

15 Lessons for out-scaling and up-scaling from *Capacity development*

Background

In simple terms, 'capacity' means the ability—knowledge and skills—of individuals and organizations to do a given task. The ideal end result of developing capacity in an innovation system is independence—support is no longer needed and the system is capable of continuing to learn and adapt to change.

Efforts of the 1995-2006 Renewable Natural Resources Research Strategy to develop capacity for impact—out-scaling and up-scaling—were scattered and opportunistic rather than strategically integrated. Where there were successes they show that demand-driven, action oriented and integrated strategies that are adequately funded, flexible and supported are likely to pay off.

The innovation systems approach switches attention from conventional research to improving the ways in which innovation happens. It is more interactive and less linear. This re-orientation has important implications for capacity development.

Key points

- Capacity development for out-scaling and up-scaling proven technologies, practices, policies and processes needs to be demand-driven, action oriented and integrated.
- Capacity development cannot be an add-on. A strategy must be in-built.
- The sets of skills and knowledge for out-scaling and up-scaling differ from those needed for research. There will be a shift from technical skills to the soft skills needed to strengthen institutions, policy, legal and economic processes.
- The types of people involved in capacity development services will grow. For out-scaling and up-scaling they will tend to be non-government, civil society and private sector organizations and southern research organizations.
- Networks are a powerful tool for capacity development.
- Capacity development is a long-term process.
- Formal monitoring and evaluation are critical if opportunities to learn and create synergies are not to be lost.

Lessons learned

Capacity development needs to be demand-driven and integrated. This means responding to demand, finding out what

new skills and knowledge are needed and how they will be applied (Box 15.1).

Box 15.1

Fruits of the Nile: demand-driven, action-oriented, integrated capacity development^{48 49}

Fruits of the Nile, a small enterprise in Uganda requested help:

- to improve the way they dried fruit for export to UK, and
- to break into UK markets.

Key features were:

- *Demand-driven and action oriented.* The company knew what it wanted and capacity building responded directly to the expressed need.
- *Integrated.* The thrust was on improving the company's economic performance and strengthening its linkages. This is because one will not work without the other: a strong organization would be of little value without a strong core business, and business linkages would not be sustainable without a strong organization. The Natural Resources Institute, UK, and the Kawanda Agricultural Research Institute ran seminars for farmers to improve the dried fruit product. Farmers 'learned by doing' to build solar driers and process fresh fruits. The seminars also covered business management for small solar drying enterprises.
- *In context.* The capacity building linked local poverty to development opportunities and constraints outside the local area, for example the Fair Trade movement, regional, national and international market opportunities, best practices for production, processing and marketing.
- *Partnerships.* Capacity building strengthened links to markets, processors and involved concerted efforts by a range of actors. Strong trust relations lowered transaction costs.

Capacity development needs to be action oriented. Being on the spot to support partners in their newly devolved responsibilities has proved very successful. For example, the Crop Post-Harvest Programme devolved programme development, strategic planning and project support to four regional offices. The Regional Coordinator and small local team work with regional organizations to assess and build the skills that partners need to

⁴⁸ RNRRS Synthesis Study No 10. Innovation Systems: Concepts, Approaches and Lessons from RNRRS. January 2005. Page 12.

⁴⁹ The concept of this example is based on Getting Mozambican pineapples to market, pages 56-61 in KIT, Faida MLai and IIRR. 2006. Chain empowerment: Supporting African farmers to develop markets. Royal Tropical Institute, Amsterdam; Faida Market Link, Arusha; and International Institute of Rural Reconstruction, Nairobi.

become self-sufficient, such as in mobilizing resources from DFID and other development agencies to implement projects. Often, regional offices can source local trainers. South-South exchanges set up by the regional offices have proved to be very effective.

Capacity development cannot be an add-on. A strategy must be in-built. An analysis of the various 'actors' in the system and the links between them will help answer the strategic questions for capacity development and determine who, what, when and how various capacities might be developed (Box 15.2).

Box 15.2

Developing a capacity building strategy

For an innovation system: Bolivian potato farming

Researchers analyzed the strengths and weaknesses of a complex national innovation system—smallholder potato production in Bolivia—to devise a strategy for building capacity for opening new markets for potatoes.

They found out:

- What and whose capacity needed to be strengthened. Farmers needed to learn to carry out surveys, run crop trials, evaluate results, analyze markets and to pass on to others what they had learned.
- That there was a need to link organizations that traditionally don't talk to each other. They needed to set up a network that would have more power than individuals working alone.
- That levels of trust needed to be better so that changes could be made in relationships between parties, ways of working and hierarchies.
- That there was a need to take a practical approach: 'show' as well as 'tell'.

Individual development: farmer field schools in Gambia⁵⁰

The wheel doesn't need to be reinvented. Often capacity development tools that work well elsewhere for other purposes can be adapted. The key is to find suitable tools, adapt them to the target group and entrench them in the new environment. In the 1980s, rice farmers in Asia raised their rice yields through 'learning by doing' at farmer field schools.

The Animal Health Programme together with the International Trypanotolerance Centre and the Gambian Ministry of Agriculture set up four farmer field schools to help sheep and goat farmers learn to manage animal health and production. In the Gambia, most sheep and goat farmers are women and nearly all are illiterate. So they adapted the manuals for the field schools, making them pictorial rather than text-based, and taught farmers to keep records using symbols and pictures.

The farmer field schools encourage group action. In 'learning by doing' farmers drew up group action plans for controlling ectoparasites and footrot, and coping with shortages of animal feed in the dry season. Group action

Box 15.2 continued...

can be a start to building self-sustaining institutions. Groups may go on to tackle other issues such as forming cooperatives to buy supplies, get credit or market their produce.

Organizational development in the Tanzanian national agricultural research system

Most of the funds provided by the Tanzanian government for research pay for operations and salaries. But there is very little budget for projects. After attending workshops in proposal writing, Tanzanian scientists wrote 157 research proposals. Of these, 79 were funded internally and 24 externally. The top ten proposals brought in US\$2.7 million for projects.

This development of proposal writing skills is a step towards making the Tanzanian agricultural research system more self-sufficient.

First, the funds they've won by writing successful proposals complement government funding. Second, the researchers get to collaborate with international researchers, interaction that helps them keep current in their discipline. Third, researchers and their research organizations don't rely on others for training. A pool of trainers drawn from participants of earlier workshops trains other scientists.

Institutional development in Nepal seed regulatory framework

For some years the Plant Sciences Programme worked with farmers in Nepal to breed, test and multiply crop varieties—participatory plant breeding. This innovative approach contrasted sharply with the Ministry of Agriculture system for testing, certifying and releasing new varieties in both process and results.

Aligning the official system with the 'new way of plant breeding' meant developing the capacity of the officials and of the farmers—working simultaneously at different levels in the agricultural system—and persistent effort over ten years.

Network development

A strong international plant breeding network is up-scaling seed regulatory frameworks internationally—to India, Bangladesh and Ghana. Such networks help people exchange the technical skills and ideas that pave the way for up-scaling.

⁵⁰ FAO now has Farmer Business Schools as well.

Strategic questions for capacity development for putting research into use are:

- What knowledge and skills are needed?
- Who should have the skills and opportunities?
- What should organizational and institutional arrangements look like?
- What networks and linkages will be productive?

The experiences of the Renewable Natural Resources Research Strategy programmes show that

*'There are many examples ... throughout the NR [natural resource] programmes where selective capacity development has been necessary to both develop and disseminate research outputs. Often these may be end-users; typically small farmers, but traders, manufacturers and other small enterprises figure frequently.'*⁵¹

Cooperation, consortia, round tables and networks are mechanisms to strategically integrate capacity development into sectoral or national initiatives and leverage bilateral and multilateral donor initiatives. Programme steering groups, such as those set up by the Crop Post-Harvest Programme in southern Africa, have proved to be a good way to overcome barriers between organizations and align programme priorities with national needs. Such neutral forums raise levels of trust between partners. Such interactions need to be a designed part of the strategy.

Cooperation between bilateral, multilateral and private donor and development agencies is now the norm. Donor consortia, round tables and networks all recognize that that the whole is greater than the sum of the parts. These interest groups consolidate and

align programmes to national poverty reduction strategies and the Millennium Development Goals. But not enough interaction of this kind has happened over the 11 years of the Renewable Natural Resources Research Strategy. The innovation system approach will benefit from deliberately writing these interactions into its plans.

Use intermediaries to exchange knowledge between users and suppliers. Finding channels to exchange knowledge with users is a way of making the exchange a two-way street. For example, poultry feed producers in India learned to substitute low-cost sorghum (low cost because it wasn't fit for human consumption) for high-cost maize in chicken feed. They were helped to do this by the International Center for Research in the Semi-Arid Tropics. But, it wasn't a one-way learning experience—the Center also changed its ways. The poultry manufacturers demanded—and the Center had to learn to give—clear step-by-step recipes for feed, setting out exact ingredients and amounts rather than research results. The examples in Box 15.3 show the value of leveraging the knowledge and skills of a variety of organizations to build capacity.

The sets of skills and knowledge for out-scaling and up-scaling differ from those needed for research. As responsibilities for out-scaling and up-scaling pass to local partners there will be a need to develop their management skills, and skills in building and managing relationships, a trend that is likely to accelerate (Box 15.4).

⁵¹ Capacity Development Synthesis Study 2005 page 8, paragraph 34.

Box 15.3

Exchanging knowledge: knowledge suppliers, intermediaries and knowledge users

RNRRS programme	Producer	Intermediary/ies	Consumer	Outcomes
Crop Post-Harvest Programme	Tribal groups	International Development Enterprises (India) and a local non-government organization	Large scale food processor	Group learning—tribal groups added value and marketed semi-processed milk products
Crop Post-Harvest Programme	Farmer's Clubs	International Center for Research in the Semi-Arid Tropics Farmers Federation	Poultry feed manufacturers	Organizational learning—manufacturer substituted low-cost sorghum for high-cost maize
Natural Resources Systems Programme	Local institutions	National University	Education ministry	Institutional learning—policy change to include rain water harvesting in national curriculum

Box 15.4

The differences between capacity development for research and for out-scaling and up-scaling: soft skills rather than technical skills

Capacity development for research	Capacity development for out-scaling and up-scaling
Engineering approach, top-down flow, implemented hierarchically	Holistic, organic approach, bottom-up, non-hierarchical network model of resolving problems
Focus on: <ul style="list-style-type: none"> ● institution building ● getting the pieces right ● transfer of information 	Focus on: <ul style="list-style-type: none"> ● ownership ● getting the approach right ● learning by doing
Concentrates primarily on government and public sector	Encompasses the whole of a society (including the public sector), multi-stakeholder in nature, draws civil society and private sector organizations into the planning, design and implementation of programmes
North-South flow of expertise and knowledge	Stresses global networking, with South-South, South-North, and North-South interchange
Based on short-term projects Little attention to either retention or the loss of capacities developed	Strategic, geared to the medium and long-term Stress on maintaining and expanding knowledge, and nurturing capacities developed

The types of people involved in capacity development services will grow. Because soft skills rather than technical skills will be needed, NGOs, local civil society and the private sector are likely to play a vital role as trainers and facilitators to help people and organizations learn (Box 15.5, see overleaf).

Networks are a powerful tool for capacity development. Networks strengthen and create alliances between individuals (informal) and institutions (formal) and operate at all levels—local to global—and across organizational and discipline boundaries. Out-scaling beyond national boundaries often happens because individuals and institutions work together in informal and formal networks. Though often commodity based (e.g. bananas), networks may also focus on issues or processes (e.g. fisheries management). Strengthening networks among the academic, policy and donor communities also increases the likelihood of adoption of policy advice.

The internet gave networks a huge boost as a common space for instant messaging, e-newsletters, resources and tools, exchanging information and planning shared activities. Although experiences in different countries and areas are unique and seldom directly relevant to another, this diverse knowledge is of enormous value when gathered, considered and reinvented to fit local needs. This means networks can be a powerful tool for capacity development.

Capacity development is a long-term process. One clear lesson from the Renewable Natural Resources Research Strategy is that investment in capacity development pays off over the long term rather than the short term. It takes time to build links with local and international networks and strengthen institutions. Some

programmes aligned capacity development within their overall strategy, phasing activities within project timeframes. This approach built strong, durable capacities over the long-term.

*'Within the Renewable Natural Resources Research Strategy the best examples of significant uptake linked to durable policy change arise from coordinated and interlinked sets of activities that have been pursued over pretty much the entire lifetime of the Renewable Natural Resources Research Strategy (and in many cases pre-dating it).'*⁵²

Capacity development in short- to medium-term timeframes must integrate with long-term strategies. There are dangers in a short-term approach. Experience and evidence shows that capacity building initiatives most often die at the end of programmes and projects unless the processes for keeping them going have been put in place at the outset.

Formal monitoring and evaluation are critical if opportunities to learn and create synergies are not to be lost. Uneven and unsystematic cross-fertilization of experiences between programmes was a 'major shortcoming' in the 1995-2006 Renewable Natural Resources Research Strategy. There was little learning across programmes (i.e. organizational capacity for learning was weak). The Strategy did not build in processes for monitoring, evaluating and measuring impact, or a formal structure (e.g. regular meetings) to capture and integrate best practice. Opportunities to learn and create synergies were lost. For putting research into use,

⁵² Capacity Development Synthesis Study 2005 page 7, paragraph 26.

Box 15.5

Local resources and suppliers for capacity development for out-scaling and up-scaling

Examples of knowledge suppliers	Examples of knowledge users	Examples of capacities strengthened	Examples of impacts	Capacity development level
Traders Research organizations Information and knowledge brokers	Farmers Processors Importers Trainers Coaches Mentors	Farmers trained to keep records, understand costs, base management decisions on information and negotiate prices Farmers know how much their produce is worth	Farm management improves Farmers make higher profits	Individual capacity
Non-government organizations	Farmers	Practical skills Farmers trained in management	Farm management improves	Individual capacity
Equipment suppliers Non-government organizations (eg International Development India supplier of low cost treadle pumps)	Farmers	Advice on equipment Low-cost equipment (eg treadle pumps)	Farm management improves	Individual capacity
Farmers	Researchers	Research output adapted to local circumstances and experience	Research output used	Individual capacity
Advice on equipment	Traders Community groups Producer groups Equipment suppliers Service providers Banks	Traders trained in quality standards Traders provide free training on quality to farmers	Consumers regularly supplied with good quality produce	Organizational capacity
	Community groups	Groups learn to negotiate and lobby effectively		
	Government regulators	New management processes adopted Quality standards for different markets Price regulations Land laws	Favourable environment for agro-businesses Products supply new markets	Institutional capacity
	Interest groups Individuals	Formal collaboration	Trust between parties Lower transaction costs Foster independent learning	Network capacity

the lesson learned is that putting in place and formalizing processes to capture and absorb learning is a priority. This means identifying, consulting and involving all key internal stakeholder groups in planning and implementation from the outset.

DFID and Renewable Natural Resources Research Strategy programmes made huge efforts to manage information. Still, much useful information is in the 'grey' literature, not formally catalogued and scattered over a plethora of department, programme, project and implementing partner web sites. Although programmes developed many useful tools for communicating to various groups of stakeholders in ways that are useful to them there is still a long way to go.

This synopsis of lessons learned for up-scaling and out-scaling research is drawn from:

Capacity development synthesis study. 2005.

See

http://www.research4development.info/pdf/ThematicSummaries/Capacity_Development_synthesis_study_P1.pdf

Bennett, E. 2005. 'Gender and the DFID RNRRS: A synthesis'.

See

http://www.research4development.info/pdf/ThematicSummaries/Gender_synthesis_study_P1.pdf