

Scaling-up and communication: Guidelines for enhancing the developmental impact of natural resources systems research

1. Introduction

In recent years, various development-related institutions have stressed that natural resources (NR) research should be demanded in order to improve its relevance and potential for uptake by the intended beneficiaries. Arising from this emphasis, the issues of scaling-up and communication have received more attention. Increasingly they are recognised as essential considerations for the planning and conduct of development-oriented NR research. For scaling-up to be feasible, research teams must develop and implement sound communication strategies as an integral part of the research process. This will ensure that new knowledge is available for users (development practitioners, planners, farmers, etc.) in forms that they can utilise and adapt.

The Department for International Development's (DFID's) Natural Resources Systems Programme (NRSP), that is briefly described in the box on page 8, commissioned two studies: *The reach, use and impact of communication methods and media products* (Norrish, 2001) and *Scaling-up strategies for research in natural resources management* (Gündel et al., 2001). These studies have informed the further development of NRSP's

strategy for communication and scaling-up. It is apparent from the studies that an active approach to communication and scaling-up must be adopted from the very beginning of the research project cycle.

This digest aims to present the main findings and recommendations of the two studies, drawing out the features related to natural resources management (NRM). Key considerations in research design that can enhance the uptake and use of research products are highlighted. The digest is intended for the wide group of NRSP's constituents, including UK-based and overseas practitioners of NRM, and for students of NRM and related studies (in both the UK and overseas).

Contextual information is presented on the major shifts that have taken place in recent years in development policy and its influence on NRM research priorities. Recommendations from the Norrish (2001) and Gündel et al., (2001) reports are then presented as key actions that need to be taken at various stages in the project cycle. These actions are summarised in a table of 'essentials'. To avoid any confusion, a list of definitions of the main terms used in this digest, is provided in the following box.

Definitions

Research products Findings and results of research e.g., methodologies; conceptual models; decision-making tools; process recommendations; scientific understanding; technical information; transferable technologies; sets of alternatives from which end-users choose.

Stakeholders Those persons and organisations that should benefit from, or at least engage with, a project (on NRM research) either directly through their involvement in the research or indirectly through the communication and scaling-up of research products. The term can be further sub-divided to consider:

- **Target groups and end-users** Individuals, households, communities, associations, etc., that are engaged with the management of natural resources (e.g., farmers, fishers, service providers, policy actors in various institutional settings etc.). In line with current donor policy (see Section 2) poor people are prioritised as end-users.
- **Partners – target institutions – intermediaries**
 - **Partners** are those with whom the research is conducted.
 - **Target institutions** are those that should use the products of research beyond the term of the research project.
 - **Intermediaries** use research products to deliver information, provide access to technology and generate more products such as those needed to create favourable institutional/policy circumstances for end-users. Intermediaries can be development practitioners, other researchers in national agricultural research systems (NARS) and international agricultural research centres (IARCs), non-governmental organisations (NGOs), the private sector, policy makers and bilateral and multilateral donors.

These three groups are not mutually exclusive, i.e., an organisation can be more than one of them.

Communication The process of sharing or conveying information.

Communication strategy In the context of this digest, this concerns preparing the ground, through communication and dialogue, that will enable effective scaling-up of the research products after a project is over.

Dissemination The act of distributing information to various audiences in forms appropriate to their needs. Dissemination aims to increase the wider awareness of research products and, in turn, to enhance the speed of uptake, i.e., the use of research products.

Scaling-up Scaling-up aims to provide 'more quality benefits to more people over a wider geographical area more quickly, more equitably and more lastingly' (IIRR, 2000 in Gündel et al., 2001). Scaling-up can be a geographical expansion to more people and communities within the same sector or stakeholder group, as well as institutional, involving expansion to other stakeholder groups and sectors.

Pathways (dissemination/uptake) The route or channel through which research products reach the users. The means by which NR users search for potentially useful information and also the means by which research projects make their products known to users. Different groups of users use different pathways to access information. Pathways are multiple and complex, especially with respect to reaching poor people and responding to their needs.

Organisational learning systems Systems that enable those working in organisations to build shared visions, develop coherent thinking and team learning, and cohesively master skills and ideas (adapted from Senge, 1990).

2. Policy shifts

Development-oriented NRM research takes place within a wider framework of development policy in which, over recent years, there have been some major shifts towards a focus on poverty alleviation (World Bank, 2000; DFID, 1997 and 2000; OECD, 2001) with major emphasis on the sustainable livelihoods approach, in DFID's case (DFID, 1998). Linked with these shifts, the emphasis now is on research that can make a difference in the lives of poor people, recognising the multi-sectoral diversity of peoples' livelihoods and the linkages between micro- and macro-scale processes. The mode of conducting research is one that is holistic and interdisciplinary, that involves partnerships and commonly uses participatory methods. Such research has longer-term perspectives and pays greater attention to the requirements for scaling-up. Communication is no longer seen as simply a top-down mechanism for the transfer of information, but as an iterative, interactive, multi-directional process involving a wide range of stakeholders. It is recognised that the users of the products that research delivers have differing needs and perspectives, and that they are generators and transformers, as well as users of information.

3. Background information

3.1 Gündel et al. (2001)

In the context of NRSP's main objectives, this scaling-up review aimed to identify appropriate strategies for accelerating the uptake of research products by target groups and to develop a framework to guide the formulation of scaling-up mechanisms for improved NRM. The review identifies prerequisites for successful scaling-up that need to be fully considered at the pre-project and implementation phases of a piece of research. In respect of NRM, only a few successful cases of the scaling-up of research were encountered. A common failing was that research projects only considered uptake at the end of their lifetimes, with the development of traditional dissemination material (such as papers in academic journals and workshops), and little engagement with stakeholders. Projects tended to focus on geographical and quantitative (i.e., horizontal) dimensions of scaling-up and to neglect institutional processes (i.e., vertical scaling-up). However, the review emphasised that these pathways are synergistic and overlapping, and need to be linked in order to achieve sustainable impact. Creating and maintaining effective policy dialogue, and developing efficient monitoring and evaluation mechanisms with potential to measure the subsequent process of scaling-up

and impact are required. Importantly, research scientists need to plan and develop research products and pathways for their uptake from an early stage in the research project cycle.

3.2 Norrish (2001)

This study examined this latter issue in more detail. The uptake and impact of specific communication processes and products of past NRSP projects were assessed as part of a programme learning process. The study's aim was to contribute to the development of NRSP's communication and dissemination strategy and to inform what NRSP requires of project leaders to best ensure effective uptake. The impact of media products (such as leaflets, manuals, videos, and web sites, etc.) in the projects selected for the study was low. This was associated with poor involvement of intended users, a lack of understanding about their communication context, and insufficient appreciation of the real costs involved in producing and distributing appropriate materials.

3.3 Summing up

There was considerable agreement in the main conclusions reached by the two studies (the 'Studies' in the following text), with many points on communication and dissemination, as important components of scaling-up (and therefore wider research impact) echoed by both. These are presented as recommendations to be considered at various stages of project design and implementation, and are incorporated into Section 4.

Research, guidelines and commissioned studies in the same subject area support these findings (Farrington and Lobo, 1997; Garforth, 1998; Mulhall, 1999; Norrish et al., 1999, 2001a, 2001b; Gündel and Hancock, 2001).

4. Key actions for the design and implementation of a research project's communication strategy and for strengthening the potential for scaling-up

For scaling-up to occur, sufficient attention must be paid, within a research project, to the development and implementation of a sound communication strategy. The Studies state that scaling-up and communication must be considered at the very outset of a project and that team commitment and a shared common vision are essential. All team members need to understand what is required to achieve a project's communication objectives, including an appreciation of how a range of communication activities fit into the overall strategy, and most importantly, who is responsible for what, at all levels. It is likely that a team will work with several different

organisations and individuals, and undertake a range of activities, possibly developing several different communication materials.

Based on the findings of the Studies, which in turn are based on real project experiences, the following sections present a set of actions, to be worked through in both the design and implementation phases of NRM research projects. Each activity is briefly described and summarised in a table for use in project planning and management (see Section 5).

4.1 Identification and participation of stakeholders

Stakeholder analysis, as commonly used in project design, aims to identify the interests, capabilities and roles of all stakeholders and solicit their support in relation to the issues that the research project proposes to address. With respect to the potential for scaling-up, policy-makers are crucial stakeholders in any research project and policy dialogue is vital to ensure that project activities link to and support wider policy agendas at local, regional and national levels. This is particularly important in NRM due to the complexity of end-users and other target groups and the need for pro-activity in including and/or ensuring that research is relevant to the poor. Thus, stakeholder analysis should be sensitive to differing social circumstances going beyond such broad categories as poor farmers and/or poor communities to recognise social groupings and inter-relationships within these categories (e.g., women farmers, landless labourers). Similarly, for intermediaries (such as service providers and/or policy makers), local and national organisations and key posts/persons within these, and their inter-relationships, should be considered.

In relation to the development of a project's communication strategy (and with a view to future scaling-up) such an analysis should be used to identify those with whom the project should communicate, including: those who will facilitate communication, and those who will continue these activities beyond the end of the project. It should also identify the specific groups of the poor who would receive the main benefits of any NRM change. Gaining an understanding of the ways in which all stakeholders prefer to communicate is a vital part of stakeholder analysis. It is also vital to understand the capacity of partners, target institutions, and intermediaries to communicate with target groups and end-users, particularly with the poor. Similarly, an appreciation of their capacity to network with each other in the project environment and more widely, for later dissemination, is needed.

Interactions with stakeholders, to increase their ownership of the research process and products, should be promoted. The project team needs to consider how to

incorporate information from stakeholders into the project (from the proposal stage onwards), and how to involve stakeholders in project decision-making. This includes considering which measures will ensure dialogue and establishing strategies to strengthen and maintain links between the different stakeholders as the project progresses. Equally important is the issue of how to keep people not directly involved in the project informed of a project's progress and, where possible, to bring them into project activities.

4.2 Identification and understanding of the target group(s)

A group profile can be developed for each 'category' of target group, the detail of which will be dictated by available resources. The basic general criteria for such a profile includes: livelihood system (occupation(s), resource endowment, gender, age, social circumstances) and institutional features (ultimate end-user, intermediary, policy role). Specific criteria in relation to scaling-up and communication include: access to, control over, preference for, and ownership of, different information sources; language preference; literacy levels; and existing understanding of the subject matter.

4.3 Assessment of the communication context

An understanding of the communication context is important as it provides initial information on which to base the development of a communication strategy. This encompasses identifying the different target groups and their respective communication needs and defining potential pathways and uptake opportunities. A project team should address a range of questions in order to obtain a fuller picture of the communication context of each target group, including:

- What sources of information do people, particularly poor people (e.g., men, women, young, old, etc.) have access to, and ownership of?
- What means of communications are preferred, e.g., for different levels of literacy?
- What are the sources of information for the particular research topic?
- What methods are used to convey this information? Are these effective?
- What are the enabling and constraining factors (e.g., within communities, organisations, the environment) that could affect scaling-up?
- What are the prevailing attitudes to new ideas (methods, structures, processes)?

- What is the nature of the linkages and communication between and within different sectors of government and civil society?
- What relevant networks already exist?
- What are the local community and institutional communication capacities? Are there areas where these may need strengthening?

4.4 Determination of the communication objective(s)

The communication objectives (which are central to the communication strategy) need to be firmly rooted in the particular NRM context of the research project, and can therefore only be identified once the overall project objectives have been clarified. With regard to these objectives, if a project is truly demand-led, the identification of specific research objectives and associated products takes place after the needs of the target groups have been assessed, and is reached through interaction with them (e.g., in workshops, focused small group meetings). If this is not possible, or if there are insufficient funds available at the concept stage of a project, the project team should review relevant reports to ensure, to the maximum extent possible, that the proposed NRM research is responding to local demand. In turn, this demand should inform the formulation of communication objectives and the team's decisions on communication activities. If scientists rather than local communities have identified demand, the communication strategy may need to focus on awareness raising and educational activities.

Some research products may not become apparent until well into the project and so it is important that the team conducts regular reviews to assess the appropriateness and relevance of anticipated products. This requires a level of flexibility in the expected nature of the final research products.

The communication strategy may have a range of objectives, e.g., to raise awareness on a given topic, to change attitudes, to change behaviour, or to share experiences, and this affects the selection of communication pathways and products.

The identification of communication objectives is best done in consultation with the intermediate and end-users, and these groups should be involved in regular reviews of communication objectives. At all costs researchers should not see communication as a linear process, i.e., a transfer of their research knowledge and sensitising stakeholders to the products they will deliver. Researchers must listen and learn from stakeholders and fine-tune communication objectives and products in response to

their evolving understanding of the communication context.

4.5 Identification of, and collaboration with, partner organisations

In order to achieve the desired development-orientation of a research project, the lead organisation, whether located in the North or the South, commonly teams up with partner organisations. These may be NGOs, community-based organisations (CBOs) and even private sector agencies in addition to the more traditional research organisations (e.g., national agricultural research systems, NARS). With respect to communication and engendering readiness for scaling-up, partners should be assessed for: communication and dissemination capacities (including their access to, and use of, effective pathways, and the level of stakeholder involvement they facilitate); reach (including their ability to work with different groups, e.g., in different languages); ability to work with the poor; and their track record overall. If there are shortfalls in any of these areas, projects should consider including relevant capacity building in the project, if it can be justified.

It is important that partner organisations develop organisational learning systems including the skills needed to maintain partnerships and networks. This is crucial for communication, scaling-up and sustainability once the project ends. Networks and consortia are important for the exchange of ideas and can provide options for uptake pathways and opportunities for scaling-up.

4.6 Selection of appropriate communication products and activities for the target group(s)

Different communication activities and products are appropriate to different target groups depending on their communication context, as discussed above, and their attitude to, and perceived knowledge of, the research topic in question. The focus on poverty reduction and NRM is particularly challenging in this regard.

Important considerations are:

- A clear objective and target group for each communication activity/product, and well-defined responsibilities as to how the objective is to be achieved
- Selection of realistic and appropriate pathways. Different communication media have their own advantages and disadvantages, including time and cost implications (see Norrish et al., 2001a), and should be selected carefully to match the purpose of the activity and the target group. For example, a manual on the management of soil erosion may be appropriate for NR scientists, but not for farmers, for whom field

days, and illustrated posters for longer-term reference and greater reach, are preferred. Likewise, a pamphlet may be appropriate for some men farmers but less suitable for poor women farmers, who may have lower levels of functional literacy

- A careful and appropriate mix of media to suit the communication contexts and needs of different stakeholders
- The need to ensure that all materials are easily understandable to their intended users. This involves consideration of the language(s) that may have to be used
- Pre-testing any activities or products through, e.g., focus groups, interviews, and observation of use
- Inclusion in the research team of expertise in communication to help the team to keep to its communication commitments. Using local capacity is often advantageous, with the additional benefit of the further development of local skills.

Ideally, different communication strategies (or, more realistically, activities/products within strategies) should each be evaluated for their comparative advantage and cost-effectiveness for different target groups. The learning so gained on communication is an integral part of a project's NRM research, and is of considerable importance in positioning the research (i.e., making it ready) for scaling-up (also see Section 4.8).

4.7 Definition of the budget implications

Everything has a cost. At the proposal stage, 10% of a project's budget is recommended for communication activities. As the project develops and a detailed communication strategy is devised, the project team must review this budget so that estimates can be calculated for various scenarios that satisfy a strategy to varying levels of reach and intensity.

It is important that project leaders maintain project flexibility and ensure sufficient funding for such communication activities as: networking, partnership building, liaison with policy actors, monitoring and evaluation (of communication activities), capacity building, etc.

Clear shared-resource commitments to communication activities among partners will increase local ownership and the potential for scaling-up.

4.8 Development of appropriate indicators to assess the potential for scaling-up

The concept of an exit strategy for the conclusion of a research project, or sequence of projects, should be viewed as part of the scaling-up strategy for the research products and the outcomes they aim to engender among a range of stakeholders.

Linked with this, is the need for indicators that can track both the implementation of the activities that comprise the communication strategy and the changes that arise from these, across a range of stakeholders. In effect, the indicators should enable a project to report with some degree of rigour on its 'state of readiness' for both horizontal and vertical scaling-up (see Section 3).

In common with the requirements summarised in previous sections, this area of design cannot be left to the end of a project. The project team should integrate the indicators for tracking communication activities and the changes arising from these into project design and apply them, at the latest by a project's midterm review.

Indicators for communication activities will monitor actions that are under the control of the project. For this reason, they will provide relatively hard data on types of products and the actions taken to promote them. Indicators for the changes arising from these activities may be less quantifiable and require tracking changes in such areas as institutional support, strengths of partnerships, and capacity and skill levels of intermediaries and end-users. These are indicators in the complex pathway towards the overall aim of NRM research – assisting the improvement of livelihoods of the poor and, linked with this (but not necessarily in direct ways), sustaining the productivity of the NR base.

Even within the life of a project, indicators should be identified for tracking localised improvement in livelihoods and the NR base. Such data adds to a project's ability to assess and communicate (to donors, government ministries, NGOs, communities, etc.) its potential for scaling-up. Ideally, indicators should be locally generated with the different stakeholders, who will probably have differing views of what changes they expect to see.

The recommendations presented in this section are summarised in Section 5 (pages 6 and 7).

6. Conclusion

The Studies highlight the importance of considering scaling-up and communication from the very outset of a research project. Together the Studies provide a set of guidelines for NRM research on actions that must be taken to address these issues throughout the project cycle. Project experience has shown that these actions are practical and realistic and can lead to the achievement of increased local ownership of research and uptake of research products. The steps provided in this digest are critically important for development-oriented research that aims to reach and improve the livelihoods of poor people.

5. 'Essentials' for communication and scaling-up that should be addressed at various stages

Key action for design and implementation	Refer to digest section	Conceptual	Project planning	Project start-up	Continuous review	Project exit
Identification and participation of stakeholders	4.1					
• Take account of the communication and scaling-up (CSU) stakeholders when determining the main project stakeholders		✓				
• Detail how, when and who will conduct stakeholder analysis		✓				
• Determine how CSU stakeholders will participate in the project (in its development and subsequent implementation)		✓	✓			
• Assess the national policy arena		✓				
• State how CSU stakeholders have participated in developing the project proposal			✓			
• Indicate how policy dialogue will be promoted			✓			
• Develop and implement mechanisms for stakeholder participation in communication activities				✓		
• Develop and implement mechanisms for policy dialogue for scaling-up				✓		
• Review CSU stakeholders: these can change with time, as can their interests					✓	
• Review methods of participation by CSU stakeholders					✓	
• Review mechanisms for, and implementation of, policy dialogue					✓	
• Policy dialogue and mechanisms for its continuation						✓
• Assessment with stakeholders of the state of readiness for scaling-up through review of performance of the research products and findings of the tracking indicators						✓
Identification and understanding of the target group(s)	4.2					
• Broadly define the target group(s)		✓				
• Refine the definition of the target group(s)			✓			
• If possible, develop end-user profile(s)			✓			
• Develop end-user communication profiles for target groups				✓		
• Review target groups					✓	
Assessment of the communication context	4.3					
• State how, when and by whom the communication context (including needs assessment) will be explored		✓				
• Indicate any results pertaining to the communication context (including needs assessment, and the enabling and constraining factors to dissemination and communication)			✓			
• Review communication context of target groups					✓	
Identification of the communication objective(s)	4.4					
• Broadly define the anticipated research objectives and products including the objective of the project's communication strategy		✓				
• Identify the source of demand as this will affect decisions about the communication strategy		✓				
• Refine the objectives of the communication strategy			✓			
• Review the objectives of the communication strategy					✓	

in project design and implementation

Key action for design and implementation	Refer to digest section	Conceptual	Project planning	Project start-up	Continuous review	Project exit
Identification of, and collaboration with, partner organisations	4.5					
• Determine the range of potential partners, with justified suggestions for choices		✓				
• Identify existing networks and consortia; state how networks will be explored		✓				
• State which of the selected partners will have roles and responsibilities in the implementation of the communication strategy and its associated activities			✓			
• Build up communication partnerships and networking				✓		
• Review partnerships; other partners may join as project progresses					✓	
• Review networks and consortia					✓	
• Review capacities of local organisations					✓	
• Assess local capacity to sustain project communication activities and products in readiness for project exit					✓	
• Where required, build communication capacity and scaling-up awareness					✓	
Selection of appropriate communication products and activities for the target group(s)	4.6					
• Indicate some potential communication activities and products		✓				
• Refine plans for communication activities and products			✓			
• Review portfolio of communication activities and products (each with objective, specified target group, defined responsibilities, budget, pre-testing, and tracking mechanisms)					✓	
• Mechanisms for sustained promotion of research products (including further production and distribution of media products such as manuals, leaflets, posters, videos) in place						✓
Define the budget implications	4.7					
• Include 10% of budget for communication activities and products		✓				
• Review the budget for communication				✓		
Develop appropriate indicators to assess the potential for scaling-up	4.8					
• Indicate how communication strategies will be tracked		✓				
• Indicate possible exit strategy in the context of achieving readiness for scaling-up		✓				
• Propose possible indicators for assessing the potential for scaling-up			✓			
• Review methods of tracking scaling-up potential					✓	
• Support mechanisms for uptake of project products (e.g., training, seeds or other inputs) in place						✓
• Make sure relevant stakeholders have access to all the necessary information to ensure the continuation of communication activities						✓

7. References and additional* guideline material

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Natural Resources Systems Programme (NRSP)

NRSP is one of ten natural resources (NR) research programmes of the UK Department for International Development (DFID). The programme aims to 'deliver new knowledge that can enable poor people, who are largely dependent on natural resources, to improve their livelihoods' (NRSP, 2000). The new knowledge centres on changes in the management of the NR base that can enhance the livelihood assets of the poor over a relatively long timeframe, thus providing greater livelihood security and opportunities for advancement of poor individuals, households or communities.

Integrated management of NR is central to the research. In concept, for NRSP's purposes, the term 'integrated management' comprises three inter-related fields – firstly, the NR base itself, viewed in a holistic way rather than as its component parts (landforms, soil, water, vegetation and organic residues); secondly the integrated and dynamic nature of people's livelihood strategies and how these affect their decision-making and capacity to use and manage the NR base; thirdly the institutional environment in which NR management strategies are designed and implemented. For further information see www.nrsp.co.uk

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