Institutionalizing impact assessment at CIMMYT

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The International Center for Maize and Wheat Improvement (CIMMYT) is a CGIAR centre with a long tradition of impact assessment (IA). Until recently, such work had focused on the rates of adoption of improved germplasm and returns on investment. Limited attention was directed at measuring impacts in terms of livelihood security or poverty reduction. In 2005, therefore, CIMMYT's Impacts Targeting and Assessment Unit (ITAU) began to develop and promote more wide-ranging types of IA.

In order to enhance its IA culture and institutionalize IA within the Center, ITAU organized a series of workshops that brought together different players amongst CIMMYT's staff and partners. Coupled with follow-up activities, these have made it possible for social and biophysical scientists and other partners to share their understanding of IA and their IA experiences. This brief describes the key elements of the process that led to the establishment of a learning platform for a CIMMYT-wide IA culture, as well as ways to consolidate achievements and progress on institutionalizing IA. It also states the lessons learned with regard to institutionalizing IA within the context of an international agricultural research centre.

Introduction

There is an outstanding tradition of impact assessment at CIMMYT (Pingali, 2001) focusing on the assessment of adoption rates and the economic rates of return from investments in crop improvement. Less attention had been directed at assessing impact in terms of poverty reduction and livelihood security.

The 'Seeds of Innovation' vision (CIMMYT, 2004) emphasized people-centred, livelihoods- and poverty-oriented, systems approaches to research. CIMMYT's Business Plan for 2006-10 (CIMMYT, 2006) states that IA should assess a broader range of impacts, by including aspects of poverty, vulnerability, and the distribution of benefits. Direct and indirect impacts arising from linkages within farming systems and agriculture and the non-farm economy should also be recognized. Finally, the new strategy stated that a diversity of stakeholders should be embraced, each having somewhat different expectations from IA. CIMMYT therefore sought to develop, institutionalize, and promote a more wide-ranging type of IA.

Impact assessment is a type of evaluation linked to a range of activities, including ex-ante studies to predict impact, monitoring of accomplishments, and end-of-project evaluations. Its importance is becoming more apparent as funding declines and scientists and management seek to justify its effective use and demonstrate reductions in poverty. Key issues in effective IA include: (1) identifying a realistic counterfactual, or effective and credible substitutes for it; (2) ensuring optimum timing of the assessment; (3) establishing appropriate spatial dimensions for the assessment; and (4) properly attributing effects and impacts in complex, multi-player partnerships.

Emerging challenges for IA include the assessment of research involving natural resource management, policy, participatory approaches, the social sciences, capacity building and the contributions of diverse stakeholders. CIMMYT also seeks to ensure that IA contributes to effective staff and institutional learning, in order to improve future work.

The institutionalization of IA processes in CIMMYT faces a range of challenges, including (1) the need to develop credible methods to measure a broader array of impacts; (2) the need to identify mechanisms to ensure adequate engagement of staff and partners, in order to achieve the learning goals of IA; and (3) the need to 'package' and communicate results to a range of users.

The elements of CIMMYT's IA learning and operational platform

In May 2005 ITAU led a CIMMYT-wide workshop, co-funded by the Institutional Learning and Change initiative (ILAC), to develop a learning and operational platform for IA and institutionalize IA practice within CIMMYT and its partners. Its objectives included the:

- establishment of a multi-disciplinary learning and operational support platform across research programmes for relevant, high-quality IA from the project to global levels.
- development of a people-centred working framework for CIMMYT IA, focusing on systems, livelihoods, and poverty reduction.
- strengthening of individual skills and capacity for high-performance team research.

The workshop (Box 1) was the first of a series of events which raised staff's awareness of the importance of IA and offered tools to undertake IA. It also resulted in a range of follow-up activities (Table 1).

At the 2005 workshop, it was not as important for participants to reach a consensus as it was for them to learn from and understand each other. The process was facilitated in order to foster buy-in from participants, and plenary and small-group sessions were held.

An IA framework for use by practitioners (Box 2) was drawn up and discussed in the workshop (for details see La Rovere and Dixon, 2007). Participants then used this to discuss a set of case studies. These described intended uses and users of information generated; the potential stakeholders involved; topics to be assessed; scope, boundaries, and critical questions; the disciplinary expertise required and ways to mobilize it; and use of results.

These steps are sequential and related. The process involves negotiated planning, as users must be involved to understand the findings and put them to use. Much of an IA's value, in fact, comes from an active involvement in learning while grappling with real problems.

The case studies included one on potential impacts of the spread of a new strain of wheat stem rust (Box 3). This

Table 1. CIMMYT impact assessment workshops and related events, 2005-06			
Event	**Participants**	**Date and Location**	**Purpose**
Inception IA workshop	Social and biophysical scientists, corporate communications, managers	Early May 2005, CIMMYT, Mexico	To initiate the IA process and platform
Special sessions on IA for breeders	Wheat and maize breeders	End of May 2005, Nairobi, Kenya; January 2006, CIMMYT, Mexico	To familiarize breeders with the key elements of IA
Workshop on priority-setting and targeting	Social and biophysical scientists	August 2005, CIMMYT, Mexico	To apply IA practice in order to enhance targeting
Mid-term IA follow-up workshop	Social scientists from ITAU, plus key participants from the Standing Panel on Impact Assessment (SPIA), IFPRI, and Bioversity International	October 2005, Rome, Italy during a social science retreat	To review progress on, and share learning about IA
Participatory Research and Gender Analysis IA CGIAR-wide workshop	CGIAR participants, selected CIMMYT staff, other non-CGIAR participants	October 2005, CIMMYT, Mexico	To identify new avenues in IA directed at participatory research and gender analysis
IA sessions on poverty and livelihoods during a science forum	All CIMMYT scientists	January 2006, CIMMYT, Mexico	To familiarize CIMMYT with IA and present concrete applications
Impact pathways workshop	Social and biophysical scientists, corporate communications	December 2006, CIMMYT, Mexico	To write impact pathways for main Medium-Term Plan Projects
Publishing and launching of IA guidelines manual	IA focal points, key staff or partners involved in best-practice IA studies	November 2007, CIMMYT worldwide	To provide guidance on various IA questions and tools

showed the direct impacts of stem rust on yield, grain quality, and grain prices, and ultimately on the local economy, food security, livelihoods, and in some cases, the national economy and global markets (see La Rovere and Dixon, 2005, for details).

The workshop stimulated a continuous learning process on the effective implementation of IA and integrated work among CIMMYT programmes, which strengthened the IA capacity of scientists from regional and cross-disciplinary programmes. According to participants, one of the workshop's key benefits was the opportunity to reflect on IA experiences; on individual, programme, and regional capacities for IA; and on their understanding and definitions of 'impact'. The process, outcomes and need for follow up were shared in a workshop report (La Rovere and Dixon, 2005).

The 2005 inception workshop was followed by a series of IA-related activities (Table 1). In 2006, project-based IA training courses were conducted in Africa and Asia. The whole process has been supplemented by e-mail discussions and the sharing of information and documents among participants, as well as the identification of IA focal points.

Follow-up activities included the development of multi-disciplinary papers on IA-relevant and non-IA-relevant topics, joint activities for social and biophysical scientists, steps to institutionalize IA in proposals and ensure its inclusion in work plans, and more explicit actions being taken (in partnership with CIMMYT management) to seek funding for IA.

Follow-up workshops

Early progress on the actions agreed upon in the inception workshop was assessed during a follow-up workshop in Rome in October 2005. This brought together social scientists from headquarters and regional programmes, other CGIAR centres (Bioversity International, IFPRI), and a representative from the CGIAR Standing Panel on Impact Assessment (SPIA). The Rome workshop provided a comprehensive overview of on-going CIMMYT IA activities in the areas of breeding and maintenance research, ex-ante studies, monitoring and evaluation of technology use and adoption, and ex-post studies.

Box 1. Elements of the May 2005 inception IA workshop programme

Understanding experiences with IA. Eco-regional groups discussed the following: What is our capacity for IA? How do we define impact? What are our strengths and the best practices in IA? What are the challenges/weaknesses of IA?

Increasing our understanding of livelihoods, poverty and systems. Thematic groups discussed key questions such as: Are we working together effectively? Have we clarified sufficiently the concepts of livelihoods, poverty, systems and the implications for IA?

Impact assessment framework. A proposed evaluation framework was discussed, modified, and adopted (Box 2). Group exercises were held on different IA case studies including the impacts of stem rust (Box 3).

Panel presentations on methods, approaches and best practices. This considered CGIAR approaches to, and guidelines for, IA, an application of the Sustainable Livelihoods Framework in Mexico, and aspects of IA derived from ILAC's approach for institutional learning and change.

Implementing an IA platform, framework, and guidelines. Participants worked to define best practices, create an action plan to implement IA, and build IA into projects and operational modalities for global and regional programmes.

The workshop resulted in a series of studies that reflect more explicitly the broader focus of IA at CIMMYT, by integrating conventional economic approaches (surveys, surplus analysis, econometrics), qualitative assessment tools, and livelihood approaches.

Take-home messages for CIMMYT included the benefits of looking back and building on past achievements and successes, moving to broader livelihood, systems, and poverty integrated approaches, and integrating much more closely with other disciplines than in the past, while maintaining a strong emphasis on economics. Finally, participants flagged the need to reduce the use of IA jargon and provide guidelines

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Box 2. The proposed impact assessment framework (adapted from Patton, 1995)

The framework covers the key actions and aspects that IA leaders or project managers need to consider before and during an IA process. It consists of the following phases:

1. Clarifying the IA: Actual demands, background, context, type, purpose, intended uses and users should be clarified and its key stakeholders involved
2. Focusing on key IA issues, such as the scope, timing, scale, boundaries, counterfactual and attribution issues, as well as aspects of the impact seen on institutions, policies, and capacity
3. Planning the implementation of the IA, which includes identifying the disciplinary expertise needed, setting up the best teams, and planning how to learn from and use the IA results (which itself includes ensuring the active participation of diverse stakeholders and clearly agreeing on their role)
4. Selecting a variety of methods, and focusing on the key data and indicators for the impact assessment
5. Assessing, with partners, the role that different agents play in having an impact, the pathway by which impact is or is not achieved, and the expected magnitude of impacts
6. Acquiring the key data and information from different primary and secondary sources
7. Assessing and analyzing impacts, interpreting findings and developing recommendations
8. Using reporting to improve the dissemination and communication of results, externally and internally
9. Evaluating the assessment, and reflecting and learning internally

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that help demystify IA terms and practice, to foster more widespread application of IA. A workshop, held at CIMMYT in late 2006, followed up a CGIAR recommendation that the impact pathways of projects be identified in the Center's Medium-Term Plan (Douthwaite et al., 2003).

What was learned and what changes have occurred?

The process of assessing the learning and change that has occurred as a result of these activities is on-going. A follow-up survey helped to better understand how participants increased their knowledge of IA and how useful the process had been. Progress was also monitored using learning and change indicators. Examples of such include whether or not those most involved in IA were developing into a coherent team, whether lessons were being applied, whether those facilitating the process were providing sufficient operational support, and whether or not adequate incentives exist to make learning on IA a priority.

Most people felt that they had gained a better understanding and appreciation of the principles of IA and their practical uses. Participants did, however, feel that they needed guidance (1) on defining relevant datasets and the key variables for use in an IA, (2) on how to

prioritize studies that require IA, and (3) on ways to budget for an IA when developing proposals. A major challenge for scientists from all disciplines was that a general lack of time hampered the consolidation and implementation of IA knowledge. The transformation of learning into actual action is still hampered by a generalized lack of time, despite the significant investment and commitment made by CIMMYT in this process in the form of meetings, costs, workshops, staff time and communication.

Incentives are also important: scientists and partners can be further encouraged to embed their work within an IA lens and livelihoods/poverty-reduction perspective by promoting IA as a key element in resource mobilization. Indeed, research hypotheses in project proposals are now often being formulated by scientists based on the IA framework. This may be the result of a genuine understanding that more IA is needed. However, it may also result from the researchers' recognition that they need to include clear reference to poverty reduction in their proposals to increase their chances of getting funding.

By the time the mid-term assessment was conducted, it appeared that not everyone had put the lessons learned into practice. People react differently to experimentation and change; some immediately feel comfortable with a new process, while others need more time to assimilate it. There is also a tendency for some scientists to see IA and the formulation of IA hypotheses as mainly the responsibility of social scientists.

Behavioural change, particularly for project managers, was often reflected in the clearer attention paid to IA in projects, through the use of more commonly understood language in discussions with colleagues, and during the development of new Medium-Term and Business Plans— in which staff wrote impact statements based on impact pathways workshop outputs. One concrete change was the institutionalization of templates for project proposals that contain IA budget lines. However, funding is a major obstacle for non-social scientists who want to include IA into their projects, as IA is among the 'desirable' components that often get cut when donors ask for budgets to be reduced.

The follow-up agreed at the workshops was implemented gradually, which is typical because this type of learning takes time and effort. However, there is growing acceptance of the technical and institutional complexity of IA and the key role it plays in supporting strategic priority-setting. This is testified to by the fact that there is increasing recognition of the need to increase the number of ex-ante IA studies, as well as an increasing demand for ex-ante studies within CIMMYT.

It was important to examine the IA process openly in order to learn from both successful and less successful outcomes. The work done did raise the profile of IA within CIMMYT and initiated an institution-wide learning process. As a result, biophysical and social scientists within the organization are now more aware of IA and are more interested in what it can mean for them. Moreover, more and more often IA is being developed in an issue-oriented (rather than commodity-oriented) fashion. This is broadening what was an earlier focus on crops

Box 3. Case study: charting the impact pathways of the spread of stem rust
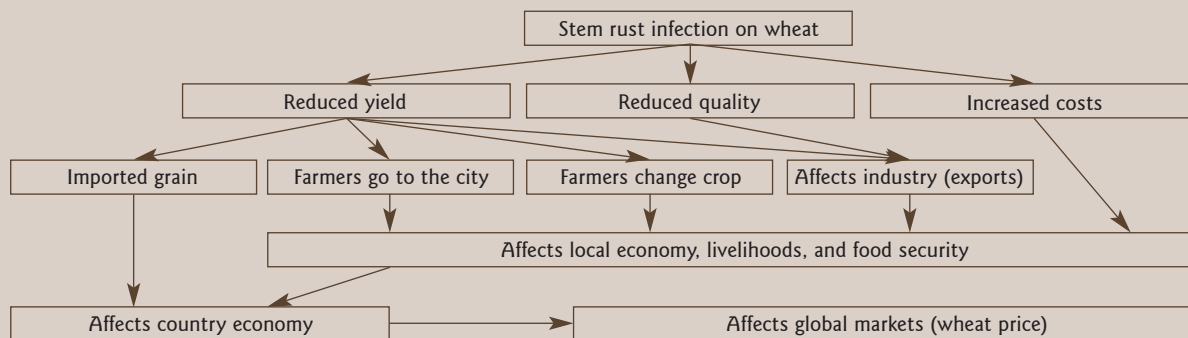
and adoption to cover different aspects of livelihoods, and different types of impact, while maintaining the elements of robust economic analyses.

Examples of this approach to IA are becoming more frequent and include the following: a study on livelihoods and the economic impact of research on maize in the mid-hills of Nepal; a livelihood impact study of maize diversity projects in Mexico; use of a poverty and livelihoods explicit baseline and monitoring system for assessing the medium-term impacts of long-term interventions in eastern Africa; and the targeting of poverty-alleviation activities in the Indo-Gangetic Plains of north India.

Conclusions, implications and the way ahead

The process described in this brief generated a wealth of ideas that will take time to be fully implemented. And, though both CIMMYT scientists and the Center's partners have been improving their understanding of IA, there is still a need for:

- Regularly conducted and expanded baseline studies that go beyond maize and wheat simply as commodities and that embrace the livelihood systems associated with them
- An increased use of qualitative methods, or mix of quantitative and qualitative methods
- More attention to the issue of attribution (Mayne, 2008)
- Greater efforts to measure and account for unintended, positive and negative impacts
- A recognition of the fact that the design and implementation of IA methodologies has become critical and that no unique format exists that will fit all needs or demands
- Early agreement on the role that IA will play in projects, in order to allow for IA to be properly budgeted for
- Internal evaluators with a formal mandate to support institutional learning and change
- Better communication of IA-related outcomes
- New modalities for cooperation among partners on IA.

In order to follow up on what has been achieved to date, ITAU plans to implement a comprehensive web-based survey of CIMMYT staff and partners. This will assess the influence of internal and external learning processes, the advancement of an IA culture, and the institutionalization of IA, so summing up achievements and the lessons learned over a five-year period following the Center's strategic shift in IA initiated in 2005.

The survey will investigate what further lessons can be learned, what could have been done differently, and what should be repeated and/or strengthened in the future. It will also assess whether more scientists now recognize the role and importance of IA and the extent to which this awareness extends to senior management. It will also be used to compare recent research projects with those run in the past, in order to determine whether the former focus on yields, productivity and economic indicators has been enriched as a result of adding into the equation an assessment of the impact on people's livelihoods.

In conclusion, the experiences of CIMMYT in enriching and institutionalizing IA can be relevant and directly useful to other centres that want to undertake a similar process.

Further reading

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