers: the following table was developed as information was gathered.

TABLE 1: Existing media and accessibility to farmers in the project area

	Literature	Radio	TV
Existing media	Pamphlets from KVKs, CIFA, Veterinary College, FFDA, NGOs most often in Hindi or English	All India Radio (AIR) agricultural programmes 6:05–6:10 (short advice) and 19.00–19.30 (specialist interviews) daily in the major language of the region. Topics vary, depending on season. Specialists from KVKsi, the agricultural universities, IBRFPI, etc. AIR tribal language programmes (news and drama) 18:00–19:00. In many villages very small radio stations broadcast only at the village level.	Each state has a number of TV stations. Ranchi TV station broadcasts agricultural programmes (Gramenoketje – programme for rural people) 18:30–19:00 in Hindi (daily) and Nagpuri (Wednesday), and covers livestock, fisheries, poultry, dairy, etc. It has two components, a part aimed at farmers (talks by scientists, other experts and farmers) and a part aimed at development agencies.
Accessibility to farmers	Literacy levels in the project area: 20.9–69% for men (average 50.5%), 1.4–51.7% for women (average 25%)	Broadcast radius AIR: 100 km. AIR estimate 75% of all farmers listen to evening programme daily. All project villages have 10–15 radios, men listen mainly to news and cricket, women to music. Mainly young men and educated people listen to the radio, the poorest people do not have any spare time.	Ranchi TV station estimates rural viewing figures: Ranchi District – 35% of viewers watched agriculture programmes (1998). West Bengal – 1 095 104 Bihar – 841 835 Orissa – 441 650 Only rich villagers (7%) can afford TVs but some villages have none. TV access for women is restricted. Irregular electricity supply constrains viewing.

- What are the target audiences' sources of information for the given research topic?
- Which other institutions inform the target audience on the research topic?
- What are the target audience's sources of information for similar, i.e. other NR, topics?
- How is this information given?
- Is this means of communication effective?

- How might it be improved?

- When is the best time of year/month/day to communicate in relation to the research topic?

- When, during the day, is the best time to reach the target audience?

Clearly the above list represents a considerable body of information and, given limited resources, research managers may have to prioritize and focus resources upon the most important components.

Why assess the communication context?

- It can provide baseline information with which to compare ratings before and after the dissemination phase; for example, how many people used to listen to a time segment on a given radio station and how many do during or after the programme transmission containing research findings? While this will not show the impact of the programme, it will reveal its popularity.

- It will indicate the most appropriate means of communicating with the target audience (time, language, treatment, etc.)

- It can enable the means of communication to become participatory; for example, it can include audiences' comments and feedback on the programme, article, etc.

- It will reveal different sub-sections within the target audience who have differing access to information sources (e.g. women, men, children, poor, etc.) and will help to define the most appropriate communication strategy accordingly.

CHOOSING AND DEVELOPING APPROPRIATE COMMUNICATION VEHICLES/ACTIVITIES

Matching communication products and activities to target audiences

Figure 2 shows which communication products and activities may be appropriate for an audience, depending on their attitude to, and knowledge of, the topic in question. For example, if the target audience knows a little about a topic, but still thinks that it is important (e.g. if it is important for their livelihood), then the main communication objective may well be to challenge their existing beliefs and to inform them more about the topic (see box at top right in Figure 2). In this case manuals, training events, workshops, demonstrations, etc., may be appropriate, depending on what is known about that target audience's communication context. The diagram is *not* intended to be prescriptive, rather, it is an illustration of possible options from which project implementers will choose, depending on the context.

The concern here is the audience's own perception of their level of knowledge and interest in a topic. Whether or not farmers know the *real* cause of this or that crop disease is irrelevant, because if they *believe* they know it, they will not be interested in being taught otherwise. In this case an approach which is based on working with farmers, to address the problem as they see it, will probably work better.

Ideally, the aim is to move people from a position of low interest and little knowledge to a position of high interest and high knowledge (top left to bottom right in Figure 2). It is at this point that action may follow. Nevertheless, behaviour change is not guaranteed, it is only more likely. There may be any number of factors blocking action, for example, financial constraints, other competing priorities, outside political factors, etc.

Choosing appropriate media

Understanding who the target audiences are, where they stand in terms of knowledge of, and interest in, the research output and what media they are used to, as well as

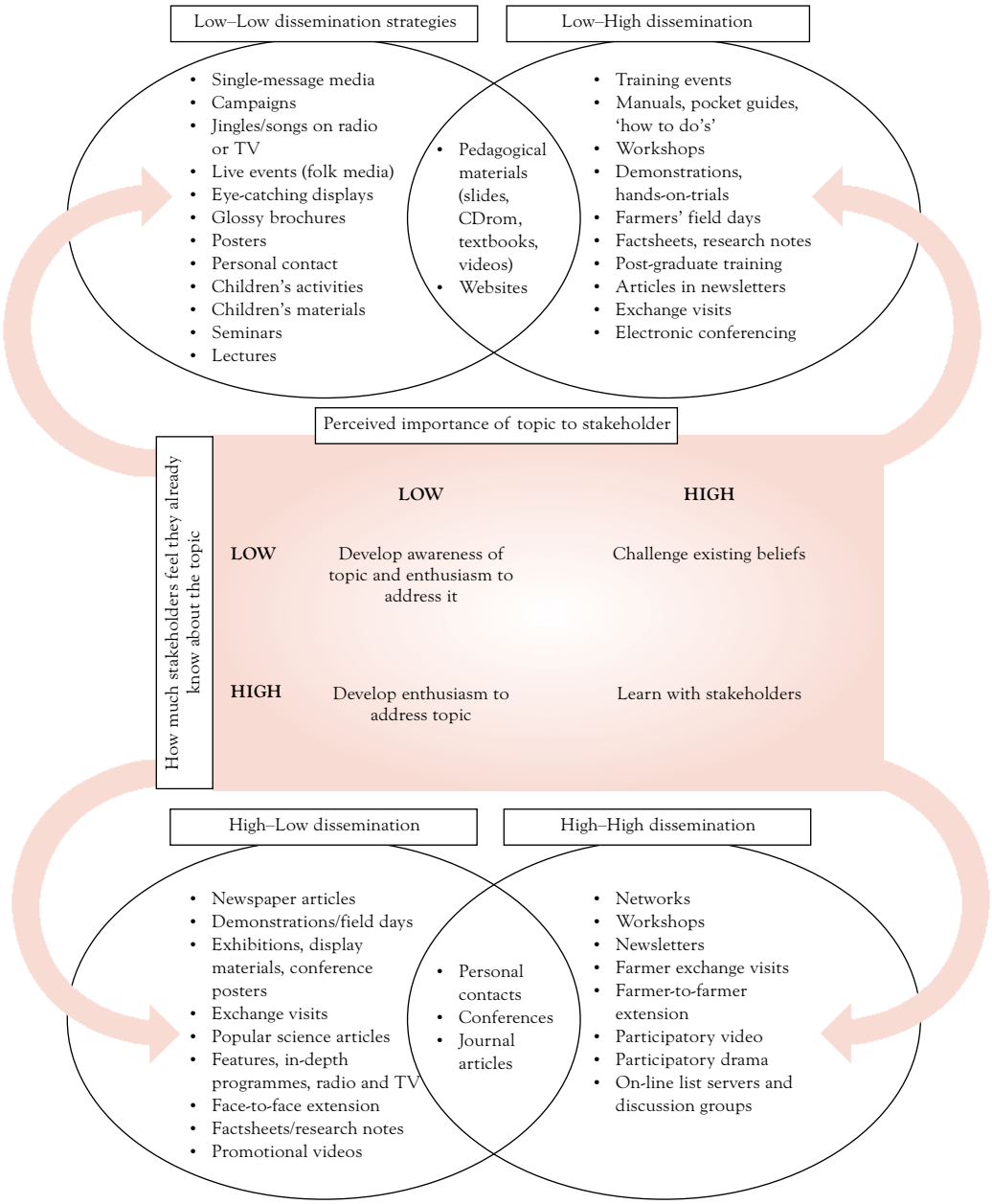

Figure 2: Characteristics of target audience and relevant dissemination strategies.

clarifying the reason for communicating with them, will all help in choosing the appropriate media for them. Figure 2 gives some indications but it is by no means exhaustive or prescriptive.

In most cases a combination of different media works best. A radio campaign can have a greater impact if it is linked with visual media, such as posters, featuring the same characters as those appearing on the radio. Workshops are more effective if they are backed up with striking displays or posters, concise handouts and a good workshop report. The Annex gives fuller guidelines on which media lends itself to what context.

Obviously some media lend themselves to a wider range of applications than others. For example, workshops can be adapted for a number of target audiences, from university professors to national agricultural research systems (NARS) scientists to goat-herders, and for a wide range of purposes, for example, training, academic exchange, technical demonstrations, eliciting funds, brainstorming, policy-making, etc. Other media, such as websites, have a more limited audience (they preclude most end users) and can fulfil only a narrow range of functions, for example, publicity, research exchange, or introductory/general information.

Time and money are also important factors to be taken into account when choosing between different media. In the Annex to these guidelines the advantages and disadvantages of different media, a checklist to use when considering different communication products, indicative costs and the time taken to develop communication technologies are given.

Budgeting for communication

Budgeting for a communication strategy and for the effective dissemination of specific research outputs at the start of the research process is notoriously difficult. At the concept note stage it may be even more problematic.

FAO (1989) recommend the following budget for development projects "...as a rule of thumb, and since experience has shown that a well-organized communication component for a project usually costs about 8–15% of the total project budget, include a provisional 10% for communication support, pending the formulation of a detailed communication plan". Although the FAO proposals for communication strategies are similar to those in this guide, the cost to research projects may be different from those for development. For example, research projects may start out with less information on final targets than is the case for development work. Much may also depend upon capabilities (and costs) of associated bodies involved in research and communications.

BOX 5: The East India Integrated Aquaculture Project

This project developed a three-step extension strategy, the first step of which involved raising awareness with farmers (end users) and aquaculture research institutes and extension agencies (intermediate users) that aquaculture can diversify livelihoods, can provide an extra income and food source. The media developed to achieve raising awareness were costed (Table 2).

TABLE 2: Costed recommendations for awareness creation for farmers and aquaculture extension agencies

Recommendation	Cost	Total	
		(Rs)	£
Project findings (research methodology and specific recommendations) published in both international and in-country scientific journals by the end of the project.	1.5 months – one full-time staff @ Rs 60,000 per month	90 000	1324
Meetings between project staff and ICAR institutes to ensure that local research institutes are aware of approaches taken by the project (the project is already co-operating with CIFA, DoF, agricultural university, SRI).	1 trip to CIFA HQ Bhubaneswar @ Rs 600 x 5 KRIBP(E) aquaculture staff = Rs 3000	3000	44
A local drama group with tribal actors commissioned to write a play on aquaculture as an option. Performance in 20 villages in project area.	Rs 16 000 for play Rs 1500 per performance x 20 = Rs 30 000 plus transport and accommodation for actors @ Rs 200 pp x 15 actors x 20 nights = Rs 60 000	105 000	1544
Performance of the play for recording on video in Hindi and English. Video taping of play. Translation of video into Bangla, Oriya and Hindi. 100 copies of video. Demonstration of video to farmers in Bihar, Orissa and West Bengal on the communal TVs present in most villages. The video should be made available to CIFA, the FFDAs and the KVKs and NGOs of the region.	Rs 5000 x 2 languages = 10 000 Rs 100 000 Dubbing studio at Rs 200 x 10 hours x 3 languages = Rs 6000 Rs 200 x 100 copies = Rs 20 000 4 full-time staff @ Rs 300 per day x 5 days each = Rs 6000 1 full-time staff @ Rs 300 per day x 5 days = Rs 1500	143 500	2110
Folksongs in Nagpuri and Hindi with aquaculture message recorded. 250 copies of tape made. Songs played on radio stations and at market fairs and sold on cassettes to farmers in village stores. Copies distributed to the FFDAs, the KVKs and the NGOs of the project area.	Rs 3500 x 2 languages = Rs 7000 Rs 20 x 250 copies = Rs 5000 1 full-time staff @ Rs 300 per day x 5 days = Rs 1500	13 500	199
Fairs and markets arranged to increase the opportunities for farmer communication and thereby the dissemination of information.	Rs 5000 x 9 fairs (3 in each project state) = Rs 45 000	45 000	662
Total		**400 000**	**5883**

After a project has been approved (or during an inception phase), managers, project staff and stakeholders can start planning a strategy and develop ideas for communication activities and products. As research continues it may become progressively more feasible to estimate costs, including those for alternative strategies. Whilst some activities contribute jointly to both research and the development of communications strategies, others are additional to those for research alone, for example, the cost of hiring professional staff and developing actual media. The Annex to these guidelines provides an indication of production costs, based as far as possible on previous RNR project experience.

The communication strategy will need to be revisited and refined constantly throughout the project cycle and budgetary provision may have to be altered accordingly.

Identifying costs in an add-on dissemination project should be more straightforward, as the nature of the research output will be known. However, costs are unlikely to be significantly less, as similar communication strategy processes will need to be undertaken.

Skills needed for communications

At best, communication strategies need a 'driver', a person who has responsibility for all communication activities and products from the start of a project. Whilst there are arguments in favour of this driver being a communication expert, the most important criterion is that someone takes responsibility for the management and continuity of communication planning and activities throughout the project. This could equally be one of the project staff with an interest in communication and dissemination.

During the course of a project many skilled communication practitioners may have to be brought into the project. Ideally they should be brought in as early as possible and have an opportunity to take part in discussions with project staff and stakeholders. In order to avoid some of the problems of working across professional divides, efforts will need to be made to ensure that project staff, stakeholders and professionals work as a team.

The following checklist will help to keep control of the issues to be communicated, whilst getting the most out of the commissioned media professionals and should facilitate working as a team.

- Make sure you know who your target audience is and what you hope they will learn, think or do, as a result of your communication product (if you do not know this, the media professional definitely will not).

- Give the media professional a short written brief (one side of A4 at most) outlining the above, keeping it simple and avoiding scientific jargon.

- Try to anticipate the questions he/she will ask (e.g. budget, time-scale, quality of materials to be used (weight of paper, number of print colours, quality of videotape, etc.).

- Establish a written contract.

- Invite him/her to meet relevant staff and visit the field/laboratory/factory where the research is taking place.

- Keep in regular touch with media professionals and target audience as the product develops and insist on reviewing the draft product during its development.

- Work with him/her on pre-testing the product on a small sub-section of the target audience.

- Consult and work with her/him on distribution.

- Work with him/her on monitoring and assessing impact.

Pre-testing the communication vehicle

Pre-testing is undertaken during the development stages of media production. It involves key stakeholders in the process and provides feedback so that materials being developed can be changed before final production. Pre-testing of specific parts of the material (e.g. illustrations, text), separate from the whole, is an important part of any pre-test in order:

- to ensure that treatment and content are
  – acceptable
  – comprehensible
  – useful
  – relevant
  – interesting
  – fit for their purpose

- to identify and solve early production and distribution problems.

BOX 6: Pictorial extension manuals for women farmers in West Africa

Working with women farmers in The Gambia, Rose Clarkson of the Edinburgh Centre for Tropical Forests, has developed a method to enable local fieldstaff to create visual agroforestry materials using only pictures.

This pictorial approach avoids problems with local languages and dialects. Two manuals have been produced. One is a guide to tree management, the other gives information on producing the pictorial extension materials themselves; 250 copies of each were produced and disseminated for pilot testing.

The manuals were tested during a 9-month field trial. Clarkson says:
"There appears to be a good deal of interest in the manuals…around 80% of non-literate participants could understand the illustrations and use them effectively. I have tried to encourage critical reviews."

Women users in The Gambia said:
"The manual can help any Gambian woman farmer do her work better. The use of neem tree to control pests and the [production of] mango jam and cashew nut pancakes are of great interest to us."
"With the help of this manual we can now plant trees by looking at the pictures step by step."

Phase II of the project (1999–2001) is testing and adapting the technique to suit the requirements of local development organizations in West Africa. This phase involves training of extension staff from agricultural and environmental organizations in The Gambia and Ghana in the production of illustrated materials for non-literate farmers (R. Clarkson, pers. comm.).

Pre-testing should be conducted with representatives of the target audience, using focus groups, one-to-one interviews, and observation of use. Both should be carried out by someone who has skills in these areas and can record the data accurately, who knows the audience's culture and language and is familiar with the process of media production. It will also be necessary to have someone to analyse the data and quickly give feedback to the relevant people.

Monitoring and evaluating the effectiveness of the communication vehicle or activity

It is notoriously difficult to judge the impact of communication. Isolating the causes of a change in knowledge, attitude or practice is difficult and can lead to false claims. However, there are things that can be done, particularly if baseline data have been collected at the start of a project as part of the needs assessment exercise, as well as part of the communication context assessment. This will enable the development of qualitative indicators of success with different audience groups (see Gujit, 1999). If numerical data are required to show that a communication initiative has had impact, then it is necessary to identify numerical indicators against which impact will be measured at the start of the project. All indicators should be recorded in the log-frame as they are developed throughout the project (this will mean revising the log-frame from time to time).

Eliciting audience feedback should form an integral part of the monitoring process to improve future communication efforts, for example:

- how useful was a workshop to participants?
- what action came out from the workshop?
- did people's awareness of a topic increase after a radio programme?

Monitoring can be carried out through a wide variety of means: focus group discussions, questionnaires, listening/viewing panels, diaries, audience ratings, interviews, and regular consultation with stakeholders. As in other respects, managers will need to make pragmatic decisions based upon likely costs and returns to monitoring information.

Monitoring and evaluating the effectiveness of the communication strategy

The overall strategy may also be evaluated, if feasible, in partnership with intermediate and end users. You will need to find out:

- whether the project was demand-led and, therefore, more likely to lead to take-up
- whether a communication strategy was put in place and followed, if not why not?
- whether target audiences were adequately defined and understood, if not why not?

- whether the communication context and needs of different stakeholders were determined and taken into account, if not why not?

- whether the communication capacity reach and impact of intermediate organizations were sufficient for the purposes of the project and the needs of the end users

- whether the communication skills available or bought in were adequate for the purpose

- whether the budget was sufficient to enable the planned strategy to be implemented, if not why not, i.e. was the plan too grand, or the budget incorrectly estimated?

CONCLUSION

The Renewable Natural Resources Research Strategy (RNRRS) is entering a key phase with particular emphasis on the development and fine-tuning of outputs of research that are relevant to poor peoples' livelihoods in developing countries. The emphasis upon dissemination and uptake in turn means that there is a major role for development of communications strategies within the research project cycle.

Many of the components required for developing such strategies are already likely to be part of research commissioning and implementation, but others are additional and there may be additional costs. In the latter context, research managers will need to adopt a pragmatic approach, particularly if the targets of their research activities are large in number, and/or diverse in character. Similarly, the extent to which strategies can be developed will often hinge upon the capabilities of collaborating (in-country) institutions.

RESOURCES AND READING

General Reading on Communications

AERDD (1998) *Rural Extension Bulletin*, June. Reading: Agricultural Extension and Rural Development Department, The University of Reading. (Theme issue on media communication and development. Includes useful articles on video, radio and participatory media.)

ARCHER, D. and COTTINGHAM, S. (1996) *Reflect Mother Manual: Regenerated Freiran Literacy Through Empowering Community Techniques*. London: Action Aid.

BOEREN, A. (1994) *In Other Words: The Cultural Dimension of Communication for Development. CESO Paperback*, No 19. The Hague: Centre for the Study of Education in Developing Countries.

BURKE, A. (1999) *Communications and Development: A Practical Guide*. London: Department for International Development.

CHRISTOPHERS, A. (1998) *Renewable Natural Resources, Research Output Dissemination Why and How*. Chatham, UK: NRInternational.

CHRISTOPHERS, A. (1999) *References: Guidelines on the Citation of Outputs from DFID-funded Projects Managed by NR International*. Chatham, UK: NRInternational.

COMMONWEALTH SECRETARIAT (1992) *Women, Conservation and Agriculture. A Manual for Trainers*. London: Commonwealth Secretariat.

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FAO (1989) *Guidelines for Communication for Rural Development: A Brief for Development Planners and Project Formulators*. Rome: Food and Agriculture Organization of the United Nations, Development Support Communication Branch, Information Division.

FAO (1994) *Applying DSC Methodologies to Population Issues: A Case Study in Malawi, Development Communication Case Study*. Rome: Food and Agriculture Organization of the United Nations, Development Support Communication Branch, Information Division.

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GARFORTH, C. (1998) Dissemination pathways for RNR research. *Socio-economic Methodologies for Natural Resources Research. Best Practice Guidelines (BPG1)*. Chatham, UK: Natural Resources Institute.

GRIMBLE, R. (1998) Stakeholder methodologies in natural resource management. *Socio-economic Methodologies for Natural Resources Research. Best Practice Guidelines (BPG2)*. Chatham, UK: Natural Resources Institute.

GUJIT, I. (1999) Participatory monitoring and evaluation for natural resource management and research. *Socio-economic Methodologies for Natural Resources Research. Best Practice Guidelines (BPG4)*. Chatham, UK: Natural Resources Institute.

HOPE, A., TIMMEL, S. and HODZI, C. (1994) *Training for Transformation: A Handbook for Community Workers*. Volumes 1–3. Gweru, Zimbabwe: Mambo Press.

IIED (1997) Performance and participation. *PLA Notes*, No. 29. London: International Institute for Environment and Development. (Also includes good articles on participatory video and facilitation skills.)

LINNEY, B. (1995) *Pictures, People and Power*. London: Macmillan.

MESSERSCHMIDT, D. (1995) *Rapid Appraisal for Community Forestry. IIED Participatory Methodology Series*. London: International Institute for Environment and Development.

MODY, B. (1991) *Designing Messages for Development Communication: An Audience Participation-Based Approach*. New Delhi/Newbury Park/London: Sage Publications.

PRETTY, J., GUIJT, I., THOMPSON, J. and SCOONES, I. (1995) *Participatory Learning and Action: A Trainers Guide*. London: International Institute for Environment and Development.

QUERRE, F. (1992) *A Thousand and One Worlds – A Rural Radio Handbook*. Rome: Food and Agriculture Organization of the United Nations.

RICHARDSON, D. (1996) *The Internet and Rural Development. Recommendations for Strategy and Activity*. Rome: Food and Agriculture Organization of the United Nations, Development Support Communication Branch, Information Division.

SAYWELL, D. and COTTON, A. (1999) *Spreading the Word: Practical Guidelines for Research Dissemination Strategies*. Loughborough: WEDEC, Loughborough University.

SLIM, H. and THOMPSON, P. (1993) *Listening for a Change: Oral History and Development*. London: Panos Publications.

SRINIVASEN, L. (1990) *Tools for Community Participation: A Manual for Training Trainers in Participatory Techniques. PROWESS/UNDP Technical Series*. New York: United Nations Development Programme.

SUTHERLAND, A. (1998) Participatory research in natural resources. *Socio-economic Methodologies for Natural Resources Research. Best Practice Guidelines (BPG3)*. Chatham, UK: Natural Resources Institute.

THEIS, J. and GRADY, H. (1991) *Participatory Rapid Appraisal for Community Development*. London: International Institute for Environment and Development Sustainable Agriculture Programme/ Save the Children.

VELDHUIZEN, VAN L., WATERS-BAYER, A. and DE ZEEUW, H. (1997) *Developing Technology with Farmers. A Trainers Guide for Participatory Learning*. Netherlands: ETC/London: Zed Books Ltd.

WILKINSON, J. (1985) *A Guide to Basic Print Production*. London: The British Council/Intermediate Technology Publications. (Out of print, but available in AERDD Documentation Centre, The University of Reading, UK.)

ZEITLYN, J. (1992) *Appropriate Media for Training and Development*. Leiden: Tool Publications.

ZIJP, W. (1994) Improving the transfer and use of agricultural information: a guide to information technology. *World Bank Discussion Paper*, No. 247. Washington, DC: World bank.

Videos

Participatory Research with Women Farmers. Patancheru: International Crops Research Institute for the Semi-Arid Tropics (ICRISAT). Distributed by TVE, Postbus 7, 3700 AA Zeist, The Netherlands. Free of charge to organizations in developing countries.

Questions of Difference PRA Gender and the Environment. London: International Institute for Environment and Development. Price: £25 (OECD) or £7 (non- OECD).

Media Profiles on Individual Countries

UNDP Human Development Report, published annually by Oxford University Press gives a statistical communication profile for every country in the world, showing, for example, how many radios are owned per1000 people.

The Communication Initiative website (www.comminit.com) has figures and statistics on media usage in 69 developing countries.

Macro International Inc. (USA) publish *Demographic Health Surveys* on most developing countries in which they usually give details of the populations' main information sources (e.g. newspapers, TV, radio, etc.). Statistics can be accessed on the web (http://www.macroint.com/dhs) or reports can be ordered from: Macro International Inc., Attn. Publications, 11785Beltsville Drive, Suite 300, Calverton, MD 20705-3119 USA. Fax: 301-572-0999 Tel: 301-572-0958.

Useful Websites

Johns Hopkins University: www.jhuccp.org/
This site enables one to access the JHU Centre for Communication Programs, and reach their library of extensive and authoritative reports on their communications projects around the world. A very good resource.

UNESCO: www.unesco.org/
This eventually enables one to get access to the UNESCO library/resource centre through several further links. This is better for historical material on radio/communications than for up-to-date materials and it takes some searching so it is a little frustrating.

IDS library search facility: http:/nt1.ids.ac.uk/dbases/bldsdb0.htm
This is the Institute of Development Studies in Sussex, UK that holds a good range of books, articles and reports on development communications. Abstracts, but normally not the whole article, are available on-line and it is easy to search. A good resource for more academic material.

FAO Communication for Development Homepage:
www.fao.org/FAOINFO/SUSTDEV/CDdirect/CDhomepg.htm
Worth searching through for good sources, contacts and news on development communications – as seen by the Food and Agriculture Organization of the United Nations. They are the main funders of rural radio in West Africa.

Annenberg School of Communications (University of Pennsylvania):
www.asc. upenn.edu/general/index.html
This site allows access to the Annenberg School library which has a wealth of information about communications in general. A good academic source.

Development Research :www.id21.org
Economic and social research digests on topical development policy issues. A good example of using the web itself for dissemination.

The Communications Initiative :www.comminit.com
A lively and up-to-date site on all media for development communications, including impact studies from around the world.

Books and Manuals

Below is a list of organizations from whom books and manuals can easily be obtained. If they provide annual catalogues we have indicated this as well as whether materials are free or have to be bought.

Intermediate Technology Publications

ITP have a bookshop, a postal service, and an on-line bookshop, dealing with theoretical and practical literature on all aspects of development. They provide a new catalogue for each service annually. Their stock (their own publications and those of a wide range of other development publishers from around the world) is extensive and is constantly updated. Each publication is annotated and the price given. Contact addresses for IT Publications:

IT Publications
103–105 Southampton Row
London
WC1B 4HH, UK
Tel: +44 (0) 171 436 9761
Fax: +44 (0) 171 436 2013
Email: orders@itpubs.org.uk
Website: http://www.oneworld.org/itdg/publications.html
The website provides information on new books, journals and on the work of Intermediate Technology Development Group.

FAO, Development Support Communication Branch

FAO publish a range of guidelines, manuals and case studies on development communication. These can be obtained free of charge from:

Development Support Communication Branch
Food and Agricultural Organization of the United Nations
Viale della Terme di Caracalla
00100 Rome
Italy
Email: loyvan.crowder@fao.org

Media Production, Communication Training and Support

The Agricultural Information Centre, Nairobi, Kenya

The AIC has become one of Africa's leading media production centres, focusing on the development and production of appropriate media for training a wide range of target audiences in agricultural and environmental subjects. It is aiming to become an independent self-sustaining agency within the Kenya Ministry of Agriculture and Livestock Development and Marketing (MOALDM). At present it supports the government's and outside organizations' agricultural and environmental information needs, trains extension staff and provides wider audiences throughout the region with radio, print, video and TV educational material. Material is produced in the AIC video, radio and DTP units.

The Agricultural Information Centre (AIC)
PO Box 14733
Nairobi
Kenya
Tel:/Fax: 00 254 2 446467

The Mediae Trust

The Mediae Trust is a registered UK charity that offers advice to organizations on how to use media most effectively in order to disseminate information to specific audiences, particularly rural audiences in eastern and southern Africa. Mediae offers support in the development of communication strategies, training and actual production of radio, video and printed materials.

UK Office:
Lynton House
53 Woodgreen
Witney
Oxon OX8 6DB
Tel:/Fax: +44 (0)1993 709855
website: http://www.mediae.org

Kenya Office:
PO Box 39486
Nairobi
Kenya
Tel:/Fax: +245 2 442660

SADC Regional Centre of Communication for Development, Harare, Zimbabwe

SADC have pioneered The Action Programme for Communication Skills Development, a training programme of communication advice, hands-on training and technical follow-up integrated either into ongoing or planned development projects. It is based around an action workshop. For further details link to SADC Regional Centre of Communication for Development at their website :http://www.zimbabwe. net/sadc-fanr/seed/seedtxt.htm

SADC Centre of Communication for Development
Merchant House
PO Box 4046
Robson Manyika Avenue
Harare
Zimbabwe
Tel: 00 263 4 722723/722734
Fax: 00 263 4 722713
Email: comdev@fanr-sadc.org.zw

The Agricultural Extension and Rural Development Department (AERDD), The University of Reading

The department has the capacity to support RNR programmes and projects in the field of communication, dissemination and the uptake of research at both the strategic and operational level. It can:

- assist in the development of communication and dissemination strategies for research programmes and projects;
- conduct research to identify effective dissemination and communication pathways and methods for specific contexts and outputs;
- provide technical assistance and advice in the dissemination of research outputs through a range of media.

AERDD's current staff include people who have been and remain professionally active in communication in developing countries.