This report is presented as received by IDRC from project recipient(s). It has not been subjected to peer review or other review processes.

This work is used with the permission of International Centre for Research in Agroforestry (a.k.a. World Agroforestry Centre).

Research organizations want to improve impact while ensuring that technological innovations leading to enhanced productivity do not undermine the long-term productive potential of farms. Social, policy and economic issues hindering development and change need to be addressed. Areas such as collective resource management; information systems that improve the efficiency of institutional support; and market and policy incentives that encourage investment in NRM need attention. Integrated Natural Resource Management (INRM) is a new approach that can tackle these issues but requires time for building awareness, practical skills and experience.

INRM poses two main challenges—developing and testing new approaches, and deriving institutional arrangements that foster innovation and learning cultures. Technically-based organizations tend to impede uptake of new methods. Therefore, changing internal working patterns and culture is fundamental, and processes that enable this to happen need to be understood and managed. “Learning” organizations should enable staff to be innovative and undertake critical reflection on the dynamics of organizational change, construction of knowledge-related social interactions, the role of individual attitudes and behavior, and how to embrace learning from error.

If INRM were widely applied, researchers would:

✔ Apply their skills to broader topics—collective action for environmental management and conflict resolution; managing a production-to-market chain; influencing policy makers.

✔ Use integrated, multi-disciplinary teams for addressing complex issues.

✔ Employ strategic partnerships, facilitate dialogue and improve inter-institutional links with development organizations, policy makers and the private sector.

✔ Work at multiple levels and scales with a wide variety of actors, and differentiate approaches for various actors and conditions.

✔ Utilize a range of participatory methods that foster stewardship of natural resources, are inclusive of women and the poor, value local knowledge, and build local capacity.

✔ Use experiential learning and systematic monitoring for continuous progress in innovation and application.
In 2001, AHI helped initiate work on self-directed management of organizational change with the Ethiopian Agricultural Research Organization (EARO) and the Department of Research and Development (DRD) in Tanzania. This was not a donor-driven process or an external evaluation. The following steps explain the process used:

1. Discussion with research managers to build ownership and clarify expectations. Top managers’ expectations were to understand the potential, added value and constraints of participatory research (PR) methods as a key INRM component; to produce guidelines for mainstreaming “best practice” in PR and for assessing its quality and impact; and to formulate a strategy for operationalization.

2. Design an assessment framework and set standards for good research. Researchers with diverse experience were selected by managers to undertake the PR assessment. An organizational change facilitator guided the researchers in designing an assessment frame, and identifying principles and values of good research. The assessment frame was constructed from the vision of what farmers and farmer organizations should be doing if operating successfully (Fig. 1), and what research should be doing to support this.

3. Field assessment of cases. Two assessment teams applied the assessment framework to compare 20 cases with varying degrees of PR. This provided experience, and tested and practically applied the assessment framework in the field.

4. Joint analysis and synthesis. Best practices, strengths and weaknesses, and impacts were assessed for each case. The group reflected on the assessment, the guiding principles and lessons, and identified success factors. A constraints analysis assisted in the identification of best practices, challenges, and ideas for improving the situation. Best practices were not being systematically documented, shared, and incorporated into the research system and remained as project-supported “islands.” This led to weak understanding of PR, weak linkages and synergies with on-station research, and poor quality and inconsistent organizational arrangements. Success factors provided an excellent basis for further work towards improving the effectiveness of PR processes.

Important impact areas of PR included technological adoption (more appropriate technologies, more relevant research), improved interaction among farmers and between farmers and institutions, increased farmer capacity (innovativeness, technical competence) and attitude change (understanding by researchers of farmer knowledge). Weak areas or barriers, on the other hand, included limited technical competence and motivation of research and extension to work closely with farmers, inadequate documentation of processes, limited technological and other options that suited identified constraints (i.e. income), and lack of a clear strategy for scaling up.

5. Feedback to managers. Upon learning outcomes, managers were impressed by the thoroughness of the analysis and process, and proposed ways to operationalize INRM in their organizational practice.

6. Recommendations and next steps for putting theory and concepts into action. The final output included recommendations for further institutionalization of lessons learned into NARS practice. They include: implementation of a learning mechanism across research centres, testing of PR methods, scaling up of lessons from cases, review of organizational support systems (reward systems, resource allocation, M&E), capacity building and strengthening of existing institutional structures to take recommendations forward.

—Ann Stroud

Figure 1: VISION

**Farmers** share their knowledge actively with others; actively participate in research priority setting, planning and implementation; make a profit from their production; manage their resources more adaptively; and are partners with researchers in technology development.

**Farmer organizations** mobilize resources; facilitate sharing for adoption and dissemination; increase their linkages with other organizations; influence agricultural policies; invest in research capacity; manage themselves effectively; and solve their conflicts.