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An Introduction**

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Institutional Learning and Change: An Introduction²

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Summary

Rationale

Throughout the world, the pace of environmental, social and technological change is accelerating, and this in turn has major implications for the poor and their development prospects. Traditional transfer-of-technology approaches to agricultural research can no longer keep pace with the complex, diverse, risk-prone and dynamic realities of poor farmers. If agricultural research organizations are to be more successful in reducing poverty and increasing the sustainability of agricultural production systems, they must become less isolated, more interconnected and more responsive. In so doing, they must transform themselves into learning organizations, more in touch with field realities and better able to learn and to change. Recent research on the poverty alleviating impacts of technology associated with the Consultative Group on International Agricultural Research (CGIAR) has identified institutional learning and change (ILAC) as a key area for intervention if research is to be more efficient and effective in serving the poor.

What is ILAC?

Problem-solving agricultural research, by its very nature, is a risky enterprise. It involves a degree of trial and error in which not all - probably not even a majority of - research paths achieve their intended goals and impact positively on the livelihoods of the poor. Outputs and outcomes cannot be predicted with certainty. ILAC is a process which can change behavior and improve performance by reflecting on and reframing the lessons learned during the research process. Within the framework of ILAC, a set of interventions is emerging which seeks to strengthen performance and encourage new modes of professional behavior associated with continuous learning and change. The process is concerned with the rules, norms and conventions that frame decision-making in agricultural research organizations. ILAC is driven by the premise that improved performance requires a spirit of deliberate and critical self-awareness among professionals and an open culture of reflective learning within organizations – a culture that encourages the identification and examination of less successful research paths to help direct changes in objectives, strategies and methods. In such an environment, errors and dead ends are recognized not as failures but as opportunities for both individual and institutional learning that can lead to improved performance.

Entry points for ILAC

Learning and change can occur at the level of systems, organizations, groups, teams and individuals. The ability of an organization and the people within it to learn and change is

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affected by the external operating environment, the internal environment, and organizational capacity. Both top-down and bottom-up approaches to ILAC are needed: top-down for support, legitimization and protection, and bottom-up to allow for individual encounters and learning, augmented by monitoring and evaluation by field staff and farmers.

At the *system* level, operational paradigms may need to be examined and networks expanded or reconfigured. At the *organizational* and *program* levels, strategic planning exercises may be useful to explore new frontiers and to assess any revisions in strategy or tactics that may be needed to identify and correct less successful research paths and to address changes in the external environment. It may also be necessary to move away from formal hierarchies towards more decentralized decision-making and operations. At the *individual* level, both researchers and managers need to be more open to learning and change, since ultimately, institutional change can only occur through changes in behavior, attitudes, relationships and activities, all of which depend on individual insights and decisions.

Ways forward: Towards learning organizations

Four complementary, synergistic approaches are proposed for fostering institutional learning and change and for developing learning organizations:

- *Developing a supportive external environment.* Donors can play a key role in encouraging and rewarding more explicit, transparent and self-critical learning and change in research centers. The process can be further facilitated through networking and building alliances with others both outside and inside the CGIAR.
- *Fostering a culture of innovation, learning and change.* This can be achieved by promoting values, beliefs, norms and traditions that positively influence behavior and performance. Examples include seeking out new partners who offer diverse perspectives on development challenges, fostering open, enabling and non-hierarchical relationships, and supporting and facilitating critical review and reflection.
- *Reorienting management systems.* All elements of management should be reviewed, including approaches to planning, monitoring and evaluation, recruitment, training, monitoring and evaluation, and reward systems: all should encourage and celebrate risk-taking, innovation and learning.
- *Developing and enhancing individuals' awareness, knowledge, and skills.* This may include pilot initiatives to study innovation and learning within on-going work, training to develop new process-oriented skills and the provision of support services to allow CGIAR staff and partners to design and implement learning-oriented activities.

The proposed initiatives are exploratory, pilot activities, which include learning within existing projects, documenting innovation histories, and exploiting opportunities to learn from both successes and failures. Initially, the focus will be on providing the necessary support to enable CG centres to adopt an ILAC orientation in their work.

It is envisaged that successful ILAC initiatives will – indeed, must – connect with real work goals and processes. They will be focused on improving performance and will engage people who have the power to promote and protect ILAC initiatives. By balancing and combining action and learning with review and critical reflection, these initiatives will enhance and reward people's capabilities, both individually and collectively.

A critical element of ILAC is reflection on the process of learning and change itself. This is a vital part of an iterative process of improvement: ILAC is not a predetermined blueprint, but an evolving approach with processes which themselves demand learning and change.

Embracing the ILAC approach will help to develop a more transparent, productive and efficient CG system that can more effectively contribute to the sustainable reduction of poverty.

1. Background and Rationale

“No institution, however successful, can base its future purely on past performance. Progress and relevance come from building on past strengths and grappling with past weaknesses.”

CGIAR System External Review, 1998, p.1

Three major trends – climate change, economic globalization, and population growth – are exposing rural communities to greater pressures and risks than ever before. On the other hand, innovations in information, communications and biotechnology offer tremendous opportunities for the rapid advancement of the poor. If they are to keep pace with these changes, rural people must be able to exploit innovations more quickly and more effectively. Assisting them in this process is a network of organizations with mandates for fostering rural development and achievement of the Millennium Development Goals — i.e., to halve hunger and malnutrition by the year 2015. The research centers of the CGIAR and their national partners form part of this network, and represent an important international scientific resource with untapped potential for contributing to development. However, if the CG Centers are to fully contribute to this effort, individuals, teams and the Centers themselves must learn and change at unprecedented rates. Regrettably, there is a current perception among donors and other stakeholders that insufficient progress is being made, and that consequently the CG Centers are not contributing as effectively as they could to the achievement of development goals. As a result of this crisis of confidence, funding has declined and calls to restructure and reorient the work of CGIAR Centers and national research organizations have intensified; in some circles, the very notion that agricultural science is a useful tool for improving the livelihoods of the world’s poor has been questioned.

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 centers of scientific excellence to develop technologies to be transferred to national programs and onwards to farmers. Implicit in this design was the assumption that scientists could both 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 need for institutional change has become apparent. The research agenda of the Centers has expanded to include the triple goals of agricultural productivity, environmental sustainability, and a more explicit focus on poverty reduction that recognizes the multidimensional nature of the livelihoods of poor people (Hall et al. 2000). The Centers are struggling to address this expanded agenda with an institutional design intended for a narrower and simpler task.

Another driver of institutional change is the rapid pace at which the wider development context is evolving. 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 partnership and grass-roots participation
- Changing norms of governance and democracy such as decentralization
- New patterns of knowledge ownership, particularly in the area of biotechnology
- Opportunities presented by rapid developments in biotechnology and information 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
- The increasingly important role of knowledge in the global economy
- Rapidly shifting patterns of alliances and partnerships
- The continual reassessment and reorientation of the role of the State in development issues

All of these various changes suggest that the CGIAR Centers and their partners cannot continue with their current approach. Whilst restructuring is a typical response to reduced funding and flagging performance, if agricultural research centers are to cope with growing complexity and seize opportunities as they arise, they need not merely new approaches to research organization or practice, but more flexible and adaptive institutional arrangements.

In this regard, it is now widely acknowledged that the CGIAR must change from a supply-led model of *centers of excellence* to a more responsive mode of operation in which partnership and client orientation are core principles. Major institutional change will thus be needed: although it would be wrong to suggest that the institutional arrangements of the CGIAR have not evolved over time, much remains to be done.

These challenges and opportunities are addressed in this paper by outlining how CG Centers can become more effective learning organizations through “institutional learning and change” (ILAC). As mentioned earlier, this can be described as a process of reflecting on and reframing knowledge gained during the research process that can result in changed behavior and improved performance³ In the following section, we describe ILAC more fully and identify some possible entry points and practical steps for implementing ILAC within agricultural research organizations.

This paper is very much a ‘work in progress’. The ideas presented here will be clarified and refined as ILAC gains momentum and as agricultural research and development organizations gain more experience with the approach.

³ This description is based on a definition proposed by Ursula Blackshaw (2003).

2. What is Institutional Learning and Change? Concepts for Coping in a Rapidly Changing World

“It may be a good thing that (ILAC) is not currently explicitly defined, but is a conjuncture of words – Institutional, Learning, Change. Sustainable livelihoods began like this, as two words put together which then many people developed meanings for. This had the advantage that people defined and owned the evolving concepts. The same could happen with ILAC in the CGIAR system.”

Robert Chambers (IFPRI, 2003)

ILAC and shifting development frameworks

While the rapid rate of global change can generate many new opportunities, it also creates a challenging environment in which the CGIAR must make an effective contribution to poverty reduction and environmental sustainability. As stated earlier, recent advances in development theory and practice are suggesting new ways of coping with and exploiting a rapidly changing world. Throughout development practice, there is increasing emphasis on strengthening reflective and learning-orientated professional behavior.

Examples of such recent shifts in the development framework are summarized in Exhibit 1. The emphasis is not on rejecting old ways of working, but on a balanced and complementary use of both old and new frameworks so as to address diverse and evolving circumstances. The new perspectives listed here emphasize empowerment, accountability, diversity, complexity and continuous learning. Such fresh perspectives can contribute much towards creating flexible, adaptive research and development capability (Clark et al. 2003); in so doing, they will help to increase the contribution of agricultural research and development to poverty reduction.

The above points indicate that agricultural research institutions must continually evolve in response to changing conditions. Note that in this context, the term “*institutions*” refers not to organizations *per se*, but to the norms and conventions that operate within and between organizations. Institutions thus determine the direction, governance and evolution of research practice. Key institutions influencing the conduct and performance of agricultural research include: the processes of identifying and defining research priorities; the role of the various participants involved in the production, transfer and use of knowledge; the processes of judging and rewarding research performance (criteria and incentives), the means by which R&D projects are held accountable to different interest groups and society as a whole; and the processes through which organizations learn and adapt.

The initiative on Institutional Learning and Change seeks to improve the performance of the CGIAR through accelerated institutional innovation - via more flexible institutional arrangements and a variety of proposed interventions. Central to the initiative is the idea that critical self-awareness and continuous improvement are essential, on-going tasks. If scientists and CGIAR Centers are to contribute meaningfully to innovation, they must become continuous learners, evolving and adapting all the time. Shortened, self-reflective learning cycles exploring the effectiveness of particular approaches and processes could drive the rapid institutional change that CGIAR Centers need to improve the contribution of science to poverty reduction and environmental sustainability. It is this change in orientation that the ILAC initiative seeks to bring about.

Exhibit 1. Frameworks for development practice: Shifts and expanded options

	From	Expanded to include
Paradigm of and for:	▪ Things	▪ People
Orientation and power:	▪ Top down	▪ Bottom up
Key words:	▪ Planning	▪ Participation
Modes / approaches:	▪ Standardized ▪ Linear ▪ Reductionist	▪ Diverse ▪ Complex ▪ Systems
Conditions:	▪ Controlled ▪ Stable ▪ Predictable	▪ Uncontrolled (able) ▪ Dynamic ▪ Unpredictable
Research mode:	▪ Experimental	▪ Constructivist
Learning:	▪ Ex-post	▪ Continuous
Roles:	▪ Teacher ▪ Supervisor ▪ External evaluator	▪ Facilitator ▪ Coach ▪ Evaluation facilitator
Outcomes:	▪ Products and infrastructure	▪ Processes and capability
Valued behaviors:	▪ Rigorous/ objective	▪ Critical self-reflection.
Dominant professions:	▪ Agricultural scientists and economists	▪ All
Patterns of change:	▪ Predetermined/ prescriptive	▪ Evolutionary
Characteristic management tools:	▪ Logframes and external review	▪ Action research, participatory review and reflection
Main purpose of evaluation:	▪ Accountability and control	▪ Learning and improvement
Accountability to:	▪ Donors and peers	▪ All stakeholders, especially the poor
Vision of capacity development:	▪ Build capacity of others	▪ Develop own capacity
Treatment of failure:	▪ Buried or punished	▪ Valued as a learning opportunity
Consequences of failure:	▪ Cataclysmic	▪ Continuous program readjustment

Centrality of ILAC in innovation processes

ILAC forms part of a new operating system that redefines the way in which research activities are conceived. The ILAC approach draws inspiration from a number of fields including sociology, institutional economics, action research, management science, education, systems research, innovation policy, capacity development, and participatory evaluation (Ekboir 2003; Douthwaite 2002; Douthwaite et al. 2003; Hall et al. 2003; Horton and Mackay 2003; Horton, Galleno, and Mackay 2003). ILAC responds to the need to restructure the traditional linear transfer-of-technology model of innovation into one better suited to contemporary development needs.

Increasingly, this new model of innovation is being described in terms of the “innovation system” concept (Hall et al. 2001), which helps clarify the nature, role and *modus operandi* of CGIAR Centers as part of a larger dynamic whole, dedicated to improving the lives of the poor. At its simplest, an innovation system can be described in terms of three elements (1) the *organizations* and *individuals* involved in generating, diffusing, adapting and using new knowledge, (2) the *interactive learning* that occurs when organizations engage in generation, diffusion, adaptation and use of new knowledge, and the way in which this leads to innovation (i.e., new products and processes), and (3) the *institutions* – rules, norms and conventions – that govern how these interactions and processes occur.

The complexity of innovation processes has been highlighted by many empirical studies (Lundvall, 1992). Here, the concept of *complexity* refers to a characteristic of systems in which many elements interact with each other to create cumulative and unpredictable outcomes. The development of such complex systems is driven by feedback and learning, which enable them to respond to emerging needs and circumstances that cannot be fully predicted in advance.

This way of viewing innovation has several important implications for research organizations and the way in which they operate:

- Innovation involves not only formal scientific research and research organizations, but a range of other bodies and non-research tasks. This implies that research organizations must collaborate with other organizations in order to contribute more effectively to innovation.
- Since linkages between organizations facilitate learning and information flow, making contacts and forming partnerships, alliances and coalitions are extremely important activities for all research organizations. New and closer relationships with partners and new patterns of accountability may be needed.
- Innovation is a social process that involves interactive learning based on practical experience, a process that can generate new approaches, practices and opportunities. In this way, institutional innovations are often an important by-product of technological change. This implies that there is no blueprint for structuring research processes: they should instead be allowed to evolve naturally, acknowledging that this will lead to a diverse range of approaches.
- Since the innovation process is influenced by institutional arrangements, research on institutional development is as important as research on technological issues. Research organizations must develop not only pro-poor technology but also pro-poor institutional arrangements. In this way, new research conventions or approaches become important international public goods.

- Research organizations must be flexible: since learning creates new capabilities, the roles of different organizations are not necessarily fixed but should instead evolve gradually over time. In a similar way, partnerships and alliances need only be maintained for as long as they are useful.

Organizational learning as a key to unlocking ILAC

“Organizational learning occurs when individuals within an organization experience a problematic situation and inquire into it on the organization’s behalf.”

Argyris and Schön, 1996, p.16.

Although the focus of ILAC is on changing *institutions*, much of the operational effort occurs at the level of the organization. Following the lead of many of the world’s most successful enterprises, CG Centers must attempt to become “learning organizations” – organizations that are open and flexible, that identify and recognize both successes and failures as opportunities to learn and improve, and that build relationships with the many and varied participants involved in agricultural development.

Organizational learning begins with recognizing and admitting to problematic situations, including failures. This may be difficult in the current atmosphere of cut-backs and competition within the CG system – a situation which, ironically, is partly due to the past failure of the CG Centers to learn from experience and to initiate necessary changes. Given the current environment - in which many investors are emphasizing the need for greater accountability and evidence of impact - it is probably unrealistic to expect CG Centers or their employees to admit to “big” mistakes or failures.

An example of a “big” failure is provided by Paul Starkey’s book *Perfected yet Rejected* (Starkey, 1988), which reveals the true story behind the animal-drawn wheeled-tool-carrier that was developed through research projects in over 20 countries. The wheel-carrier ‘bubble’ grew on the basis of glowing accounts of early trials in which farmers could use the machines but did not have to buy them. Few negative experiences were reported to challenge the ‘success’ story that was being generated — but ultimately the technology was nearly always spurned by farmers and millions of dollars were wasted.

Starkey’s book presents the life history of an “innovation fad”. Such fads are the result of positive feedback loops and are common in many areas of endeavor. Sterman and Wittenberg (1999), for example, describe the life cycle of fads in management science, which could apply equally well to agricultural science:

“Typically, a guru proposes a new theory, tool, or process promising to address persistent problems facing business. The early adopters of the guru’s methods spread the word and initiate some projects. Even in cases where the ideas of the guru have little merit, the energy and enthusiasm a team can bring to bear on a problem, coupled with placebo effects and the existence of ‘low hanging fruit’ will often lead to some successes. Positive word of mouth then leads to additional adoption..... Management gurus and their followers, like many scientists, develop strong personal, professional and financial stakes in the successes of their theories and are tempted to selectively present favorable and suppress unfavorable data. Positive feedback processes dominate the dynamics, leading to rapid adoption of those new ideas lucky enough to gain a sufficient initial following.”

Such fads can be extremely expensive in terms of both money and time: in addition to Starkey's estimate of the several million dollars spent on the animal-drawn wheeled-tool carrier, Douthwaite et al. (2003) detailed the alley farming fad in West Africa in the 1980s, on which well over 200 publications were written despite farmers neither recommending nor adopting it.

Failed fads often result in a backlash against the individuals, projects and institutions associated with them. Starkey's analysis of the animal-drawn wheeled-tool-carrier was conducted as an independent investigation only after several years of research and development had already taken place. Consequently, rather than helping agricultural engineering units to learn and improve, the study helped to increase scepticism regarding public-sector agricultural engineering research, which has now all but disappeared from the research agenda of the CG Centres.

The ILAC initiative will help to break the fad, failure and backlash cycle - ironically, by encouraging people to admit to errors and to actively learn from things that are not working well. The various activities incorporated within ILAC – particularly the regular reflection on progress in order to support adaptive management – should allow problems to be identified and resolved long before they reach career-, project- or institute-threatening proportions. Learning exercises such as innovation case studies should help both donors and CG scientists to form a more realistic impression of the time needed to achieve results, and should also help to reduce the early hyperbole that can work against learning and help to create fads.

In addition to the difficulty that organizations may face regarding learning from failures, many managers are finding that they are unable to predict the future with any certainty, and are realizing that their organizations will only succeed if they develop the necessary skills and capabilities for coping with change. Organizations must become much more responsive and adaptive if they are to be capable of playing a catalytic role in an increasingly complex environment.

An accumulating body of practical experience related to learning organizations has revealed that such organizations have several core elements forming a continuous cycle of learning that can strengthen the organization's ability to adapt to its changing environment. These elements include the following:

1. *Systematically gathering information* not only with regard to emerging challenges and opportunities, but also regarding feedback on previous activities
2. *Making sense* of the information collected, drawing on a wide range of perspectives
3. *Sharing knowledge and learning* throughout the organization and with partners
4. *Drawing conclusions* and developing guidelines for action
5. *Implementing actions*, the results of which lead to new learning cycles
6. *Institutionalizing lessons learned* in the organization's procedures, behavior and culture

Institutional learning and change can be further catalyzed and supported through exploring and reflecting on questions centered around the following three areas:

- *Operations*. Are we doing the job right? For example, are we using the most cost-effective methods to achieve our goals?
- *Strategy*. Have we got it right? For example, are our goals and strategies still relevant to our clients?

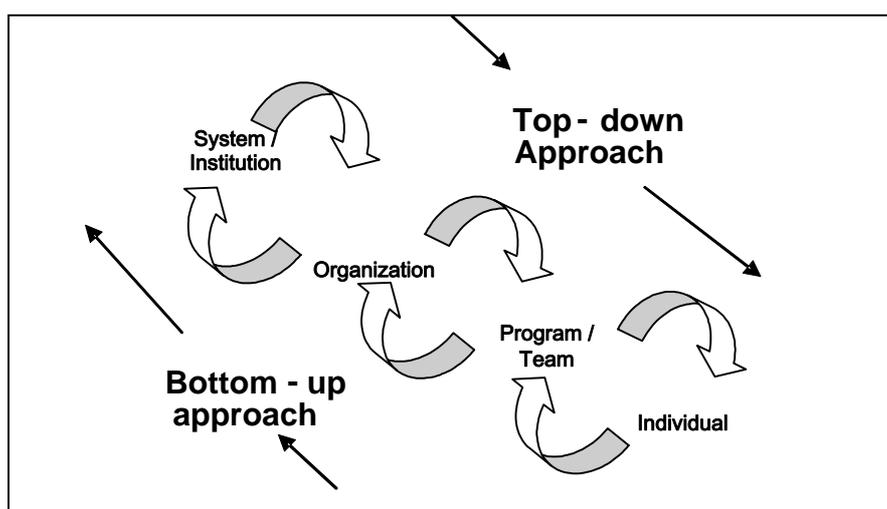
- *Paradigm.* Are our underlying premises and mental view of the world still valid under contemporary conditions? For example, is it more useful to view agricultural development as a diffusion of innovations, or as the result of the actions of multiple participants within innovation systems?

A commitment to a continuous cycle of learning that addresses all three areas would enable the CGIAR Centers to continually monitor the efficiency, usefulness and validity of their work, and to make any necessary adjustments to ensure that they remain on track — even while the “track” itself may be shifting.

3. Entry Points for ILAC

Introducing and nurturing ILAC in organizations requires that we stimulate, support and reward new ways of thinking and behaving at several different levels. It also calls for integrating bottom-up and top-down approaches into a coherent strategy to maximize continual learning (Exhibit 2).

Exhibit 2. Bottom-up and top-down approaches to ILAC



At the *individual* level, the central importance to ILAC of the orientation and commitment of all participants is so self-evident that it is easy to overlook. Processes of institutional learning and change can only occur through changes in the behavior, attitudes, relationships and activities of individuals. This applies both to those directly involved in research and development (bottom-up), and to those able to provide them with legitimacy, incentives, support and space (top-down). ILAC thus depends on individual professionals, wherever they are situated, being open to new ideas, practicing critical self-awareness, contributing to collective review and reflection, learning from positive and negative experiences, and supporting others in these practices. Individuals must hold themselves accountable for learning and change.

In the early stages of introducing ILAC processes, bottom-up learning may be highly dependent on the interest and commitment of a small number of innovative staff who actively seek out alternative paradigms and practices within an innovation system. These innovators

may initially require institutional support to counter their peers' resistance to change, since many individuals may have a stake in preserving the *status quo* and even those organizations committed to change may eventually end up restricting it to narrowly defined "safe" areas.

Learning and change at the individual level "spirals out" when individuals share their learning with larger groups or teams as they move through the learning cycle. For this to happen, participation and collaborative action must become valued ways of working within the organization. Groups and teams must actively value diversity (the perspectives of diverse organizations, disciplines and cultures, as well as diversity across gender, age, hierarchy, etc.), sharing of knowledge and experience, and collaborative learning. Ideally, group members should support one another in moving through the cycle of acquiring new knowledge, applying it in practice, learning from experience, setting new goals — and ultimately, sharing this learning with the rest of the organization, influencing the behavior and performance of others as a result.

At the *organizational* and *program* levels, managers may initiate "top-down" learning and change in the pursuit of organizational goals. Initially, they may prefer to begin with a hierarchy of objectives and a decision-making structure to ensure that efforts to learn, change and improve are initiated in response to the strategic objectives of the organization or the broader system. Strategic planning exercises may be useful for obtaining input from multiple stakeholders and to evaluate those changes in the external environment that call for revisions in strategy, tactics, and the organization's definition of its purpose and niche. New frontiers may be explored through scenario planning or technology foresight exercises and best practices of organizations in related fields may also be benchmarked.⁴ Furthermore, if the organization is to move away from formal hierarchies towards more decentralized working and decision-making, then various changes in operations and authority may also be needed.

At the *system* level, operational paradigms may need to be examined (in the CGIAR context, for example, this may involve shifting from a technology-transfer paradigm to a sustainable livelihoods and/or innovation systems paradigm). Networks of partnerships may need to be expanded and/or reconfigured. Finally, systems of accountability may need to be reconsidered so that farmers and end-users are seen as the true "clients" of CG research.

4. Ways Forward: Towards Learning Organizations

ILAC is neither the first, nor the only current initiative to foster learning and change in the CGIAR. Organizational changes of various types have been supported and encouraged through, for example, the program on Organizational Change Management, the Gender and Diversity initiative, the Participatory Research and Gender Analysis program, and the Integrated Natural Resource Management initiative. A new initiative is currently seeking to improve the use of information technology and knowledge management. New systems and procedures for performance measurement, monitoring, and evaluation have been proposed by the Science and Executive Councils. The ILAC initiative complements these various other programs by specifically focusing on learning from experience and using the knowledge gained to change behavior and improve performance.

⁴ See references by Ringland (1998), Schwartz (1997), van der Heijden (1996) and Tegart (1999).

A range of possible options – an “ILAC menu of interventions” – is emerging to help foster new modes of professional behaviour and to promote continuous learning and change. If agricultural research organizations are to fully exploit the benefits of ILAC, then interventions may be needed in the following four areas:⁵

1. Provision of external stimulation and support for ILAC
2. Creation of a supportive internal environment with a culture of innovation, learning and change
3. Reorientation of management systems
4. Enhancing the knowledge, skills and capabilities of research managers and staff

Potential interventions within these areas are discussed briefly in the following sections and examples given in Exhibit 3.

External stimulation and support for ILAC

Efforts to develop learning organizations can often benefit from external support from investors or colleagues with similar experiences in other settings. Without external support, ILAC efforts may lose momentum or be disrupted.

Donors play a key role in stimulating and supporting new ways of working within the development community. Financial support from donors will be needed to initiate new activities, projects and programs that stimulate learning and innovation. Hence donor support must be sought for the idea that learning is a critical element that must be explicitly incorporated into project proposals. Furthermore, since a fundamental component of innovation is learning from both strengths and weaknesses, donors should encourage CGIAR Centers to develop monitoring processes that critically assess progress and include explicit recognition of those elements that are not working well; in this way, any necessary adjustments can be made as soon as problems are identified. Ideally, donors should also support very speculative proposals that stimulate new thinking and that may bear fruit in terms of new and innovative initiatives.

Networking is another important mechanism for stimulating change, by improving the links between agricultural research organizations and external partners such as NGOs, private companies, development agencies and other research institutes. New linkages could also be established with other sectors such as health and nutrition, which focus more closely on the immediate needs of the poor and which may already have established mechanisms for engaging the poor which could be useful to agricultural research. Within the CGIAR, networks could be formed to bring together innovative scientists testing new working methods; this would both facilitate exchange of experiences and decrease the sense of isolation often felt by those experimenting with new and different ideas and practices.

⁵ Horton et al. (2003) discusses strategies and intervention for strengthening organizational capacity and improving performance.

Exhibit 3. Summary of options for introducing ILAC

External stimulation and support for ILAC

- Create a forum for CGIAR donors to discuss conditions for institutional learning and change, and means by which donors could stimulate learning from experience
- Encourage donors to support ILAC by making it a criterion in funding decisions
- Initiate learning alliances with non-traditional partners (including national and international NGOs, community based organizations, the private sector and development agencies), and other sectors (e.g. health and nutrition)
- Create a forum within the CGIAR to share experiences of institutional learning and change, to document current experiences and to stimulate learning, networking and mutual support within the system.

Creating a supportive internal environment and culture of innovation, learning and change

- Foster an organizational culture that values information sharing, diversity, mutual respect, teamwork, risk-taking, tolerance of error and critical self-reflection
- Analyze the role of research within the agricultural innovation system and its implications for project design and implementation
- Promote learning and change as leadership functions by conducting management workshops on the role of management in learning organizations
- Publish a series of summaries from CGIAR centers and their partners documenting practical experiences of managing change through innovation and learning

Reorienting management systems

- Allocate a proportion of Center funds to exploratory projects (some of which may be high-risk/high-return ventures)
- Identify and implement ways in which CGIAR evaluation and assessment processes can be oriented more towards learning and performance improvement
- Identify and develop options for incorporating learning processes into CGIAR decision making and priority setting procedures
- Ensure that human resource management practices (e.g. recruitment, evaluation, training, and career development) value learning and processing skills as well as disciplinary expertise

Developing and enhancing knowledge, skills and capabilities which facilitate flexible working methods

- Initiate pilot learning experiments in which the CGIAR centers and their partners investigate ways of reorienting research more towards poverty reduction
- Document case histories of innovations to determine which approaches are successful (and why) and to assemble evidence in support of learning-based approaches
- Train scientists in participatory approaches, group facilitation techniques and participatory monitoring and evaluation
- Establish an ILAC support service for agricultural research and development organizations that would promote documentation, information sharing, skill development, and facilitation of organizational change

Creating a supportive internal environment and a culture of innovation, learning and change

The culture of an organization is a pattern of shared basic assumptions, values, beliefs, customs, and traditions that the organization develops as it solves its problems of external adaptation and internal integration. Cultural elements are transmitted to new members as the correct way to think, feel, and do things. Innovation and learning processes will not be adopted and sustained by an organization without a supportive organizational culture. However, since organizational culture is rarely formalized (or even discussed), changing it – even understanding it – can be difficult. Nevertheless, cultural change could be promoted by increasing awareness at all levels of the need for change, by ensuring that incentives promote change (or at least do not stifle it) and by promoting and celebrating efforts in organizational learning.

Other elements that can help create a supportive environment include open, enabling and non-hierarchical relationships, and support for - and facilitation of - critical reflection and review. Some authors promote the idea that up to 20% of core resources should be dedicated to promoting risk taking and innovation (Von Krogh, Ichijo and Nonaka, 2000).

Reorienting management systems

The creation of learning organizations may require reorienting management systems such that decision-making, planning, monitoring and evaluation, recruitment, training and reward systems all promote risk taking, innovation and learning. Monitoring and evaluation systems that encourage learning from experience and focus on improving performance should be better integrated and linked to project design and management (Mackay and Horton 2003a). Decision-making and priority setting processes should also be informed by critical review and assessment.

The culture of an organization is strongly influenced by human resource practices: hence modifications of personnel practices can result in dramatic and rapid cultural changes, e.g. by recruiting staff open to learning and self-assessment, by evaluating staff on the basis of learning and innovative behavior, and by promoting staff training and development aimed at enhancing the skills needed to support new ways of working.

Developing and enhancing awareness, knowledge, and capabilities

Awareness, knowledge and capabilities must also be strengthened to support ILAC initiatives. Pilot projects could contribute to capacity building by engaging managers, scientists, farmers and other partners in learning experiments designed to analyze their own experiences, needs, and expectations as well as the strengths and weaknesses of research contributions to agriculture. Such pilot projects would provide practical experience of the ILAC approach and evidence of its benefits, as well as helping to stimulate new initiatives.

Additional training may be needed to develop skills fundamental to ILAC, for example in facilitation, negotiation and partnership-building. As mentioned above, monitoring and evaluation is an area in which new skills are needed among both staff and partners if self-assessment approaches are to be used for continuous improvement. It might also be useful to hold field trips and workshops so that partners can assess their work together in a field setting. Finally, the proposed ILAC initiative would benefit greatly from the establishment of a dedicated support service that could assist CGIAR staff and their partners to design and implement learning oriented activities.

5. Implications for Managers and Scientists

Experience with the management of organizational and institutional change indicates that initiatives to promote ILAC will stand a better chance of success if they (i) connect with real-work goals and processes, (ii) focus on improving performance at all levels, (iii) engage people who have the power to promote ILAC initiatives, (iv) balance and combine action, experiential learning, review and critical reflection, (v) enhance and reward people's capabilities (individually and collectively) to learn and to change, and (vi) include a focus on learning *per se* (Senge et al. 1999).

Introducing ILAC into the CGIAR will require time, energy and resources. A core group with a vision of a new way of working and a commitment to change could lead the way, but if fundamental and lasting change is to occur, then ILAC cannot remain the domain of a single, isolated group. Profound change will require active leadership from senior managers, who may wish to consider the following checklist of ways in which to foster ILAC:

- Ensure that adequate time and resources are dedicated to learning within the organization
- Assume responsibility for learning and change at the level of senior management and board
- Learn from weaknesses as well as strengths, and from successes as well as failures
- Support training of staff in areas that will better enable them to learn from their work and to develop other skills (e.g. facilitation skills, participatory process management, monitoring and evaluation skills, diagnostic skills)
- Ensure that personnel policies, decision-making and evaluation procedures promote learning and change rather than stifle it
- Value diversity in all its forms (including gender, ethnic, and disciplinary) for its ability to generate fresh perspectives and stimulate innovation. Be sensitive to the ways in which cross-cultural and power dynamics can affect the ability of people to take risks, learn from experience and adopt or promote change.

ILAC initiatives should include the reflective study of the process of learning and change itself. This is a vital part of an iterative process of improvement: ILAC is not a predetermined blueprint, but an evolving approach with processes which themselves demand learning and change. Embracing the ILAC approach will help to develop a more productive and efficient CG system that can more effectively contribute to the sustainable reduction of poverty.

6. Conclusions

This paper has outlined conditions and actions that can support institutional learning and change. The term "ILAC menu of options" has been used to indicate that ILAC presents managers with a variety of ideas and choices. The emphasis is not on instituting dramatic and comprehensive changes, but rather on seizing opportunities, testing new approaches, gaining experience, and proceeding through sensible sequences. Programs and projects already exist in which varying degrees and forms of ILAC can be found. Such programs should be encouraged and new initiatives supported on a small scale, for example with a single team or group. This can be achieved without the high transaction costs associated with major structural change. Thus while in the longer term the process may be transformative (through gradual reorientation of whole organizations, their cultures and relationships), not everything

can - or should - be attempted at once. A start can be made by identifying what is already being done, by supporting new initiatives, and by linking them together to facilitate mutual learning. In the long-term, only incremental and iterative learning and change will result in the sustained improved performance of the CGIAR system and its greater relevance to agricultural research and development.

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