Participatory Research and Development
for Sustainable Agriculture and Natural Resource Management
A SOURCEBOOK

VOLUME 2: Enabling Participatory Research and Development

Edited by
Julian Gonsalves, Thomas Becker, Ann Braun, Dindo Campilan, Hidelisa De Chavez, Elizabeth Fajber, Monica Kapiriiri, Joy Rivaca-Caminade and Ronnie Vernooy
Participatory Research and Development: A Sourcebook Overview

The Changing Agenda of Agricultural Research and Development

Agricultural research and development has traditionally focused on meeting the challenge of feeding the world’s hungry population. Central to this agenda is the need to increase agricultural production through the introduction of technologies and support services for improving farm yield.

Following the successes of the Green Revolution in the 1960s and 1970s, newer challenges to agricultural research and development have emerged, such as:

- Promoting more equitable distribution of benefits resulting from dramatic improvements in agricultural production.
- Sustaining productivity gains through better management of natural resources supporting agriculture.
- Shifting the focus of research and development interventions to less favorable environments and low-input agricultural systems.
- Strengthening the capacity of local farming communities to continuously learn and experiment ways of improving their agricultural livelihoods.
- Building synergy between technological change and the socio-economic, cultural and political dimensions of agricultural innovation.

In seeking to address these emerging challenges, the dominant transfer-of-technology paradigm has proven inadequate for managing more complex second-generation issues such as: diverse biophysical environments, multiple livelihood goals, rapid changes in local and global economies, expanded range of stakeholders over agriculture and natural resources, and drastic decline in resource investment for the formal research and development sector.
The Changing View of Research and Development

Global experiences now show that the changing agenda requires new ways of thinking about and doing research and development. Fundamental to this emerging paradigm shift is reassessing the traditional notion of research and development as a process primarily concerned with generating and transferring modern technology to passive end-users. Instead, research and development is now widely seen as a learning process that:

- Encompasses a diverse set of activities for generating, sharing, exchanging, utilizing knowledge.
- Results in a wide range of knowledge products, from technological to socio-institutional.
- Builds synergy between local capacities, resources and innovations.
- Draws upon diverse sources of knowledge, from local systems to global science.
- Provides decision-support tools and information that enable various types of users to make strategic choices and actions.
- Requires a holistic perspective of both the biophysical and social spheres in agriculture and natural resource management.

These new perspectives suggest that research and development can no longer be the exclusive domain of scientists, but rather a joint process requiring the participation of a wider range of actors, users or stakeholders. More importantly, it redefines the role of local people from being merely recipients and beneficiaries to actors who influence and provide key inputs to the process.

Participatory Research and Development (PR&D)

In reconceptualizing the research and development process, there has been a growing interest in the use of participatory approaches in the natural resource management, agriculture and rural livelihoods sectors. These have included: participatory rural appraisal, farmer participatory research, participatory technology development, participatory action research, participatory learning and action, gender and stakeholder analysis, community-based natural resource management, and sustainable livelihoods approach.

These diverse yet interrelated approaches collectively represent participatory research and development (PR&D) – as a pool of concepts, practices, norms and attitudes that enable people to enhance their knowledge for sustainable agriculture and natural resource management. Its underlying goal is to seek wider and meaningful participation of user groups in the process of investigating and seeking improvements in local situations, needs and opportunities.
PR&D has partly evolved from efforts to improve technology development and dissemination. However, field experiences show that innovations for improving agriculture and natural resource management need to address not only the technological but also the socio-cultural, political, economic dimensions such as: community structures, gender, collective action, property rights, land tenure, power relations, policy and governance.

Participatory approaches are envisioned to help agricultural R&D: 1) respond to problems, needs and opportunities identified by users; 2) identify and evaluate technology options that build on local knowledge and resources; 3) ensure that technical innovations are appropriate for local socio-economic, cultural and political contexts; and 4) promote wider sharing and use of agricultural innovations. In contrast to the linear process of technology generation-transfer-utilization in conventional approaches, PR&D encompasses a broader set of phases and activities including:

- **Assessment and diagnosis**: situation analysis, needs and opportunities assessment, problem diagnosis, documentation and characterization.

- **Experimenting with technology options**: joint agenda setting for experimentation, technology development and evaluation, integration of technology components and piloting.

- **Sustaining local innovation**: institutionalizing social and political mechanisms, facilitating multi-perspective negotiation and conflict management, community mobilization and action, local capacity development, strengthening local partnerships.

- **Dissemination and scaling up**: development of learning and extension mechanisms, information support to macro-policy development, promoting networking and horizontal linkages.

- **Managing PR&D**: project development, resource mobilization, data management, monitoring and evaluation, PR&D capacity development.

In practice, PR&D is generally distinguished by key elements such as: sensitivity to users’ perspectives, linkage between scientific and local knowledge, interdisciplinary mode, multi-agency collaboration, problem- and impact-driven research and development objectives, and livelihood systems framework.

**Promoting and Developing Capacity for PR&D**

While there is growing interest in PR&D, it remains widely perceived as incompatible with accepted norms and practices in the mainstream research community. In the field, PR&D demands a set of knowledge, attitude and skills that go beyond the typical human and organizational capacities under top-down research and development paradigms.

In addition, the value adding potential of participatory approaches have yet to be fully explored by research and development practitioners. There remains a major
need to document empirical cases and to systematically assess impact of PR&D. Similarly, there is still limited understanding on PR&D’s complementary role to more conventional research approaches, and on maintaining effective linkage with mainstream science to facilitate local innovation processes.

Nonetheless, participatory approaches are gradually gaining ground across the institutional landscape – from research and academic organizations to non-government organizations (NGOs), development agencies, and local government units. To further promote and develop capacities for PR&D, it is necessary to create more opportunities for information exchange, training and networking among the growing number of practitioners and organizations seeking to explore the value-adding potential of PR&D. Among its key challenges are:

- **Synthesis**: Reviewing diverse PR&D experiences to identify field-tested concepts and practices for wider sharing and adaptation.

- **Capacity development**: Developing PR&D capacities of field practitioners and their organizations such as through training, information services, networking and development of protocols.

- **Establishing support mechanisms for capacity development**: Sustaining capacity development through institutionalized, locally-driven support mechanisms.

- **Integration**: Creating opportunities and a supportive environment for introducing PR&D in mainstream agriculture and natural resource management programs.

**The PR&D Sourcebook**

The development of this sourcebook supports wider initiatives in promoting easy access to systematized information on field-tested PR&D concepts and practices among field practitioners and their organizations. It addresses the need to facilitate sharing and use of the expanding knowledge on PR&D by:

1) Identifying and consolidating field-tested PR&D concepts and practices relevant to managing natural resources for agriculture and rural livelihood, drawn from experiences of practitioners and organizations around the world.

2) Repackaging, simplifying and adapting information through the production of a sourcebook on PR&D.

3) Distributing and promoting the use of the sourcebook, including its derived products, particularly in developing countries where access to PR&D information resources is limited.
The primary target users of the sourcebook are field-based research practitioners in developing countries seeking to learn and apply PR&D in their respective programs and organizations. They may have technical or social science backgrounds but share a common interest in using PR&D’s general knowledge base. They are involved in research activities dealing with interrelated issues in natural resource management, agriculture and rural livelihoods.

As a whole, the sourcebook is envisioned to provide general reference and comprehensive overview on PR&D. In showcasing the rich, diverse perspectives on PR&D, the sourcebook is characterized by the following salient elements:

- Emphasis on information applicable to **research- and development-oriented activities**, complementing existing publications/materials that primarily focus on the use of participatory methods for extension, learning and community mobilization.

- Broad topical coverage of the **research and development process**. As an introductory guide on PR&D, it provides general orientation to various phases or types of activities that are specifically covered by existing method- and/or tool-specific publications.

- Focus on the application of PR&D within the framework of **conservation and sustainable use of natural resources**. It consists of papers that share field experiences associated with natural resources being used in agriculture and rural livelihoods and/or agriculture and rural livelihoods that consciously maintain long-term productivity of the resource base.

- An integrated **socio-technical perspective** that takes into account both the social/human and technological dimensions of innovation required for natural resource management, sustainable agriculture and rural livelihoods.

- **Cross-cutting perspective** of PR&D applications, encompassing various types of natural resources, agricultural activities and rural livelihoods; this comparative mode of presenting information complements existing publications that are specific to sub-categories of PR&D applications.

- Conscious effort to seek out papers dealing with **lesser known projects/organizations** in developing countries, especially PR&D experiences that have not been (widely) published.

**The Editors**
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**Multi-Stakeholder Based Natural Resource Management**

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One of the envisioned outcomes of more participatory, demand-driven agricultural research and development is direct input from farmers into policy formulation and implementation. This represents a significant challenge from the standpoint of organizing farmers and civil society to lobby for policy change given a long history of top-down policy formulation and implementation. Similarly, policymakers are challenged to enhance their responsiveness to civil society.

The National Agricultural Advisory Services (NAADS) was first implemented in 2002 as part of Uganda’s Plan for the Modernization of Agriculture (PMA). Broadly, it aims to decentralize agricultural services and to foster a farmer-owned and private sector-serviced extension system.

During the pilot phase of NAADS, farmers and stakeholders at the country level selected non-government organizations (NGOs) to help in sensitizing people about NAADS, in group formation and registration, and in agroenterprise selection. Upon completion, the contracted organizations felt that the process had created more questions than answers. Farmers voiced concern over financial management of service contracts and

NAADS envisions a decentralized, farmer-owned and private sector-serviced extension system that contributes to a more market-oriented, specialized and privatized agricultural sector. Principles intended to guide the implementation of NAADS include: (a) a pro-poor focus; (b) more effective service delivery; (c) market-oriented production; (d) farmer empowerment; (e) gender mainstreaming; and (f) sustainable natural resource management.
the need to prioritize single enterprises given the complexity of their farming systems and production goals, while NGOs were concerned about lack of clarity on how to integrate “cross-cutting principles” (gender, equity, sustainability) and ensure farmer representation. A shared vision emerged from these discussions, leading to the formation of the Coalition for Effective Extension Delivery (CEED) by research and development organizations involved in NAADS implementation in Kabale District. These include the African Highlands Initiative, CARE International, Kabale District Farmers’ Association and Africa 2000 Network.

CEED’s aim is to enable demand-driven development in Kabale District, and to share the experiences derived from this with other development actors. The Coalition’s immediate focus was to operationalize the NAADS framework through a participatory action learning (PAL) process at the local level, enabling farmers to identify and address structural bottlenecks hindering the implementation of NAADS.

**Facilitating Grassroots Participation**

The following steps were followed in facilitating or encouraging grassroots participation:

**1. Identifying Stakeholder Concerns**

The Coalition began to formulate an intervention strategy by systematically documenting the concerns of diverse actors about the NAADS process. This was desirable because it captured priority issues that are situation-or actor-specific. This was needed at the local level where wealth, age, gender and levels of political prestige are likely to influence what priority issues emerge. It is equally important at other levels within the NAADS structure, where one’s position influences how problems are perceived.

Representatives of different actors within the NAADS system were interviewed to identify key “hot spots” by listing and prioritizing the problems that have arisen throughout the NAADS implementation process. Significant overlap in the issues identified by different stakeholders (Table 1) indicate that the issues are systemic (felt throughout the system) and of high priority.
2. Identify Critical Bottlenecks

Two primary bottlenecks were found to contribute to identified “Hot Spots” and hinder the spontaneous decentralization of decision-making under NAADS:

- **Ineffective information flow.** While NAADS policy dictates decentralization of roles and responsibilities, poor communication of policy guidelines hindered farmers’ understanding of their rights and roles.

- **Usurpation of decision-making authority.** The failure of actors to fully internalize their new roles and responsibilities under a decentralized decision-making model allowed the process to be co-opted (both intentionally and unintentionally) by more powerful actors at all levels.

### Table 1. ‘Hot Spots’ Identified by Diverse Actors in the NAADS System

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<th>Hot Spot</th>
<th>Dimensions of the Problem</th>
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<td>Agroenterprise selection/development</td>
<td>Time is too short to address complex selection criteria (sustainability, equity, profitability, capital); the principle of enterprise specialization is questioned.</td>
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<tr>
<td>Roles and responsibilities</td>
<td>Ambiguity of roles and responsibilities in NAADS implementation manual and absence of clear checks and balances in operations, contributing to abuse of funds and usurpation of decision-making authority.</td>
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<tr>
<td>Funding and financial accountability</td>
<td>Capital for inputs does not accompany service provision; disbursement not synchronous with agricultural cycle; distribution is inequitable (flat rate irrespective of sub-county population) and insufficient; sub-county fund allocation not transparent.</td>
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<tr>
<td>Inclusiveness and empowerment</td>
<td>Farmer fora not considered representative; equity is not operationalized for agroenterprise or within program design; farmer capacity to effect change and awareness of legal basis for empowerment is still lacking.</td>
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<tr>
<td>Service delivery</td>
<td>Insufficient quality of service providers; required qualifications (diploma) limit use of local experts; coverage is biased toward more accessible villages and farms; farmers lack control over contracting; monitoring of services is ineffective.</td>
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3. Formalize Partnership

CEED members formalized their partnership through a Memorandum of Understanding that clearly specified the objective of the partnership, its guiding values, and the responsibilities of member organizations. The primary objective as defined by CEED members is to build people’s capacity to influence policies, structures and systems that affect their livelihood and access to agricultural services.

4. Participatory Action Learning (PAL)

The core approach to engage communities in analysis and improvement of policy formulation and implementation has been the PAL process at the sub-county level. The objective of PAL has been to work through major hot spots, focusing on critical bottlenecks that hinder effective implementation of either NAADS policy or of the values underpinning these policies (in cases where the policy itself is somehow deficient).

Participatory action learning is composed of a series of steps, including: planning, action, reflection and re-planning (Figure 1). Facilitating farmers through critical reflection and action enabled them to target the “power and information bottleneck” at sub-county level and within the farmer forum itself. This led to the formation of parish-level councils composed of representatives of farmers’ groups in each village. This independent council links the grassroots with the sub-county farmer fora, providing a means for farmers to advocate for greater representation within the farmer fora as well as upward throughout the NAADS structure.

5. Interfacing and Advocacy

The Coalition interfaces with both the NAADS Secretariat and farmers’ organizations at the sub-county level. Figure 2 shows the linkage between civil society and policymakers under NAADS, as facilitated by CEED.
This approach yielded the following successes/accomplishments:

- Led to the emergence of new farmer institutions (parish-level farmer fora and councils) to improve farmer representation
- Opened a gateway for bringing in the views of farmers’ groups and forging better representation within the farmer fora
- Formalized the linkage mechanisms between CEED, the NAADS secretariat, and farmers’ groups
- Secured NAADS’ funding for the Participatory Action Learning (PAL) process in Kabale District and a national survey on key lessons from roll-out of the NAADS program
- Addressed the concerns of the NAADS secretariat to strengthen the linkage between localized learning and national policies
Case Examples

A critical bottleneck was identified at the sub-county level, where funds are disbursed by the Secretariat, contracts are made, and several key actors (NAADS, local government, farmer representatives) interact. The lack of clear roles, and thus of clear monitoring criteria, has enabled the abuse of roles, authority and funds.

Staff from the top-down extension organizations that NAADS is designed to replace now work for NAADS, and continue to give directives on how farmers should proceed. Service providers and farmers’ fora - accustomed to such top-down directives - often adhere to them, further undermining the program’s aims. Lack of transparency in the use of funds has also opened the door to corruption and limited quality assurance in service contracting. This is now being addressed through PAL processes in which farmers test approaches to overcome these bottlenecks.

Sub-County (S/C) Bottleneck to Demand-Driven Service Provision
Successes and Challenges

Some of the key successes and challenges of the Coalition’s experiences are outlined below, and serve as the basis for ongoing learning as CEED works to enhance farmer-owned development processes in Kabale District and beyond.

Several important successes have emerged from the PAL process. Of key importance is the decision of farmers to advocate directly with the Secretariat for policy reforms, and to contest the usurpation of power and decision-making at the sub-county level. The Secretariat has now expressed a willingness to consider farmer service providers and have allocated funds for the development of processes for overcoming the power dynamics currently hindering program success.

### Successes

- Farmers are able to identify structural constraints to empowerment, are engaged in PAL & seeking solutions, and advocate directly with Secretariat.
- Negotiation within the Coalition to bridge member organizations’ worldviews on approaches (research and facilitation), resources and skill base.
- NAADS Secretariat is open to restructuring implementation and policy guidelines.

### Challenges

- Summarizing results quickly, so as to influence policies implemented during program roll-out.
- The tendency for farmers to see the PAL process as external to farmer groups & farmer fora makes its legitimacy and full participation a challenge.
- Maintaining legitimacy vis-à-vis NAADS and powerful sub-county actors, given the tendency of vested interests to try to de-legitimize the PAL process.

### References


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