

Institutional Learning and Change: An initiative to promote greater impact through agricultural research for poverty alleviation

Jamie Watts and *Douglas Horton*

Abstract

The ILAC Initiative consists of an evolving community of individuals committed to increasing the contributions of agricultural research to sustainable poverty reduction around the world. ILAC promotes research, methodology development and capacity development to increase understanding of agricultural change processes and increase the effectiveness of interventions to stimulate pro-poor innovation. This paper presents a broad overview of ILAC, including its background, origins and evolution, objectives and activities. It also presents the initiative's central hypothesis and a set of guiding questions. Theoretical frameworks that show promise for increasing understanding of issues related to capacities to learn, facilitate innovation, and contribute to poverty reduction are introduced.

Background

When the CGIAR system was formed in the early 1970s, its main goal was relatively simple: to assure food supplies in the developing world using agricultural science to increase the productivity of major food crops. The institutional model underpinning this goal involved the creation of international centres of scientific excellence to develop technologies to be transferred to national programmes and onwards to farmers. Implicit in this design was the assumption that scientists could identify research priorities and act as the central source of innovation. However, as development goals and processes have become more complex and better understood, the research agenda of the centres has expanded to include the triple goals of agricultural productivity, environmental sustainability, and a more explicit focus on poverty reduction (Hall *et al*, 2000). The centres are challenged by the need to address this expanded agenda with an approach and a culture that were intended for a narrower and simpler task. Another driver affecting the CGIAR and agricultural research in general is the rapid pace at which the development context is evolving. Some of the features of this rapidly changing context include:

- A more sophisticated understanding of how development occurs, which recognizes that innovation has multiple sources and that it results from the actions of a variety of participants
- The emergence of a large number and range of organizations associated with agriculture and rural development – including NGOs, private companies, farmer-operated enterprises, and research foundations
- New working practices involving partnerships and grass-roots participation
- Changing norms of governance and democracy such as decentralization
- New patterns of knowledge ownership
- Opportunities presented by rapid developments in technology
- Increasingly rapid learning and diffusion rates as a result of improvements in information technology and communications infrastructure
- Globalization and the increasing influence of international markets on the rate and direction of technological change
- Environmental degradation and climate change which are themselves highly complex and evolving processes

At the same time, there is also a concern that poor farmers seldom actually benefit from efforts to improve agricultural production. For example, recently collected information on the production and use of leafy vegetables in Kenyan households shows that most farmers surveyed lack access to irrigation, markets, seeds, credit, and information on markets and improved production practices. . Moreover, among the farmers surveyed, the poorest farmers had the least access to markets and information (Gotor and Irungu, 2007).

It is widely recognized that to be relevant and effective in this context, CGIAR programs must have a more responsive mode of operation in which partnership and client orientation are core principles. To achieve this, major institutional changes will be needed. Although the institutional arrangements of the CGIAR have evolved substantially over time, much remains to be done to complete the transition from a “centre-of-excellence” model to one of effective participation in innovation systems. The Institutional Learning and Change (ILAC) Initiative aims primarily to support the CGIAR and the agricultural research community more broadly in adapting to these rapidly changing circumstances.

Origin and Evolution of the ILAC Initiative

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ILAC emerged from a debate about impact assessment that began in earnest at a conference entitled “Why has impact assessment research not made more of a difference?” This conference was convened by the CGIAR Science Council and the Economics Programme of CIMMYT in Costa Rica in 2003. At that time, some evaluators, researchers and donors expressed concerns about the way that impact assessment was being organized within the CGIAR, which was based upon three major assumptions:

1. There is a direct causal link between research and impact
2. This link dominates other variables
3. Inputs and impacts can be accurately measured or predicted using economic and statistical methods (Ekboir, 2003).

A project to assess CGIAR impacts on poverty alleviation questioned these assumptions and broke new ground by examining poverty impacts using both qualitative and quantitative methods and by exploring the wider livelihood context of the poor. A set of poverty studies highlighted the complexity of rural livelihoods and showed that impact is influenced not only by technology, but also by the way the research is carried out and by the institutions that guide research and technology development (Adato and Meinzen-Dick, 2007). Donors and others expressed concerns that CGIAR impact assessment was too focused on demonstrating impact rather than analyzing it in a hypothesis testing mode. Problems deriving from this include too much focus on success cases, inconsistent use of counterfactuals, and over-attribution of benefits to centres among others (Matlon, 2003).

In 2003, the Rockefeller Foundation provided initial support for the ILAC Initiative in the context of the CGIAR’s reform initiative. In 2004 and 2005, the Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ-BMZ) and the International Fund for Agricultural Development (IFAD) also provided funding support for the initiative. In 2005 and 2006, the Netherlands Ministry of Foreign Affairs (DGIS) provided one-year grants for ILAC. During this period, the initiative focused on challenging impact assessment paradigms in the CGIAR and experimenting with and publishing about methods for research management and evaluation that focused on increasing learning and examined processes and relationships that might support increased impact on poverty. ILAC promoted several shifts in emphasis from traditional planning, monitoring and evaluation approaches, for example:

- From a product focus to a focus on people and institutions

- From a focus on external expert reviews to internal critical self-reflection
- From a focus on documenting successes and punishing failures to a balanced analysis of both successes and failures as critically important to learning and programme improvement.

The organizations that were involved in the first phase of ILAC include Bioversity International (which hosts ILAC and which had a case study), the Institute of Development Studies (IDS), the United Nations University (UNU), Xavier Institute of Management (India), the International Centre for Tropical Agriculture (CIAT), the International Centre for Maize and Wheat Improvement (CIMMYT), the International Potato Centre (CIP), and the International Crops Research Institute for the Semi-Arid Tropics (ICRISAT). The approaches developed and tested in partnership with these and other regional and national partners included, among others:

- Facilitating of participatory decision-making
- Preparing innovation and institutional histories
- Establishing and managing learning alliances
- Forging cooperative agreements
- New evaluation approaches to foster learning and program improvement

These and other approaches for ILAC are outlined in a series of ILAC Briefs that are available in print publications and on the ILAC website (www.cgiar-ilac.org).

An effort to draw lessons from the ILAC Initiative began in late 2005 when ILAC was invited to present lessons at an impact assessment workshop convened by the CGIAR System-wide Program on Participatory Research and Gender Analysis for Technology Development and Institutional Innovation (PRGA Program) and CIMMYT. ILAC case studies implied that institutional learning and change for poverty alleviation involves three inter-related elements:

Institutions: Agricultural innovation takes place within systems of multiple players at different levels, and norms and rules that govern their interactions.

Experiential Learning: This involves analyzing and understanding the work we do and learning as a social process of reflection and analysis.

Change: Applying lessons learned in order to improve on-going and future programmes.

Another lesson-learning activity was led by Dr. Arnold Love, former president of the Canadian Evaluation Society, who conducted a series of interviews to investigate the strengths and weaknesses of ILAC, issues associated with institutionalizing learning and change in planning, monitoring and evaluation in the CGIAR, and options for the future. The interviewees included more than twenty people from several CGIAR centres, inter-centre initiatives, the CGIAR Science Council and CGIAR Secretariat, and ILAC donor organizations. The interviews indicated that support and commitment of CGIAR Centre Directors General was seen as critical to stimulating change within the centres themselves. Some evaluation mechanisms, such as the performance measurement system, Centre Commissioned External Reviews (CCERS) and evaluation quality standards, could be entry points for ILAC in the CGIAR system. However, there was a tension between learning and change objectives promoted by ILAC and the evaluation and impact assessment procedures promoted by the Science Council, which focused on accountability and advocacy rather than learning and improvement.

In fact, during the first phase of ILAC, the Science Council was developing or strengthening mechanisms for planning, priority setting and performance measurement that appeared to be reaffirming a pipeline approach to the research process, with an increased emphasis on production of global public goods and tracking of output delivery, decreased emphasis on capacity development, networking and other processes for relationship building and organizational strengthening within an innovation systems framework. Reforms to the impact assessment processes and approaches would be difficult to achieve in such an environment where good performance in research was so narrowly defined. Conversely if a more flexible approach to defining the role of research were institutionalized in CGIAR processes and systems, adopting new approaches to impact assessment might readily

follow. As other authors have pointed out, the nature of evaluation evolves in line with an evolution in understanding about the nature of development from an early emphasis on investments in infrastructure to a more mature appreciation of the importance of intangible factors such as entrepreneurship, relationships, and capacity to innovate (Stame, 1999).

Faced with the end of funding in 2006, the ILAC coordination team met to develop ideas for a new and expanded phase of ILAC building upon lessons learned and feedback from ILAC donors and others that its work was too CGIAR-centric and focused too greatly on CGIAR evaluation and impact assessment reform. The group decided to redirect the initiative towards a more inclusive and strategic direction focused on enhancing the CGIAR contribution to poverty alleviation. A decision was taken to shift the focus from impact assessment and evaluation *per se* to enhancing impacts through partnerships for innovation and to support groups that are already utilizing ILAC approaches but which lack visibility, resources and credibility. Rather than focusing on the CGIAR, it would focus on agricultural innovation systems in which CGIAR programs operate.

Beginning in November 2006 negotiations began with DGIS for support for a larger-scale ILAC Initiative with a longer time horizon. This resulted in a decision by DGIS in July 2007 to provide support for the ILAC Initiative over a five year period. Complementary resources are now being sought.

ILAC Objectives and Strategies

The goal of the ILAC Initiative is to increase the contributions of international agricultural research to sustainable poverty reduction, by:

1. Generating new knowledge on innovation processes of practical use to agricultural R&D managers
2. Strengthening the capacity of collaborative programmes to foster pro-poor innovation
3. Fostering leadership for pro-poor innovation in the agricultural R&D community
4. Facilitating effective communication and knowledge sharing among practitioners and leaders of pro-poor agricultural innovation processes

In pursuing its goals, the ILAC Initiative combines elements of action research and action learning. Action research is a reflective process of problem solving led by individuals working with others in teams or as part of a "community of practice" to improve the way they address issues and solve problems. Action research is widely used in organizational development efforts where an applied researcher works with an organization's members to define a problem that is amenable to applied research and then to carry out the research needed to resolve the problem.

Action learning is a related educational process in which participants, usually in small groups, study their own actions and experiences in order to improve performance. It enables individuals to reflect on and review actions they have taken and the results. The lessons drawn can then be used to guide future action.

Both action research and action learning involve elements of problem solving and learning. The ILAC Initiative combines action research and action learning in a "Learning Laboratory" to foster knowledge production, capacity development, and behavioral change. In the Learning Laboratory, members of a number of collaborative R&D programmes will come together to share their experiences (positive and negative); identify common barriers to pro-poor innovation; plan applied research activities to address these barriers; test new approaches for planning, managing, and evaluating collaborative programmes; and reflect on the results of the research and experimentation carried out.

As a matter of principle, the ILAC Initiative will attempt to model the behaviors it advocates for planning, managing, and evaluating collaborative programmes. The key aspect of ILAC (to promote learning and change) will be built into each component and activity of the ILAC Initiative.

Central Hypothesis and Guiding Questions

The central hypothesis of the ILAC Initiative is that collaborative research programmes can play key roles in increasing the contributions of agricultural research to pro-poor innovation.

The activities of the initiative are guided by the following questions:

1. What is the role of research in pro-poor innovation?
2. How can collaborative R&D approaches contribute to pro-poor innovation?
3. Which actors should be engaged at different points in the research-innovation process, and how can they be effectively engaged?
4. How can learning be fostered that contributes to programme improvement?
5. How can collaborative programmes meet their evaluation needs for accountability (performance measurement and impact assessment) and learning (leading to programme improvement) in a cost-effective way?

Major Activities

The ILAC Initiative will work to achieve its objectives through activities in three areas:

- Area 1.* Applied research and evaluation
- Area 2.* Capacity development
- Area 3.* Fostering leadership for pro-poor innovation
- Area 4.* Communications and knowledge sharing

Applied research and evaluation activities will be carried out to generate new knowledge about innovation processes, in particular, knowledge about the results of collaborative research for development programmes and about ways to improve the planning, management, and evaluation of such programmes. This new knowledge will feed into the other three programme components.

The capacity development component aims to strengthen the knowledge, attitudes, and skills needed by individuals engaged in pro-poor innovation processes and to support institutional change initiatives aimed at improving the effectiveness of their programmes in fostering pro-poor innovation. ILAC will continue to sponsor the course on facilitating participatory decision making and will develop another course, possibly related to leadership for innovation.

The third component aims to motivate senior research managers and decision makers to play more effective roles in leading, stimulating, and supporting pro-poor innovation efforts. This will include providing a forum for awareness raising, critical discussion of issues and networking, benchmarking and performance assessment.

The fourth component aims to improve communications and knowledge sharing among innovation practitioners and research leaders and to influence decision making related to innovation, via the timely delivery of relevant information. ILAC flagship publications will continue to be developed (briefs and discussion papers) as will the web site.

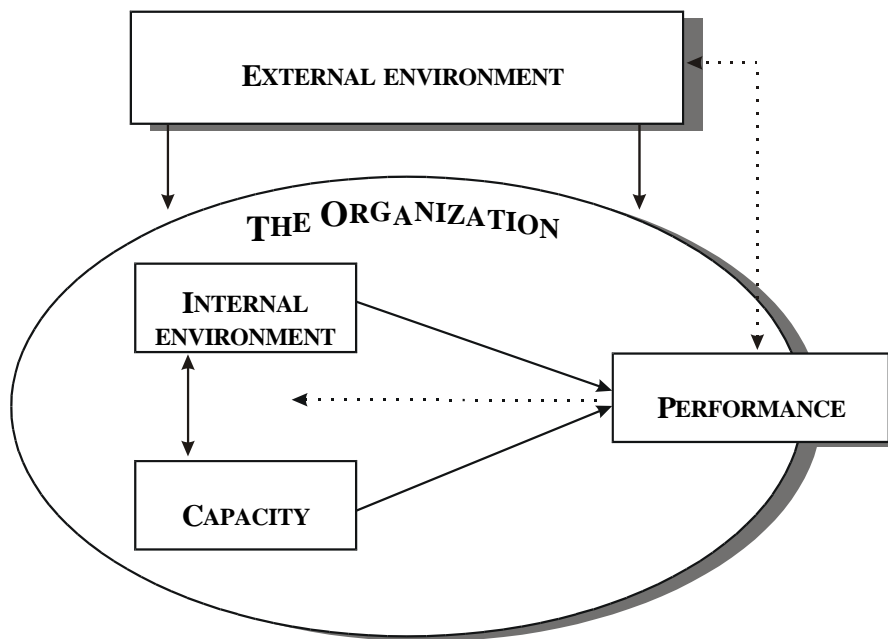
Theoretical Frameworks for ILAC

Robert Chambers once suggested that as a part of a paradigm for change, there were advantages in ILAC not being explicitly defined but rather existing as a conjuncture of words — Institutional, Learning, Change. “Sustainable livelihoods began like this, as two words put together for which many people then developed meanings. This had the advantage that people defined and owned the evolving concepts. The same could happen with ILAC in the CGIAR system” (Mackay and Horton, 2003). Robert will be pleased to know that the concept of ILAC is still evolving. The second phase of ILAC has only been formalized in July of 2007 and much work needs to be done to make some of the ideas more concrete. Thus, what follows is a presentation of some of possible theoretical frameworks for ILAC as it moves into its next phase.

Capacity Development

ILAC is fundamentally based on a model for organizational assessment that was originally developed for the International Development Research Centre (IDRC), and was adopted for use in a CGIAR study on Evaluating Capacity Development. This model, shown in Figure 1 below identifies three complementary groups of factors that influence an organization's performance: (a) external environment, (b) the internal environment, and (c) the Organization's capacity.

Figure 1. Organizational assessment framework



Source: Based on Lusthaus, Anderson, and Murphy (1995) and Lusthaus et. al. (2002).

The model emphasizes the need to complement efforts to develop skills for new ways of organizing and carrying out research for poverty alleviation with other activities aimed at both the internal organizational environment and the external environment (since both are factors that affect the ability of individuals to operate in new and more effective ways). Thus, a complementary portfolio of activities must address different aspects of the model in order to influence performance. In the context of a CGIAR programme, factors in the external environment could be donor behavior and priorities and the Science Council standards, guidelines and priorities. A possible positive external factor is the alliance recently established among the Directors General and Assistant Directors General of the CGIAR centres which is a mechanism by which the centres can speak and negotiate authoritatively with a common voice (Alliance of the CGIAR Centres 2006).

ILAC has already begun to build capacity in the CGIAR through its training courses in facilitating participatory decision making. As of this writing, over 150 people from all CGIAR centres and many partner organizations have participated in these courses. Most participants have been at middle or senior management level. This and other courses will be carried out in the next phase of ILAC so as to build a critical mass of expertise in this critical function.

Organizational culture, incentive systems and other such factors linked to the internal environment must also be addressed. ILAC undertook a study of human resource policies and practices as they relate to knowledge sharing in its first phase and published an ILAC Brief about how a gender and diversity assessment in one centres stimulated dialogue about the organizational culture. Further work will be done in the next phase to establish mechanisms for benchmarking practices and attitude

related to ILAC and to carry out studies of the current situation. This will raise awareness and also provide a baseline against which any change can be assessed. Once some of these indicators are tested, efforts might be made to institutionalize them into the CGIAR Performance Measurement system.

The capacity development model presented above emphasizes that the ultimate purpose of capacity development is to improve performance. One criticism that might be made of ILAC and other organizational change initiatives is the inability to clearly articulate the change or performance that is desired. Without clarity in the realm of performance, efforts could go seriously astray. Anyone who is familiar with the application of participatory approaches in practice will tell tales of how this concept has been distorted and misapplied in ways that sometimes go beyond ineffective to counter-productive (see Ashby, 2007 which describes experiences with participatory farmer research). Some of this is probably related to failure to clearly articulate performance objectives and a clear vision for alternative approaches. Several other bodies of work hold promise for clarifying performance objectives for an ILAC paradigm.

Organizational Learning Capacity

A recent study carried out by researchers at the University of Valencia and published by Massachusetts Institute of Technology's Sloan School of Management presents and illustrates the application of a model and methodology for assessing organizational capacity for learning and the relation between this capacity and the organization's ability to innovate (Alegre and Chiva, 2007). The authors conceived organizational learning capacity as including five dimensions:

1. **Experimentation:** degree to which new ideas and suggestions are embraced
2. **Risk taking:** tolerance of ambiguity, uncertainty and errors
3. **Interaction with the external environment:** scope of relationships with the external environment
4. **Dialogue:** sustained collective inquiry for building common understanding
5. **Participatory decision making:** level of influence employees have in the decision making process

Through employee-based surveys that assessed organizational learning capacity and innovation, the authors were able to demonstrate a link between learning capacity and innovation. Although this work was developed and applied within the private sector it could conceivably be applied within the CGIAR to assess the current state of learning capacity in CGIAR programmes. Such a model could help clarify what is meant by improved performance as relates to organizational learning.

Innovation systems

From its beginnings, ILAC has been oriented towards collaborative and participatory research within an innovation systems context. As an early member of the ILAC team, Hall has promoted the notion that in order to be responsive and relevant, agricultural research must be conceived as taking place within a dynamic system that includes many other actors (Hall *et al*, 2005). A range of collaborative institutional arrangements are emerging to promote collaboration, including such things as partnerships, alliances, consortia, networks and eco-regional initiatives. But many (or most) collaborations take place outside of formal structures. Many questions remain about the impacts of work within collaborations or systems of agricultural innovation, or about how best to organize, manage and institutionalize them to achieve sustainable poverty reduction.

Dimensions of innovation

Although it is widely agreed that innovation is crucial for agricultural change, and hence important for agricultural research and development organizations, there is still considerable confusion as to what innovation is and how you would actually know if you were innovating. A recent study distinguishes between "technological innovation" and "business innovation," which concerns creating new value, not new things (Sawhney, Wolcott and Arroniz, 2006). As a result of an extensive research study, the authors present a framework and a tool to assess innovation, which consider 12 dimensions of innovation including developing new products or services, creating derivative products from existing technologies, creating integrated and customized solutions to customer problems, discovering unmet customer needs, leveraging a brand into new domains, and creating new distribution channels. By applying this framework and the assessment tool organizations can assess their own strengths and

weaknesses or compare themselves against others and perhaps most importantly, broaden their own concept of innovation and strategize as to how to stimulate it.

While the tool itself might not be directly useful for agricultural research organizations, as it was constructed for use in private businesses, the idea of disaggregating innovation into specific types may be useful for those engaged in facilitating agricultural innovation processes, as does the idea of benchmarking and monitoring the extent to which different types of innovation are taking place.

Democratizing Innovation

Von Hippel (2005) and others (e.g., Douthwaite, 2002) have proposed the concept of democratizing innovation. The thinking behind this concept might be more recognizable to agricultural researchers than some of the thinking about innovation. The principle upon which the concept is based is that in today's world the circumstances and needs of end users of products (or in our case agricultural technologies) are so diverse and changing that they cannot be predicted, and no one "product" or solution can adequately respond to all of the possible needs and circumstances. Thus the only viable alternative is to develop products that are designed to be adapted and modified by the end user. The process of adaptation and modification is encouraged by the product developer, end user adaptation processes are supported by the developer and the developer may find new roles in further developing user adapted products.

Several examples from agricultural research may offer insights into such democratized innovation within agricultural systems in poor countries. In one such example in Mexico, farmers took up improved varieties of maize and by planting them alongside traditional varieties, exposing them to local conditions and management, continually selecting seeds for replanting and in some cases promoting hybridization, they produced creolized or rusticated varieties (Bellon et al, 2007). Subsistence farmers seemed to undertake a process whereby they could maximize beneficial characteristics from both traditional and improved varieties to meet their needs in varying circumstances. This process was not recognized or valued by agricultural research, nor does the research process facilitate such adaptation. The research of Bellon et al challenges the adoption model that assumes that the breeding process is completed at the point of adoption, and that if changes do take place they are assumed to be negative. If the agricultural research system were oriented towards promoting democratic innovation, it might offer farmers improved populations containing diverse traits, and train farmers to make their selection more efficient.

Several papers presented at this meeting also seem to be suggesting a process of democratizing innovation. The System of Rice Intensification is described by the author as being based on basic concepts and principles that can be adapted and extended (Uphoff, 2007). The author describes how the approach was (and continues to be) rejected by main stream research organizations, rather it is being promoted by civil society and users themselves. Douthwaite and Gummert (2007) describe how rice dryers were adapted by users, and researchers remained as a part of collaborative networks closely embedded with those users, and thus were able to pick up from user adaptations to further improve the technology and extend it further through an evolutionary process engaging engineers, scientists, manufacturers and farmers. The authors coin the term "learning selection" for the process whereby users make changes to a technology by selecting its beneficial traits and thus increasing its suitability to the environment in which it is used and thus its marketability. The authors feel that this approach is being threatened by an emphasis on global public good delivery and the pressure to "projectize" research, rather than enabling long term relationships to flourish.

Surely many other examples exist in the CGIAR and among its partners. A challenge is to document these cases clearly, describe and communicate what it takes to adopt such approaches, and then find mechanisms by which they can be embraced, rather than marginalized or rejected.

System dynamics

In addition to innovation systems, a number of other schools of thought related to system dynamics could be relevant to ILAC. Interest in system dynamics is growing in many sectors (business, manufacturing, public sector management, education, evaluation etc) because it offers a potential way of describing the world that actually embraces and works with complexity, nonlinearity and feedback

loops that we recognize as existing in real life but that many other approaches are unable to adequately address (Forrester, 1994).

Social network analysis, a field derived from the complex mathematics used to explain subatomic physics, maps social connections and uses algorithms to increase understanding of human interactions. Findings go beyond organizational charts and formal structures to identify the human networks and trust-based relationships through which information flows (Kleiner, 2002). A cornerstone of Peter Senge's work "The 5th Discipline" is system thinking (Senge, 1990).

System dynamics is relevant to ILAC because it has the potential to increase the depth of analysis related to how to make participation and collaboration more focused and meaningful. It can identify key individuals who serve important networking functions and thus help organizations strategize as to how to be most effective in terms of networking. One such application is to challenge the notion that impact can be attributed to one organization, as proposed by Ekboir (2003): "In a complex adaptive system, several variables and chance interact to produce the observed results, making it impossible to assign causality to just one variable."

Some cultural advantages exist with exploring a systems approach to participation and collaboration. First many applications are now using computers and mathematics to quantify relationships and to test hypotheses to determine how variables within a system will affect outcomes or other variables. This approach might be amenable to technology-oriented organizations such as those engaged in agricultural research, and thus might provide an entry point to capture the imagination of researchers and managers in a way that more traditional participatory approaches has not (by being too "process-oriented" or too "soft science"). The organizational culture downside is that the notion of applying mathematical models to human behavior and interactions might well be counter to the culture that has risen up around participatory processes.

Secondly, it might offer a means of identifying more precisely which aspects of a collaborative or participatory approach will most likely yield the most benefits. This offers an alternative to a "more is better" approach to participatory practices by providing inputs about who should be involved when to yield the greatest benefits in terms of innovation and poverty alleviation.

Conclusions

A cornerstone of ILAC will be the Learning Laboratory that will bring together six to eight case teams from around the world that are experimenting with new, participatory approaches to agricultural research for development to explore the concepts presented in this paper and others. The Learning Laboratory will be a place where colleagues can critically assess their own and each other's work, learn from each other and will also be the focus of support activities and capacity building. ILAC is also co-sponsoring with PRGA, ILRI and Harvard a workshop on impact which will focus on new paradigms for impact for poverty alleviation and how these new paradigms relate to the way agricultural research is designed and implemented, and the way progress and effectiveness are assessed. ILAC remains a work in progress, itself an experiment in social learning and innovation, and in this spirit invites collaboration, feedback and ideas about how to support learning and change within individuals, the organizations they work for and the institutions that govern them, so that they can better address the dynamic and complex challenges facing poor farmers.

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