

# **Enabling Rural Innovation in Africa: An Approach for Empowering Smallholder Farmers to Access Market Opportunities for Improved Livelihoods**

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## **Abstract**

This paper presents lessons from applying an innovative approach for linking smallholder farmers to markets. This approach entitled, *Enabling Rural Innovation (ERI)* focuses on strengthening the capacity of smallholder, resource-poor farmers to access market opportunities and actively engaging in them with the aim of creating an entrepreneurial culture in rural communities, where farmers “*produce what they can market rather than trying to market what they produce*”. The approach focuses on fostering inclusion of rural women and the poor in analyzing and accessing market opportunities (domestic, regional and international), using a territorial approach to agro-enterprise development. The paper provides a general overview of the approach, the guiding principles, conceptual framework and steps in the ERI process. The paper also gives detailed examples of the five key components: participatory market research, farmer participatory research and its links to natural resource management, social and human capital, gender equity and participatory monitoring and evaluation. Lessons, experiences and challenges from testing this novel approach with a range of research and development partners in eastern and southern Africa are presented. The paper also summarizes some key research findings from a series of impact studies. This paper is a critical self-reflection of our intellectual journey testing and applying the ERI approach.

## **1. Background**

Agricultural markets can play significant roles in reducing poverty in poor economies, especially in countries which have not already achieved significant agricultural growth. Dorward et al. (2003) highlight three broad mechanisms through which agricultural growth can drive poverty reduction: (1) Through the direct impacts of increased agricultural productivity and incomes; (2) Through the benefits of cheaper food for both the urban and rural poor; (3) Through agriculture’s contribution to growth and the generation of economic opportunity in the non-farm sector. However, experience has shown that markets can fail the poor, especially poorest and marginalized groups, especially women. Johnson (2005) argues that in remote rural areas markets may fail because they may be too ‘thin’, or the risks and costs of participating especially for poor people may be too high, and or there may be social or economic barriers to participation.

There is evidence that women and the poor face more constraints as they endeavor to engage with market systems. Empirical studies on intra-household gender dynamics in Africa have shown that when a crop enters the market economy, men are likely to take over from women, and therefore women do not benefit from market-oriented production (von Braun and Webb 1989). In some instances, women’s social and cultural roles may assign productive and reproductive roles to men and women that can limit their access to markets (OECD 2004). Women’s role of household provisioning versus the men’s role of providing cash requirements of the household, affects women’s ability to participate in markets.

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During the period between 1975 to 1985 (women's decade) and early 1990's, there were various efforts have endeavored to link women farmers to markets. These efforts focused on rural women and their need for agricultural technology, mainly appropriate technology to increase the productivity of rural food processing and laborsaving technologies to alleviate the drudgery of women's work (UNIFEM 1997; Ilkharacan and Appleton 1995) and Appleton 1993; UN 1985). However, various reviews have found that these massive campaigns and projects for women did not yield the expected benefits to rural women. For example, a majority of the women-only projects focused on traditional domestic activities, such as food processing, handicrafts, amongst others, all activities with low economic returns and scant opportunities for improving women's socioeconomic status (Pena, Webb and Haddad 1996; Everts 1998). In a review to derive lessons and experiences from initiatives and other approaches that have targeted women with technological innovation, Kaaria and Ashby (2001) found that the women in development initiatives succeeded in reducing women's drudgery. The review also found that increases in labor productivity were not significant because these technologies focused on women's domestic/traditional activities as opposed to focusing on women's economic productivity.

A majority of approaches for linking smallholder farmers are often commodity and cash crop based and use arrangements such as contract farming and out-grower schemes that link smallholder farmers to large growers. Such arrangements while linking the smallholder farmers to regional and domestic markets also leave them vulnerable, due to lack of capacity to effectively engage in markets, or to analyze and negotiate with these markets. In a review of case studies, Bingen et al. (2003) found that investment in human capital formation could determine the ability of rural communities to participate effectively in markets. They argue that although human capital investments can be slow, the skills in marketing often determine the ability of a community to access inputs and market production beyond the life of a project.

Therefore, it is now widely accepted that projects must integrate specific strategies to encourage and promote participation by the poor. The International Center for Tropical Agriculture (CIAT) is testing and evaluating one such holistic approach, Enabling Rural Innovation (ERI), with partners and communities in Uganda, Tanzania, Malawi, Zimbabwe, Kenya, Mozambique, Zambia, Rwanda, and DR Congo. The approach integrates specific strategies to encourage and promote participation by the poor and women, and builds their capacity to effectively engage markets in a more sustainable manner. This paper provides a general overview of the approach, the guiding principles, conceptual framework and steps in the ERI process, and some lessons learned.

## **2. ENABLING RURAL INNOVATION**

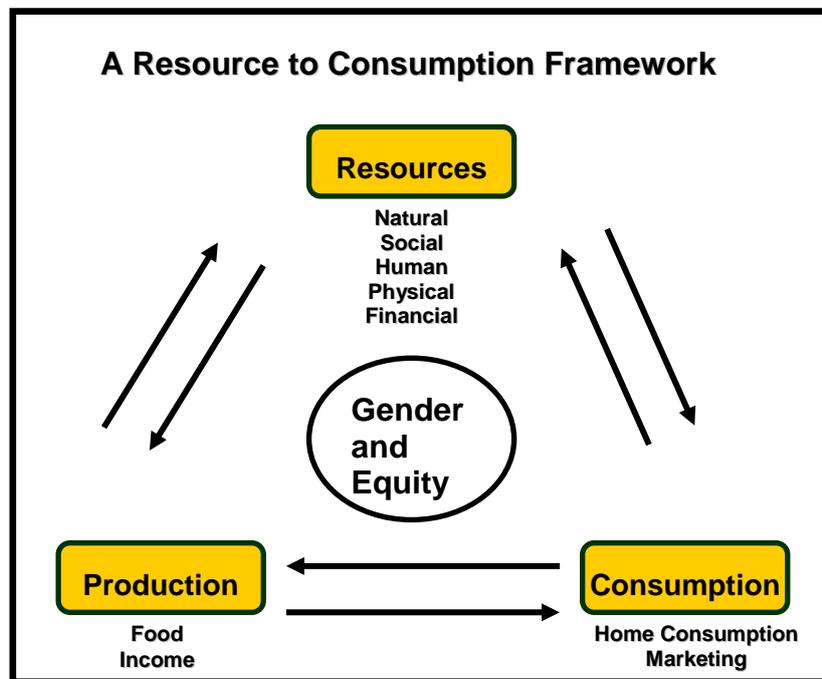
The Enabling Rural Innovation (ERI) initiative is a research for development framework that uses participatory research approaches to strengthen the capacity of research and development (R&D) partners and rural communities to access and generate technical and market information for improving farmers' decision-making. The aim is to create an entrepreneurial culture in rural communities, where farmers "*produce what they can market rather than trying to market what they produce*", and encourages them to invest in their natural resources rather than depleting them for short-term market gain (Best and Kaganzi, 2003, Ferris et. al. 2006). This initiative has emerged from three main streams of CIAT's experiences over the last 20 years: (i) Farmer participatory research, (ii) Rural agro-enterprise development and (iii) Natural resource management. The aim of this initiative is to use the most effective elements from these three approaches when working with rural communities to build more robust livelihood strategies.

CIAT has been testing and evaluating this novel approach in partnership with rural communities, national agricultural research and extension services (NARES) and nongovernmental organizations (NGOs) for the past five years in Africa. Emphasis is on developing and testing innovative partnerships that bring together stakeholders with complementary skills and expertise along the resources-to-consumption and policy continuum. It is strongly founded on the principles of mutual learning and knowledge sharing that facilitates institutional change. These efforts are geared towards fostering effective public-private partnerships, horizontal and vertical links between networks of farmers' organizations and R&D service providers (Sanginga et al., 2007).

### **2.1. Conceptual Framework for Enabling Rural Innovation: *Resource to Consumption Conceptual Framework***

ERI applies a resource to consumption (R-to-C) conceptual framework which emerged from a review of experience on what has worked or not in different approaches to benefit women through technological change (Kaaria and Ashby 2001). They proposed this framework that builds positive backward and forward linkages from the resources or assets of a community (natural, human, social, physical and financial) to production, post-harvest handling and processing, market opportunities and household consumption (Figure 1).

**Figure 1: Conceptual Framework: The Resource to Consumption Framework**



(Source: Kaaria et al. 2005)

This framework expands conventional production to consumption or commodity chain approaches by explicitly basing decisions on what productive activities to engage in on the combination of community assets that will best meet the dual needs of household food production and income generation.

The "resource to consumption framework" is based on the following principles:

- ✓ It takes a "beneficiary" rather than a "commodity" starting point for technology development. Research objectives are defined by assessing market analysis, community interests and their assets.
- ✓ Technology development is driven by a comprehensive beneficiary diagnosis, to identify differences in intra-household allocation and control over resources and responsibilities in order to understand constraints and opportunities to technology adoption and reinvestment in NRM.
- ✓ Gender and stakeholder differentiation of roles and perceptions is explicit and integrated into the technology development process, to ensure equity in the access to technologies and distribution of benefits.
- ✓ It takes a 'territorial' rather than a 'commodity' focus to market opportunity development. The approach builds community skills in identifying and analyzing markets opportunities for new or existing products, matching market opportunities with their asset base.

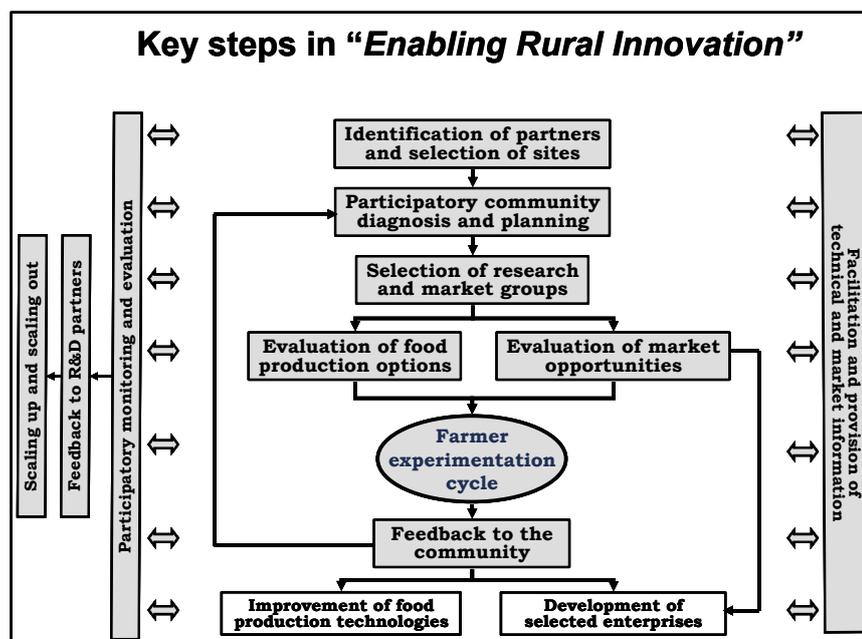
## 2.2. The key steps in establishing ERI approach

There are various steps involved in establishing the ERI process with communities. Groups are facilitated by the partner organization, and supported at critical moments by CIAT. Figure 2 shows the key steps in implementing the ERI process, these are:

- (a) Engagement of research and development partners and communities

- (b) Participatory diagnosis to assess community assets, finances, current income opportunities, potential options, access to services, skills base, degree of cooperation, access to new technologies, organizational structures
- (c) Formation of farmer research group and market research group, and building the group's capacity to participate actively in selecting, testing and evaluating marketing strategies and technology options
- (d) Participatory market analysis to identify market opportunities for competitive products that will increase farm income and employment.
- (e) Prioritization of opportunities and selection of agro-enterprise options based on social differences including gender and wealth
- (f) Planning and implementation of experiments by farmer research groups to support enterprise and food security options.
- (g) Feedback of results to the community and R&D organization, and identification of further research questions
- (h) Participatory monitoring and evaluation that is useful to both communities and to their service providers;
- (i) Scaling-up (expanding) of participatory research results and of the community enterprise development process

**Figure 2: Key steps to Enabling Rural Innovation**



### 3. Key Components of the Enabling Rural Innovation Approach

#### 3.1. Strategy for Agro-enterprise Development and Participatory Market Research

This approach focuses on building skills and knowledge of communities, local service providers, and farmers' organizations to engage effectively in markets. The approach emphasizes a market orientation that enables smallholder farmers to successfully link themselves to potential markets, with support from research and development partners. It builds on CIAT's approach to Rural Agro-enterprise Development as described by Ostertag (1999), Best and Kaganzi (2003), Lundy et al. (2003), and Ferris et al., (2006). The approach recognizes that risk assessment plays an important role in the strategy for smallholder farmer. Therefore, when selecting products and new business options, assessment of an appropriate level of risk that a client group can undertake, is crucial. Tools such as cost-benefit analysis and the Ansoff matrix (see Table 1) are used to categorize risk options, by comparing types of products and markets. Market opportunity analyses of products based on demand and profitability will tend to bias results towards higher risk options and enterprise groups

need to be aware of the risks, costs and benefits from higher profit options. For groups with more experience in marketing, higher risk strategies are likely to be more attractive.

**Table 1: The Ansoff Matrix for Risk Assessment**

	Existing products	New products
Existing markets	1. Market penetration ( <i>lowest risk</i> )	3. Product development
New markets	2. Market development	4. Diversification ( <i>Highest risk</i> )

Once the group has selected the most appropriate option, the farmer organization or group then follows a stepwise approach to developing sustainable enterprises. The process begins with a participatory diagnosis that assesses community assets, market opportunities and constraints, based on those assets. An enterprise planning committee is elected to undertake market studies, on behalf of the group. Participatory market research builds skills of farmers to analyze markets and permits them to have a better understanding of markets, to consolidate relationships with traders and to negotiate for better prices for their produce. Enterprise selection is based on the analysis of sound technical and economic information, as well as community criteria. Business plans of the best enterprises options plans are designed and tested for collective marketing (for further details see Best and Kaganzi, 2003; Ferris et al. 2006).

### **3.2. Farmer Participatory Research and Natural Resource Management**

The involvement of farmers as decision-makers in all stages of the innovation process is a hallmark of the ERI approach. Participatory research and learning approaches are strategies for investing in human and social capital for poor farming families to empower them to articulate their priorities and to participate as decision-makers in the R&D process (Pretty and Hine, 2001). Participatory research approaches decentralize control over the research agenda and permit a much broader set of stakeholders to become involved in research, thereby addressing the differential needs for research and development by men and women for technical innovation (Ashby et al., 2000). For example, initiatives such as the creation of farmer research committees (FRCs) can mobilise rural communities to prioritise and articulate their demand for agricultural research, and to subsequently develop technology adapted to local conditions based on prioritised demands. These approaches can provide an avenue for feeding back farmers' demands and priorities to research providers, thereby strengthening the capability of R&D systems to respond to the demands of rural communities. There is evidence that user participation in research can lead to more relevant technologies and greater economic impacts, especially when participation was early in the research process (Johnson et al. 2003). Finally, it is now recognized that participatory research and learning approaches are crucial in promoting learning about biological and ecological complexity (Pretty and Hine, 2001), including, knowledge intensive technology options such as management of natural resources.

### **3.3. Social and human capital**

Each community or farmer group is supported by a community development facilitator who is charged with the responsibility (among others) of supporting the development of groups so they may mature and perform effectively and, thus, strengthen their social and human capital. Such maturity is evidenced when communities report dramatic increases in the levels of trust and cooperation, the presence of several committees, regular community meetings, and regular interaction with R&D partners. Across sites, horizontal and vertical linkages are created with other farmers' organizations, service providers, and governmental departments. Many groups link up with other external organizations and attract additional resources from governmental agencies, NGOs, and other rural service providers to support their community action plans. These groups become a vehicle through which farmers can pursue wider development concerns, initiate new activities, organize collective action among members, and extend relationships and linkages with external organizations.

### **3.4. Gender equity and empowerment of women**

Gender equity and empowerment of women are of central to the ERI process, and are integrated in all stages from: Selection of communities / groups and partners; participatory diagnosis and community

planning; identifying and selecting market opportunities, and; farmer experimentation and capacity building. The ERI process specifically uses gender-sensitive participatory tools to bring gender issues to the forefront and to create awareness of gender issues in a more systematic manner. Proactive strategies and gender-sensitive facilitation skills are used to build the capacity of both men and women farmers in identifying and evaluating a diverse range of market opportunities, and in experimenting with a range of crop and soil fertility management technologies.

**3.5. Community-based Participatory Monitoring and Evaluation (CB-PM&E)**

With the ERI approach, CB-PM&E tools are applied to support self-reflection and a continuous process of learning at both community and project levels. At the local level, community-driven PM&E systems support and enhance group functioning processes, improve local decision making, and enhance participation. These systems also enable communities to develop indicators to measure change, collect and analyze their data, and decide on how to use their results. Table 2 shows an example of local community indicators, disaggregated by men and women.

**Table 2: Indicators for Men and Women**

Result / Objective	Indicators	
	Men	Women
<b>The group will have increased income from the sale of our produce in better markets</b>	<ul style="list-style-type: none"> <li>▪ Better Housing, large with iron sheet roofs</li> <li>▪ To hire labor to help them in the farms</li> <li>▪ Buy new bicycles and replace old bicycle</li> <li>▪ Income generating activities initiated</li> <li>▪ Men not drinking traditional beer</li> </ul>	<ul style="list-style-type: none"> <li>▪ Send children to secondary schools</li> <li>▪ Improved homes (good food, beds, chairs, cupboards, plates, cooking pots)</li> <li>▪ Better clothing -- women wearing new <i>khangas</i> (fabric), <i>kodokodo</i> (high heels)</li> <li>▪ Women going to market weekly</li> <li>▪ Women having Bank accounts in their own names</li> <li>▪ Capacity to buy clothes without requesting for permission from husbands</li> </ul>
<b>Gender and Equity</b>	<ul style="list-style-type: none"> <li>▪ Changing some traditions (men not always eating first)</li> <li>▪ Not having the elderly people or village headman making all the decisions</li> <li>▪ Changing some practices (men should be helping women – not give the woman the hoe when you are coming from the field)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Women taking up responsibilities – leadership roles in committees</li> <li>▪ Women being able to contribute and say their ideas</li> <li>▪ Women to have their own tobacco plot.</li> <li>▪ Women being able to contribute and say their ideas</li> <li>▪ Girls will be going to school and not have early marriages</li> </ul>

The objective of PM&E is to strengthen social and human capital assets of the rural communities, thus enabling them to analyze their strategies, and to make adjustments accordingly. Results of PM&E feed directly into improving their livelihoods by indicating more relevant and timely improvements in agricultural innovation.

PM&E results also have a wider impact through farmers having an improved capacity to make effective demands on service providers. Communities also use PM&E systems to hold R&D institutions accountable through effective communication, feedback mechanisms, and community involvement in project monitoring. At the project level, PM&E has been applied to strengthen organizational learning and enhance stakeholder participation. Project staff are involving communities in joint planning, development of common objectives, and collective assessment of progress. Building effective systems for monitoring and evaluation at both community and project level ensures that lessons are documented and shared.

### 3.6. Developing and managing effective partnerships

Successful innovations result from strong interactions and flow of knowledge within networks of stakeholders working together. Effective local partnerships between researchers, extension workers, NGOs, and farmer communities are key to the success of ERI. Partners are selected not only for their interest in incorporating the approach into their ongoing work, but also on the basis of institutional assessment, including their working relationships with local communities, their objectives and potential to scale up impact.

The ERI partnership has grown rapidly from a limited number of partners in 2000 to more than 22 boundary partners in 2004, while still expanding into new countries. The ERI partnership process is based on common problem definition and complementarity to achieve a common goal, strong and consistent support from senior leadership, joint resources mobilization, capacity building, as well as a range of institutional and individual benefits. Nurturing interpersonal relationships and bonding social capital lowers the transaction costs of partnerships, facilitates trust, mutual respect, and regular communication.

## 4. What have we Learnt

Research within the ERI initiative has focused on assessing institutional and social innovations necessary for pro-poor market development; incentives for farmer reinvestment in technology and NRM, and; equity and distribution benefits from farmer market linkages.

- (a) Results from various impact studies have showed that participatory approaches for linking farmers to markets increased the bargaining power of women, and translated into tangible household benefits. Impacts were in terms of household income, changes in social capital, changes in intra-household decision-making towards more shared, skills in analyzing and understanding markets, in conducting experimentation and in taking on leadership positions in project.
- (b) Lessons showed that a critical success factor in expanding market access is the presence of mature farmers' organizations. Farmer organizations are at the same time becoming an important stakeholder group in agricultural research and development. However, our results showed that benefits from social capital were not equally distributed: with men, educated people or group leaders (men and women) significantly benefiting more than women, and less educated. These disparities are likely to be more pronounced when working with large farmer organizations, thereby creating a need for systematic research into the dynamics, composition, performance and effectiveness of second-order or higher level farmers' associations. A key issue for research is to understand how participatory approaches can be adapted and used at this second order level of farmer organizations to effectively link smallholder farmers to markets while ensuring equity of benefits for the *hard-to-reach* farmers, and how to strengthen their role in the research and development process.
- (c) We found that when women start managing income from enterprise, household decision-making becomes more shared, however, the choice of enterprise selected and the farmer-to-market approach were important factors in influencing control. However, what remains unanswered is how different farmer to market markets shape nutrition and food security outcomes. Hence, the importance of rigorously establishing the synergies and trade-off between market orientation and nutrition and food security.
- (d) A key hypothesis of applying the R-to-C conceptual framework to achieve rural innovation was that better market opportunities would provide incentives for re-investment in technology and NRM. However, we found that for the majority of women and poor farmers in re-investment in NRM was not among the first three priorities. Investment on other livelihood needs (buying or renting more farmland, livestock, paying school fees and buying clothes) received higher priority. A key finding was that further research, including policy research is necessary to analyze policy constraints and incentives for uptake of NRM options and innovations.
- (e) A majority of small-scale poor farmers continue to face numerous barriers to market participation including poor asset base, lack of market information, weak institutions, the inability to capture benefits from value-added processes, and low involvement of the private sector and commercial relationships. We found that although farmers made income gains from farmer market linkages, there were significant income disparities between the women and men members. Therefore, we need alternative ways for linking such farmers with emerging market opportunities, and identify

how best the hard-to-reach farmers can be engaged in remunerative markets so as to increase productivity, incomes, and well-being.

- (f) An important part of farmer to market linkages was a strong linkage to research in order to sustain the increases in productivity necessary. We found that in instances where agro-enterprise development was linked to research to address various bottlenecks along the value chain resulted in higher payoffs. Research that removes bottlenecks in production and ensures sustainable supply of quality produce the project was critical.
- (g) A final key lesson was that policy-related research a critical missing element and that any approach that aims to link small scale poor farmers to markets must conduct rigorous assessments of economic and policy-related factors that influence the functioning of input and output for markets. There is an urgent need for comparative research to identify policy options for promoting the engagement of the poor in markets.

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