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Representative of partner NGO in Lushoto, Tanzania, benchmark site discusses watershed issues of concern to local women.

**AHI is using a participatory action research approach to ground research and development in local-level processes.**

## Combining Science with Participation: Learning Locally and Generalizing Regionally

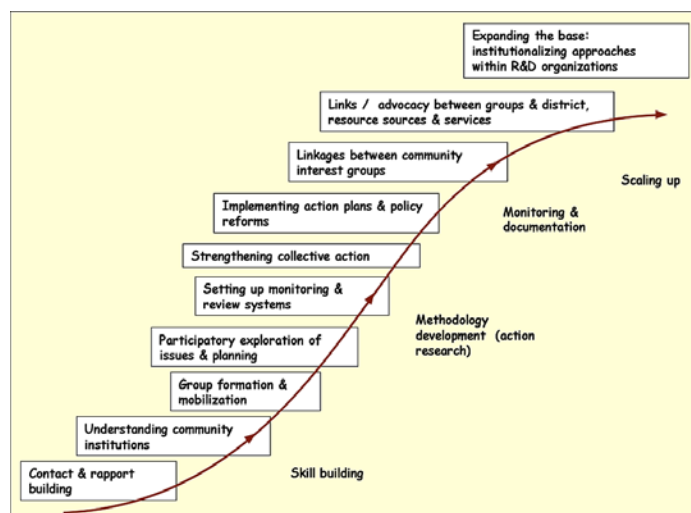
To ensure relevant contributions to improved livelihoods and environmental management in highland agro-ecosystems of East Africa, AHI is developing and promoting the use of *participatory action research* (PAR) as a key methodology for achieving change and improvement (*action*) and gaining understanding and knowledge (*research*) for managing interlinked social-economic-policy and technical dimensions of “integrated watershed management.” The application of science within a participatory development process has challenges and learning points related to managing the research process. Although AHI has recently embarked on this track, experience gained related to “frequently expressed concerns” about the strategic nature and quality of PAR as well as the paradigm shifts that it embodies can be shared.

### Why and when do we use PAR in a strategic research process?

*Conventional research goals* (quality data, high quality scientific publications, replicable findings) and *development goals* (community empowerment, improving community welfare, reducing vulnerability, targeting the poor) have been kept separate in the past. However, given the failure of conventional “wisdom” and methods, practitioners have explored alternatives to ensure that each happens and feeds into the other by intertwining R&D processes. PAR enables this to happen.

Working with social and institutional processes is a must for INRM research to

succeed. PAR can be readily applied because it is conducted *within or embedded* in a development process so that learning and experience can be informed and accumulated by the PAR action-learning cycle. In this mode, research is conducted from a



AHI's steps for participatory integrated watershed management.

different perspective and there is a distinct change in the researcher's role. Researchers are active in the process, making them more accountable to the recipients given that research is done *within the system* as opposed to understanding the system as an outsider. The researcher is no longer a neutral player.

Using PAR allows researchers to both inform the process and be informed by the process as it unfolds; to flexibly develop methodologies that are directly applicable to development; to improve the orientation of the R&D agenda because needs emerge from the process; and through PAR reflection and feedback processes the “results” or “learnings” can be presented back to and feedback collected from beneficiaries relatively quickly. Combinations of PAR and formal research methods should be used

where scientific principles related to controlling variation, replication and randomization are applied using variable forms of inquiry (from highly experimental to fairly open). Development and research objectives, qualitative and quantitative data types derived from a spectrum of methods used by various disciplines, and analyses that inform the R&D processes iteratively and quickly should all be incorporated.

## Rethinking the Definition of Strategic Research

*Strategic research should respond to problems which have local relevance but with national, regional and global application. Strategic research should aim at producing a range of products—principles, processes, methodologies as well as technologies—each of which can be scaled up and applied to a variety of contexts and situations found in other locations, institutions and regions. Strategic research can be undertaken on a range of topics: ranging from biotech to development.*

*Adapted from "Some Thoughts about Strategic Research in the CGIAR" (2000), by Jürgen Hagmann (consultant), Ann Stroud (ICRAF), Roger Kirkby (CIAT) and Cynthia Bantlam (ICRISAT), as part of the Improving Integration of the CGIAR in East and Southern Africa workshop series.*

## How do we manage research interventions as a step-wise process?

Since R&D agencies should apply themselves to a "change process" there is a departure from the notion that fixed inputs lead to pre-determined outputs in a linear fashion. While concrete products are still important, equal and often more weight is attached to *outcomes of empowerment, capacity building, institutional strengthening and policy reforms*. They represent a more pragmatic yet far reaching understanding of how change takes place, and this is where research makes a contribution. This requires serious attention to the context and demands a high level of sensitivity and skill to facilitate the "process" rather than merely focusing on technological dimensions. This attention to "process" represents a substantive shift in attention from magnitude of change to its *quality* as manifest in participation, ownership, innovation and eventual sustainability. Rigid blueprint approaches with fixed activity menus for R&D rarely permit such dimensions to fully emerge and hence remain limited and of short-term value to the communities for whom interventions are designed.

Therefore, research needs to be managed as a flexible step-wise process rather than a fixed linear process, because PAR as a key methodology is cyclic, iterative and progressive. First actions are taken (both development and research related), then a critical reflection is made of what transpired (taking into account development and research outcomes), and the reflection (analysis) is used to inform the planning of the next round which is usually better informed than the previous one.

## How do we link site specific research on local issues to more generalizable research goods?

PAR is usually applied in pilot or learning sites which serve as accessible, manageable "units" where learning through trial and analysis, observation, and monitoring over time takes place together with the actors who live and work there. Pilots are "working case examples" of *how* things can work, and illustrate localized impact and visible features of empowerment. These successes are indicators that things have gone right. Learning sites should be chosen according to more widespread "hotspots" or "syndromes," which insure they will contribute to global learning. Criteria for site selection might include representative levels of poverty or social capital, historical trends, institutional composition, distance from markets or resource degradation.

To manage decentralized learning and produce regional goods, it is necessary to develop an analytical framework that helps to organize and envision the research questions and outputs at different scales (site and regional) and shows how they are linked. Conceptualizing multiple perspective/scale and linked research questions requires iterative planning and cross checking between scales and topics. This framework is useful for: (i) focusing on "what it is we want to learn", e.g. research themes or analytical thrusts; (ii) identifying areas where synthesis leads to strategic cross-site products; (iii) communicating to a wide variety of implementers; (iv) understanding perspectives and issues from different "scale views"; (v) serving as a knowledge management framework; and (vi) formulating a scaling up and out strategy. It is important to ensure that work is relevant locally (bottom up), yet enables more global synthesis and generalization.

—Ann Stroud



*Dr. Mowo facilitating a workshop on the integration of traditional and exotic techniques for soil fertility enhancement, Lushoto, Tanzania.*



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*Key partners in this work have been research specialists from AHI's NARI collaborators (EARO, DRD, FOFIFA, FIFAManoR, KARI, NARO), the LARCs (CIAT, TSBF, ICRAF, CIMMYT, CIP, IITA), and various NGOs and government extension officers.*

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*Photos by Laura German and Ann Stroud.*