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CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH
SCIENCE COUNCIL

**Report to the Annual General Meeting
of the CGIAR from
The Standing Panel on Impact Assessment (SPIA)
of the Science Council**

SC SECRETARIAT
FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
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SC STANDING PANEL ON IMPACT ASSESSMENT (SPIA) REPORT TO AGM '03

This report to the Annual General Meeting of the CGIAR is delivered by the Standing Panel on Impact Assessment (SPIA) of the Science Council, which retains the composition of the interim Science Council's SPIA for a one year transition period. In addition to the usual summary of progress and activities during 2002-03, this report also provides some reflections on SPIA/IAEG experience to-date emphasizing key impact assessment needs of the System, and proposes several new initiatives to help maintain continuity as the new SPIA is inaugurated. The report also emphasizes the continuing need for close working relations between the impact assessment function and two other major functions of the SC - monitoring and evaluation of on-going activities, and planning for future activities.

1. REFLECTIONS ON THE SPIA/IAEG EXPERIENCE TO DATE

1.1 Background and Context

The organizational history of SPIA now dates back almost a decade, with the formulation of a Task Force on Impact Assessment which, in turn, developed the terms of reference for the Impact Assessment and Evaluation Group (IAEG). At that time, the need for a Systemwide impact assessment entity was strikingly clear, as donor fatigue was setting in and funding was declining in real terms. In such a context, the primary purpose for *ex-post* impact assessment (IA) was apparent, since evidence of efficacy was regarded as a crucial need for institutional survival and renewal of the CGIAR. *Ex-post* impact assessment (IA) was primarily for meeting accountability needs, with a secondary emphasis on strategic feedback for priority-setting processes.¹ The IAEG's role was thus to broaden, improve and synthesize Centre *ex-post* IA efforts to more comprehensively demonstrate the efficacy of CGIAR research, since IA coverage varied very much among Centres and research topics.

1.2 Terminology Clarification

The specific limits of SPIA—in focusing exclusively on *ex-post* IA—are intentional. The other forms of research evaluation are already covered by the SC and the CGIAR Centres (for *ex-ante* IA) and by SC and the CGIAR System Office (for performance reviews / monitoring and evaluation). This point must be underlined: IA is not synonymous with research evaluation. The latter is broader and encompasses far more. Indeed, to avoid confusion and to clarify functions and responsibilities, it is essential to emphasize the distinct and separate components of research evaluation within the CGIAR. These are:

- Ex-ante IA: focuses on priority setting and generating hypotheses about projected impacts;
- Program/project evaluation: focuses on evaluation of research quality (planning and process) and achievements of project milestones and objectives (e.g., CCERs, EPMRs, donor reviews);
- Adoption constraint analysis: focuses on uptake (utilisation) of research results by intended recipients and factors affecting uptake (similar terms and concepts include early

¹ Ozgediz, S. (1995) "Strengthening Evaluation in the CGIAR: Needs and Options", 10 March 1995 Draft.

adoption / acceptability studies, “follow the technology” analysis, and impact monitoring)²;

Ex-post IA: focuses on changes in selected indicators of mission-level goals (e.g., income changes or sustainable poverty alleviation) that can be attributed to specific interventions; also defined as “evaluating the scope and sustainability of overall benefits of larger programmes. Often these benefits are measured in terms of highly aggregated figures which can then be used for setting new priorities”³.

While all four relate to each other and are components of the research evaluation process (see Figure 1), ex-post IA primarily emphasizes the “accountability” and strategic validation functions of the process.⁴ Indeed, learning and operational feedback are most effectively generated and utilized via other forms of research evaluation, e.g., project evaluation and adoption constraint and analysis, to maximize the possibility of current information feeding back into research design and follow-up phases.

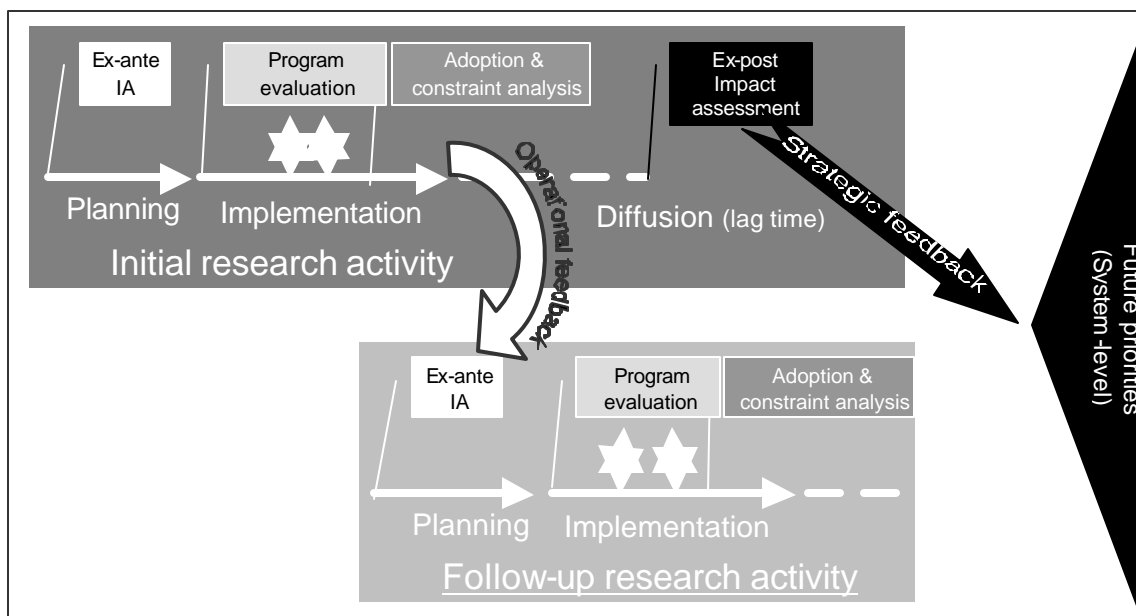


Figure 1. Evaluation Timeline for Research

1.3 Past Activities

IAEG and SPIA efforts in the past have focussed on synthesizing the available evidence of impact at the System level and on filling gaps in IA coverage. Accordingly,

² A new initiative, institutional learning and change (ILAC), is exploring new approaches to this component.

³ Balzer, G. and U. Nagel (2001). “Logframe based impact monitoring within the CGIAR System” in *The Future of Impact Assessment in the CGIAR: Needs Constraints and Options* Proceedings of a workshop organized by the Standing Panel on Impact Assessment of the TAC, 3-5 May 2000, Rome, Italy: FAO

⁴ The evaluation literature distinguishes between two main types of evaluation: ‘formative’ and ‘summative’. Formative evaluation encompasses the first three components and is primarily concerned with providing information during the implementation phase on how to improve the research program. Summative evaluation, within which ex-post IA falls, is concerned with the programme’s effectiveness, value or impact and is conducted after programme completion for the benefit of an external audience (MacKay and Horton, 2003).

IAEG/SPIA has undertaken a synthesis and review of Centre IA studies (Cooksey 1997a; 1997b), investigated factors affecting the adoption of CGIAR innovations through case studies at eight Centres (Seechrest et al. 1998), involved eight Centres in the most comprehensive analysis of the impacts of breeding research to date (Evenson and Gollin 2003), supported a literature review (Kerr and Kolavalli 1999) and seven case studies of the poverty impacts of CGIAR research (on-going), produced two reports on the environmental impacts of CGIAR technologies (Nelson and Maredia 2000; Maredia and Pingali 2001), evaluated the System's integrated pest management research (Waibel 2000), sponsored three workshops on IA methods and relevance (IAEG Secretariat 1977; TAC Secretariat 2001; Watson 2003), reviewed the milestones in CGIAR IA over time (Pingali 2001) and conducted a benefit-cost meta-analysis of the entire CGIAR investment (Raitzer 2003). (See Reference list for complete citations for these publications). Complementing these efforts have been numerous journal articles in prominent publications, such as *Science*, the *Quarterly Journal of International Agriculture*, *Agricultural Economics* and *Agricultural Systems*, as spin-offs from these studies.

1.4 Current Context

With these studies completed, and with the status of CGIAR funding arguably more secure, the original accountability role of IA receives less emphasis in many quarters, and some are calling for broadening the purpose for which *ex-post* IA is undertaken. This emphasizes IA as a tool for "learning" at the operational level to make the research process more effective. Increasingly, the purpose of *ex-post* IA is often mixed with other forms of evaluation. Indeed, the tendency is to replace the accountability function with one focused more on "failures", feedback, and operational learning in order to improve the implementation of future research efforts.

It is now widely recognised that different forms of evaluation are more appropriate to operational as compared with structural or strategic decision making levels within organizations.⁵ In this context, the types of decisions that IA can inform are largely determined by the fact that pathways from CGIAR innovations to development goals are complex, involve many complementary inputs, and are characterised by long and uncertain lag times.⁶ As a result, the closer impact analysis moves towards development goals, the less it can be related to specific sub-elements of research, as complementary factors become confounding, and long lag times in a dynamic environment make extrapolation of lessons difficult. Accordingly, *ex-post* IA, as a summative form of evaluation, is most appropriate to strategic information needs, and it remains a significant challenge to identify and understand the means by which feedback can be provided to those strategic decision processes for which insights regarding impact are most appropriate.⁷ To complement this strategic feedback, SPIA welcomes increased emphasis on a broader array of evaluation approaches and studies for informing structural and operational decision processes, but these will necessarily fall outside of the purview of *ex-post* IA (SPIA's mandate).

⁵ Mackay, R. and D. Horton. 2003. Expanding the use of impact assessment and evaluation in agricultural research and development. *Agricultural Systems*. 78(2): 143-165.

⁶ Ekboir, J. 2003. Why impact analysis should not be used for research evaluation and what the alternatives are. *Agricultural Systems*. 78(2): 166-184

⁷ A good example of this strategic learning dimension emerged from the CGI study (Evenson and Gollin, 2003) which highlighted a major remaining challenge for the CGIAR and NARS in targeting CGI investments to farmers in poor, marginal environments where modern varieties have not been adopted.

In order to take advantage of potential for strategic feedback provision, the CGIAR members and the Cosponsors decided at MTM '99 that the Systemwide IA function (previously carried out by the independent IAEG) should be integrated under the new name SPIA within the work of TAC (now the Science Council, or SC). This was meant to improve synergies with the System's forward planning and its monitoring and evaluation functions, both of which were housed in TAC. (See figure below). Thus, close and regular linkages between the three functions are considered essential. In fact, SCOER and SPIA currently have several joint studies underway.

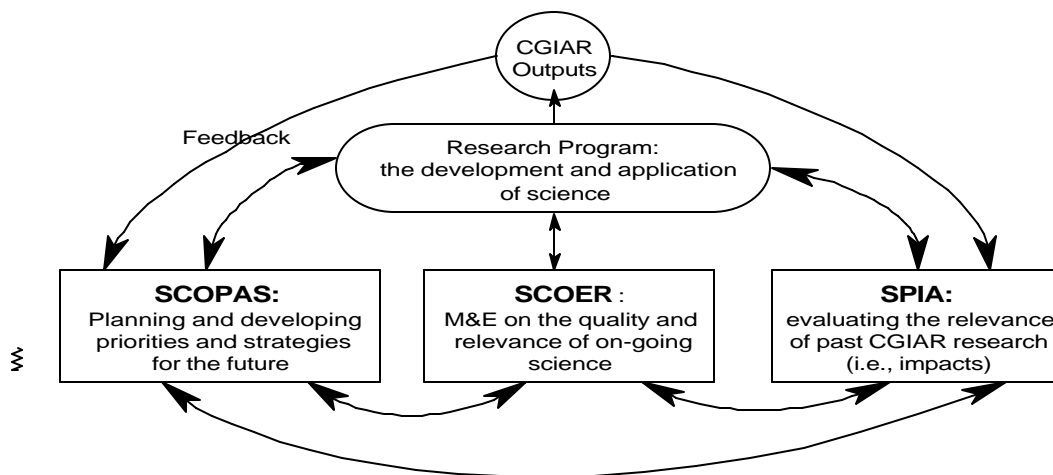


Figure 2. Relationship among the two sub-committees and standing panel of iSC

This integration was further affirmed by the Group in its endorsement of the 2002 SC Working Group report proposing the structure and functions of the new Science Council.

Changes to the structure of SPIA under the new SPIA-SC relationship accepted by the Group should be monitored closely to make sure that these synergies are maintained as before. This point is mentioned, since under the new arrangements the SPIA chair will no longer be an *ex officio* member of the SC and the chairs of the forward planning and monitoring and evaluation groups within the SC will no longer be *ex officio* members of SPIA. SPIA believes that the three functions of (i) forward planning, (ii) monitoring and evaluation (M&E), and (iii) ex-post IA should be closely associated so that findings on past patterns of impact can inform current strategic decisions. At the same time, SPIA is sensitive to the wish of the Group that the IA function should retain its independence and transparency and, hence, credibility.

1.5 Impact Assessment Needs of the System

The need which inspired the inauguration of IAEG eight years ago remains today. First, much remains to be learned about demands of the key audiences for IAs. Second, IA coverage is still primarily restricted to a few select classes of research, and there is still substantial variation in the prevalence and quality of IAs among Centres. To illustrate this

point, a recent SPIA meta-analysis of large-scale CGIAR economic IAs finds that 93.4% of benefits in the moderately inclusive scenario were generated by just three research areas – cassava mealybug biocontrol, breeding of spring bread wheat and modern varieties of rice. Third, there is still significant scope for improving understanding of the implications of the CGIAR’s activities for target beneficiaries and the broader external environment, even for those research activities that have well documented impacts.

Presently, SPIA is attempting to make *ex-post* IA in the CGIAR more demand-driven. SPIA is not only focusing on limited questions of particular studies, but is also addressing the larger questions of purpose and user demands, through increased interaction with key stakeholders. SPIA is continuing to make strides towards addressing gaps in IA coverage, by not only directly investigating new topics, but also by establishing the tools and methods that Centres can use to broaden their IA portfolios. For example, to extend IA coverage to additional research foci, SPIA is currently undertaking case studies at six Centres to better understand the impacts of natural resource management research (See Section 3.7), and is developing methods to facilitate expanded coverage of this research area. To improve the consistency of impact assessment coverage across the System, SPIA is in the process of developing strategic guidelines (Section 3.6).

Given these needs, SPIA concludes that there is a continuing requirement for three main *ex post* impact assessment functions at the System level. These include:

- (1) *Conducting independent IAs that synthesise available evidence at a System level to provide results useful to (a) investors, in justifying their investments; and (b) System management and Centres in planning their programs and investments and developing and allocating budgets. (Independence here refers to being done by individuals not associated with the research being assessed and having no conflicts of interest that could affect the assessment).*

- (2) *Developing IA methodologies that respond to the needs of key users, providing training in their use, and providing advice and facilitation for Centres as needed*, in terms of guidelines and methods documents, as well as by setting up monitoring systems in such a way as to make tracking and analyzing impacts more feasible, transparent and of high quality⁸. In addition, this function would involve the establishment and maintenance of a System IA website that also would be a focal point for entities with an interest and involvement in IA related to agricultural research and training.

- (3) *Facilitating the most effective use of IA outputs*, to maximise the value of IA findings for key stakeholders and strategic decision processes. On the other hand, this also would involve providing insights to investors on what is and is not feasible in terms of carrying out IAs for such activities as natural resources management, social science research and capacity strengthening.

⁸ It should be stressed that the implication of this statement is not that the Centres are lacking in high quality impact assessment capacity. Rather, the thinking here is that a central entity can facilitate interaction among Centres, gain access with System level resources to expertise needed by all Centres, and provide a clearing house for information and documentation of use to all Centres. In a sense, this central entity will provide “System level public goods.”

1.6 Future Emphasis

However, to fully fulfil SPIA's mandate, much more must be done. When reflecting upon the SPIA experience to date, it seems that the primary comparative advantage of SPIA lies in its independence and objectivity. Accordingly, as SPIA matures, it must preserve and enhance these qualities, so that meaningful guidance can be provided to IA in the System. To do so is not a simple matter of organization, but is also a function of the credibility behind SPIA's findings and assertions. Establishing this credibility cannot come from academic rigour alone, but must also stem from a solid and comprehensive understanding of stakeholder needs, so that SPIA can guide assessments towards the satisfaction of key stakeholder requirements.

2. MANDATE AND COMPOSITION OF SPIA

The existing mandate of the CGIAR Standing Panel on Impact Assessment (SPIA) is threefold, namely to:

- provide CGIAR Members with timely, objective and credible information on the impacts at the System level of past CGIAR outputs in terms of the CGIAR goals;
- provide support to and complement the centres in their *ex post* impact assessment activities; (this includes facilitating inter-centre impact assessment efforts and providing a forum for exchange of experience from impact studies); and
- provide feedback to CGIAR priority setting, and create synergies by developing links to *ex-ante* assessment and overall planning, monitoring and evaluation functions in the CGIAR.

Members of SPIA are chosen for their independence and impact assessment expertise and familiarity with international agricultural research. The present members of the Standing Panel are Drs. Ruben Echeverria (Uruguay) and Hermann Waibel (Germany). The Chair is Hans Gregersen (USA), who also served as an *ex officio* member of the iSC. Alain de Janvry (France) and Elias Fereres (Spain) were *ex-officio* members of SPIA under the iSC in their capacities as Chairs of SCOPAS/iSC and SCOER/iSC respectively. Tim Kelley is the person assigned to SPIA from the SC Secretariat. In addition, SC Secretariat member, Sirkka Immonen, has been working with SPIA on the training impacts study described below and SPIA consultant, David Raitzer, has been contributing to several SPIA initiatives

3. CURRENT STATUS OF SPIA ACTIVITIES

Given the importance that CGIAR members assign to independent and transparent assessment of the impacts of their CGIAR investments, the current SPIA wants to help ensure that there is a smooth transition to an active and relevant new program of impact assessment under the new Science Council. Thus, what follows in this section is a discussion of on-going, agreed upon activities being undertaken by SPIA together with recommendations for their successful completion. In Section 4, SPIA has identified new initiatives that the new Science Council might want to consider for the future.

Many of the below mentioned activities were discussed in SPIA's report to AGM02 and have been widely discussed by the Members. Brief updates are provided here on this

older set of activities. In several cases, SPIA has recently completed IA activities and published final reports, e.g., the germplasm enhancement impacts study, the proceedings of the Costa Rica IA conference, and the meta-analysis of B-C studies. The IFPRI led poverty impacts study also has been ongoing for some time, and significant progress has been reported at several CGIAR meetings, including this one. The current SPIA report provides revised plans for bringing this latter activity to a successful completion within the coming year and moving poverty impact assessment into centres as a mainstream activity.

3.1 Germplasm Improvement Impact Study

With the publication of the book “Crop Variety Improvement and its Effect on Productivity: The Impact of International Agricultural Research” (eds. Evenson and Gollin) in April '03, this IAEG/SPIA activity draws to a close. The 23-chapter book published by CABI documents the regional and global productivity, income and nutritional impacts of CGIAR centres and NARS partners through their sustained efforts in crop germplasm improvement. The book has been widely circulated (200 copies distributed), to CGIAR members, CGIAR centre directors and board chairs and to a range of CGIAR stakeholders and friends. A summary of the main findings of this study was published by Evenson and Gollin in Science (“Assessing the Impact of the Green Revolution, 1960-2000,” *Science* 2 May, 2003).

Status: Study completed; no follow-up envisioned at this time.

3.2 Conference on Impacts of Agricultural Research and Development: Why has Impact Assessment Research not Made More of a Difference ?

The main outcomes of this SPIA/iSC and CIMMYT sponsored conference, held in San Jose Costa Rica in February 2002, have been reported in a just-published summary of proceedings book (Report is available at the AGM 03 documentation table). In addition to the summary proceedings volume, the Quarterly Journal of International Agriculture devoted an entire issue (Vol. 42/2) to “Assessing the Impacts of Agricultural Research: The ory and Evidence”, comprised of one set of papers presented at the Conference, including an introductory one co-authored by the SPIA Chair and Secretary together with P. Pingali and M. Morris. A second set of papers from the conference is being published in a special issue of Agricultural Economics “Returns to Investment in Plant Genetic Resource Conservation and Crop Improvement Research” and a third set of papers have been published in a special issue of Agricultural Systems on "Learning for the future: Innovative approaches to evaluation of agricultural research" (see Annex I). SPIA was pleased with the overall high quality of papers presented at the conference and later published in various fora and wishes to put on record its appreciation to both Prabhu Pingali and Michael Morris for their diligence and commitment to this effort.

Status: Activity completed; no follow-up envisioned at this time.

3.3 Benefit - Cost Meta-Analysis of Investment in the IARCs of the CGIAR

Background

Since establishment in 1971, the CGIAR community has invested approximately seven billion dollars in various research and research related activities. In an era characterized by scarce development resources, it is relevant to ask: *Do the documented*

benefits from CGIAR research justify the total investment in the CGIAR so far? Although the CGIAR System has been a world leader in documenting research impacts, no previous study has attempted to comprehensively address this question in a quantitative manner. Thus, this study, which has received strong support from a number of stakeholders, represents a first attempt to scale-up quantified economic impacts to a System level.

At various times, the overall efficacy of agricultural research as development assistance has been called into question. With this in mind, the present analysis is intended to resolve on a preliminary basis whether the *entire* investment in the CGIAR over time can be justified on the basis of the benefits derived from its proven (and agreed-upon) major successes. Prior impact analyses have been unable to directly address this issue, because such have focused on the costs and benefits only of research successes, while ignoring the costs of associated efforts that have not resulted in quantifiable impacts. The present analysis overcomes these constraints by compiling reliable estimates of large-scale benefits, and comparing such with the *total* investment in the System to-date, under a number of different explicitly stated assumptions. The reasoning is that if the accumulated, aggregate value of generally accepted and credible benefits from a group of CGIAR activities is at least equal to the value of the entire investment in the CGIAR, when an acceptable alternative rate of return to investment is used to discount/compound benefits and costs, then the investment is justified under the assumption that the sum of benefits from all other CGIAR projects is zero or positive. Since this study has not previously been described, the following more detailed description is presented. The Study Report also is available in full at the AGM '03 documentation table.

Activities and Methodological Approach

More specifically, the present approach involved: (a) identifying available economic impact assessments (IAs) of CGIAR investments showing significant net benefits, (b) synthesising the methodological literature into standards for *ex-post* impact assessment 'plausibility' (c) appraising the transparency and analytical rigour of the benefit estimates provided by identified studies; and (d) adding up the benefits from those studies that met certain standards of rigour, starting with the most highly credible group of benefit estimates, followed by more inclusive standards to see what the relationship was between the entire seven billion dollar investment and the benefits generated at each chosen level of plausibility.

Economic impact studies for inclusion in the meta-analysis were selected based on a literature survey of publications databases, examination of reference lists from prior studies and scrutiny of International Agricultural Research Centre publications. Since impact assessment has been pursued in a largely decentralized manner, standards and approaches differ significantly among studies, and, hence, a critical review process was necessary for determining the reliability of generated results. To develop the conceptual grounding for the review process, best practices were identified for economic impact assessments.

Two overarching principles for evaluating study reliability- 1) transparency and 2) demonstration of causality, as well as accordant criteria and indicators, were developed from the identified best practices. Transparency was represented by three criteria: 1) clearly derived key assumptions, 2) comprehensive description of data sources, and 3) full explanation of data treatment. Demonstration of causality was represented by five criteria: 1) representative data set utilized, 2) appropriate disaggregation, 3) adequate consideration of mitigating factors, 4) plausible counterfactual developed, and 5) precise institutional attribution.

Using these criteria, five benefits scenarios were developed. These scenarios include 1) a scenario only including highly rated “significantly demonstrated” studies that empirically attribute benefits to specific activities of the CGIAR, rather than arbitrarily partitioning benefits from efforts in collaboration with partners, 2) a conservative scenario of only highly rated “significantly demonstrated” studies, 3) a selection of “plausible” studies meeting minimum standards for the criteria described above, 4) a “plausible, extrapolated to the present” scenario in which benefits for the crop genetic improvement studies were assumed to continue from the study period to the present (end of 2001) and 5) a “plausible, extrapolated through 2011,” which assumes that the products of current research will continue to be realized at present rates through 2011.

Summary of Major Results

Against an aggregate investment of 7,120 million 1990 US dollars (6,900 million of investment in the CGIAR, plus relevant pre-CGIAR costs) from 1960 through 2001, all scenarios produced benefit-cost ratios in substantial excess of one, based on benefits accruing from 1972 – 2001. Including only “significantly demonstrated” studies that empirically attribute CGIAR derived contributions to collaborative efforts results in a ratio of 1.94, while if all “significantly demonstrated” studies are considered, with assumed attributive coefficients applied, the ratio rises to 3.77. The “plausible” scenario results in a ratio of 4.76, while when extrapolated to 2001 this rises to 9.00, and extrapolated through 2011, this becomes 17.26. Since costs are distributed over the benefit period, and many benefits peaked in the early 1990s, the discount rate applied only significantly affected generated ratios in the extrapolative scenarios.

The true value of benefits arising from the CGIAR is probably in excess of even the upper bounds of the results generated in this study, as only a small subset of System impacts have been assessed. To illustrate this point, 98.1% of “significantly demonstrated” and 93.4% of “plausible” benefits were generated by just three research areas – cassava mealybug biocontrol, breeding of spring bread wheat and modern varieties of rice. Anecdotal evidence suggests that these are not the only areas of CGIAR research success, so there is substantial scope for expanded impact coverage, and better illustration of how System activities influence target beneficiaries.

Furthermore, while, in aggregate, the evidence is impressive, this study does identify a number of ways in which the persuasiveness of individual studies could be further enhanced. In particular, topical coverage by large-scale IAs is somewhat limited, and counterfactual development could benefit from additional attention. In addition, the present analysis notes that increased transparency would strengthen the confidence of results, and more reliable data sources would enhance precision

Finally, the diversity of methods employed among Centres and research programmes appears to indicate that more guidance on best practices for *ex-post* impact assessments within the System would offer considerable potential to improve consistency and raise analytical standards. However, for this to be effective, it will be necessary for the “clients” of impact assessments to articulate expectations for substantiating different types of impact claims.

Final Report

A first draft report of the study produced by the consultant was circulated to SPIA members in December 2002. Working closely with the SPIA chair and secretary, the consultant incorporated most of these comments into a revised draft report, which was subsequently sent out for review to six external referees—knowledgeable experts in the field of impact assessment. The full sets of reviewers’ comments were considered by both the consultant and the SPIA chair and were taken into account in developing the third draft (current version) of the report. The draft report was circulated to iSC members for discussion at iSC 84, and has now been published as a “green cover” Science Council publication, which is available at this meeting.

Future work

A second phase is under consideration for the future (see Section 4).

Status: Phase I completed; Phase II under consideration.

3.4. Impact of the CGIAR on Poverty Alleviation

Background

The first phase of this two-phase project, completed in 1999, involved a review and synthesis of the literature on the links between agricultural research and poverty and a workshop to develop methodologies for further CGIAR impact studies. The second phase, which began in September 2000, focuses on seven case studies involving a range of countries, different CGIAR centres and types of CGIAR research, e.g., in terms of commodity and regional coverage and scale of impact (see Table 1). These studies have two main objectives: (1) to test empirically methods for evaluating the impact of agricultural research on poverty in the context of different agricultural technologies and within different country, social, and institutional settings; and (2) to develop a conceptual framework that CGIAR centres can draw upon for impact assessment work, and that will also serve to guide priority-setting and technology design to increase the impacts on poverty. To accomplish these objectives, five of the first seven case studies used the sustainable livelihoods conceptual framework.

Table 1. Wave 1 case studies of impact of agricultural research under the IFPRI/SPIA project

Country	Technology	Case study leader	Lead CGIAR centre
Bangladesh	Modern rice varieties	Mahabub Hussein	IRRI
Bangladesh	Polyculture fishponds	Kelly Hallman	IFPRI
	Improved vegetables		
	Modern rice varieties		
Kenya	Soil Fertility Replenishment	Frank Place	ICRAF
Zimbabwe	Modern maize varieties	John Hoddinott	IFPRI
Mexico	Creolized maize varieties	Mauricio Bellon	CIMMYT
China	Agr. research investments*	Shenggen Fan	IFPRI
India	Agr. research investments*	Shenggen Fan	IFPRI

* Uses econometric analysis of secondary data rather than sustainable livelihoods approach with integrated social and economic impact assessment

Recent progress

SPIA reported on the key developments of this IFPRI-managed project at the last

CGIAR annual meeting in Manila (see SPIA Report to AGM '02). The following highlights the progress made since October 2002.

All five cases using the sustainable livelihoods framework have been completed and are being formatted for release as IFPRI Discussion Papers. These papers, along with three Discussion Papers and two IFPRI Research Reports from the China and India case studies, will be available at AGM '03 and discussed in a parallel session. The synthesis paper has also been prepared as a Discussion Paper. These materials will be compiled on a CD for ease of distribution.

Workshop on Institutional Learning and Change (ILAC)

This workshop was attended by approximately 30 representatives from CGIAR Centres, universities, research institutes, SPIA and the Rockefeller Foundation, including experts on ILAC and CG research managers and researchers interested in developing ILAC in their programmes and projects. The idea grew out of concerns for how results from poverty impact studies could be incorporated into the learning processes of CGIAR centres. SPIA consultant David Raitzer presented a paper on "Institutional Learning in Impact Assessment: Lessons from SPIA's Benefit-Cost Meta-Analysis of the CGIAR". A new CG working group has formed to network on ILAC and a new proposal is underway for advancing ILAC in the CGIAR, and for the new case studies. ISNAR and IPGRI have taken the lead on this initiative, and are making a presentation about it at AGM in Nairobi, Oct. 31, 2003.

Dissemination of Outputs

The outreach strategy for this activity emphasizes "a process, not a product"—that is, a series of presentations that are taken to a number of different forums, rather than relying on a single major "end of project workshop." Following this approach, the following presentations have been made to a range of academic conferences, CGIAR centers, and donor organizations:

- synthesis report and individual case studies at FAO in Rome, Oct. 3, 2003.
- methodology at the Biofortification CP meeting on impact assessment, Sept. 2, 2003.
- synthesis findings at the International Agricultural Economics meetings in Durban, South Africa in August 2003.
- paper on "National and International Agricultural Research and Poverty: Findings in the Case of Wheat in China." at the AAEA Annual Meeting, Montréal, July 29, 2003.
- paper on "Effects of Agricultural Research on Growth and Poverty Reduction in Asian Countries" at the Chinese Academy of Agricultural Sciences, on September 29.
- overall approach, methodology, and findings at CIP, July 7 2003, and discussed the possible applicability of this approach in CIP's impact evaluations.
- results from three of the five studies and the synthesis at the International Conference on "Staying Poor: Chronic Poverty and Development Policy", University of Manchester, Manchester, England, 7-9 April, 2003.
- combining qualitative and quantitative methods to study vulnerability, using examples from the poverty impact case studies, at an IFPRI-World Bank

Conference on Risk and Vulnerability: Estimation and Policy Implications. September 24, 2002.

- workshop held at IFPRI on February 4-6, 2003 on Institutional Learning and Change (see above).

In addition, three journal articles, one IFPRI research report and nine IFPRI discussion papers were published during the last 12 months.

Status: A final set of dissemination/outreach activities funded by SPIA are underway (see Annex II).

3.5 Training Evaluation and Impact Assessment

Background

As a follow up to the third System Review, TAC decided to address the role of the CGIAR in NARS strengthening as one of the priority strategic issues. In TAC 79 the committee commissioned a review of capacity strengthening in the CGIAR, of which the study of Evaluation and Impact Assessment of Training activities is the first part. SPIA and SCOER have been jointly organising this study.

The CGIAR explicitly embraces the objective of contributing to the enhancement of the capacities of NARS in the developing countries. All CGIAR Centres participate actively in capacity strengthening, and training is a major capacity strengthening activity that nearly all Centres have been organising since their inception. Training and other capacity strengthening activities are often implicitly considered as having had even more far reaching positive impacts toward achieving the ultimate goals of the CGIAR, than the research results *per se*. However, the current context of alternative training providers, new modes of channelling capacity strengthening activities, and declining funding is forcing the CGIAR Centres to prioritise and redesign their capacity strengthening strategies. The training study is expected to provide information that will guide the CGIAR and the Centres in setting relative priorities regarding training focus, identifying effective strategies for CGIAR training activities at the System level, and enhancing coordination of training as part of other capacity strengthening activities.

Recent progress

Due to the transition of TAC into a Science Council, the commitment for the Main Study was made only in 2003. The Main Study will be carried out by a small Panel with Dr Elliot Stern (UK) as Chair and Drs John Lynam (USA) and Lucia de Vaccaro (Peru) as members. In addition, regional resource persons will be contracted to assist in field surveys. The outline of the study plan is presented in the Terms of Reference to the Panel, approved by the iSC and SPIA. The TOR also includes a proposal for the study design. The Panel will define the study design and methodology in close collaboration with the relevant members of the SC and its Standing Panels.

The iSC Secretariat has been developing a short list for selecting regional resource persons by drawing from stakeholder consultation in the autumn of 2002, the short list for Panel membership and contacts with the Centres.

The Desk Study provides data and information for the Main Study, covering a period since 1990. The draft report was presented to iSC and SPIA members in the June meeting. A working draft has been completed since and it has been shared with the Chairs of SPIA and SCOER and the members of the Panel. It contains a report with 22 annexes on: i) the overall strategies, processes, organization and scope of training conducted by the Centres; ii) summary of data for those Centres that provided adequate data; iii) generic model on CGIAR training activities developed on the basis of information collected; iv) issues emerging from the recent EPMRs; and information on impact studies and evaluations on Centres training since 1990. Due to the incomplete nature of some of the data gathered, the document is for the time being only for internal use and the Panel will decide whether more data ought to be collected from the Centres in order to form a more accurate impression of training activities in the System level.

Status: The iSC Secretariat is working with the Panel Chair to prepare for a meeting initially planned in November for finalising the study approach and methodology. The field work and other data collection for the Main Study is planned to begin in 2003 and continue in 2004. The study report will be submitted to the SC in July 2004 and to the Group at AGM'04.

3.6 Strategic Guidelines for IA in the System

Background

The need for establishing strategic guidelines for IA studies in the CGIAR has been re-enforced at the last two major CGIAR sponsored IA conferences. A strategic guidelines document would cover issues that help link what users of IAs need (donors, planners, administrators) with what impact assessors can provide, given resource, and time and data constraints. It would explore basic issues such as the criteria for plausibility in IAs, attribution, development of counterfactuals, logframe and impact pathways analysis generally, and issues related to credibility, feasibility, transparency, and communication. Donors are supportive of developing this set of guidelines, since such a document would be helpful to them in establishing internal guidelines for judging IAs and explaining them to funding and political bodies. The major output from this activity will be a set of principles and 'best practices' strategies to guide *ex-post* impact assessment (epIA) work done by the CGIAR and its Centres.

Recent Progress

Last year SPIA developed a preliminary annotated outline for the guidelines that was subsequently revised after receiving input from a number of individuals, including iSC members, and some interested donors.

Since these guidelines need to be authoritative and relevant, they must incorporate the needs of key users, rather than reflect the output of one or two experts working in isolation. Consequently, SPIA, in collaboration with CIFOR, developed and distributed a survey questionnaire to CGIAR members and other stakeholders in an effort to better understand donor views about the major uses of and demand for *ex-post* impact assessments in the CGIAR.

A total of 24 responses from the following 22 donors were received: ACIAR, ADB, Austria, Belgium, DANIDA, DFID, EIARD, EU, GTZ (2), IADB, IFAD, KARI, Mexico,

Morocco, Netherlands, Philippines, Rockefeller, SDC, SIDA, Syngenta, USAID, and the World Bank. Responses generally affirmed the accountability role of *ex-post* impact assessment, as IAs were rated as influencing resource allocations more than all other information sources listed (CG Annual Reports, IARC Annual Reports, Project Reports, ICERs, EPMRs, *ex-ante* projections, or output assessments). Donors were moderately satisfied with IA approaches to date, with credibility receiving a relatively high score of 6.7/10, while impact indicators furthest down the “impact pathway” were most preferred. The implications of the survey results will be discussed in detail in a forthcoming SPIA paper, which will serve as an input for the guidelines document.

Consideration is also being given to organizing a very small workshop with selected centre IA focal points and key donors (probably in early 2004) at which time draft guidelines could be presented and subsequently modified prior to finalisation. Of particular relevance to this study is a mini-symposium being held at the IAAE meetings in Durban in August to discuss issues related to defining epIA ‘best practices’, at which the SPIA Secretary and Chair have been invited to present a paper.

Although initially a consultant was to be hired to help draft and finalise the guidelines in collaboration with SPIA members and a range of stakeholders, it is now felt that this activity could benefit substantially from, and thus should be closely integrated with Phase II of the B-C Meta-Analysis and, of considerable relevance to the epIA activities of NRM research (see Section 3.7 below) which have just been initiated. Accordingly, hiring of a consultant to help finalise the guidelines will be deferred for the time being.

Status: On-going.

3.7 Impact Assessment of NRM Research in the CGIAR

Background

Early in 2003, the CGIAR Director asked SPIA/iSC to initiate a connected set of activities that would eventually give donors a better idea of the impacts of their past investments in natural resources management (NRM) research in the CGIAR. The need for this initiative derived mainly, but not entirely, from the recent World Bank/OED meta analysis of the CGIAR and its conclusion that there was a serious dearth of quantitative evidence on the impacts of NRM research in the CGIAR. While centres have undertaken a number of evaluations of NRM research activities, not many have gone beyond a description of outputs and analysis of adoption in some cases. Much more evidence of *ex-post* impact from a wide variety of NRM research is needed.

Workplan and Approach

After several rounds of discussion involving iSC members, the CGIAR Director and several centre DGs, SPIA developed a NRM IA activity workplan and budget for this study. The workplan covers three main activities in this initiative to understand better the impacts of past investment in CGIAR research related to NRM. The three activities are:

1. Development of improved methods for assessing NRM impacts;
2. Empirical evidence of impacts from centre activities; and
3. Empirical evidence of impacts from Systemwide activities.

Ideally, activity 1 would be undertaken prior to the other two. However, due to the urgency of gaining a better perspective on the actual impacts of CGIAR activities in this area, the first two activities commenced simultaneously from June 2003. The third, which is being planned jointly with SCOER, is targeted for implementation toward the early part of next year. Centre input is acknowledged as essential to the successful completion of the activities, and particularly for activity 2, which has centre input in developing an operational plan of action for the individual case studies.

It is stressed that this initiative is focused on ex-post impact assessment (henceforth referred to as “epIA” to distinguish it from all the other analytical exercises ongoing in the centres related to NRM and INRM). The resources provided to SPIA and the centres to undertake this initiative are a direct response to CGIAR investor interest in understanding better the impacts of their past investments in NRM research in the CGIAR.

Progress Update

For Activity 1, the SPIA Chair has asked the CDC Task Force on Integrated NRM to prepare its collective thoughts on the subject and provide a review of the state of the art in the CGIAR System.SPIA. At the same time, SPIA intends to recruit an expert in the area of NRM epIA as a consultant to develop a basic background paper on state of the art in NRM epIA. Both papers will be reviewed widely and would be the centrepieces of a SPIA facilitated workshop to identify the elements needed in strategic, “best practice” guidelines (as distinct from a “how to” set of operational guidelines) for use in the CGIAR. The consultant, working with SPIA and the CDC Task Force and centre IA experts, would then develop the draft set of strategic guidelines for doing NRM epIA in the CGIAR for review by the centres and eventual adoption and use within the System.

Activity 2 involves a set of case study assessments of the impacts of selected Centre NRM projects/activities. SPIA is providing resources (\$30K per centre) and oversight for selected centres to undertake credible empirical assessments of the impacts of selected NRM activities or projects in the context of the CGIAR mission and goals. In late April, centres were asked to submit brief proposals for case studies to SPIA. Centres were encouraged to present NRM research where the results have gone on to extension, adoption and development phases at least 5 – 10 years ago. Specific criteria for selection of the proposals were provided. SPIA carefully reviewed and assessed all submissions and selected five to move ahead with during this first round (a second round will be proposed, pending results from the first round cases). The five centres/case studies selected are:

Centre	Case Study Title
CIAT	Integrating germplasm, natural resource, and institutional innovations to enhance impact: the case of cassava based cropping systems research in Asia
CIFOR	Assessing the sustainability of forest management: developing criteria and indicators
CIMMYT	Assessing the impact of zero-tillage technology in the irrigated IndoGangetic Plains
ICARDA	Ex post impact assessment of NRM technologies in crop-livestock systems in arid and semi-arid areas
ICLARM	Development and dissemination of integrated aquaculture agriculture technologies in Malawi

In the meantime, IWMI has submitted its own case study workplan (Impact Assessment of the Project 'Shared Control of Resources' in Sri Lanka), bringing the total number of ex-post IA of NRM research case studies in this project to six.

Centres are now in the process of submitting workplans with methodological details to SPIA. A first progress report is expected from the centres before the end of 2003. The final reports will externally reviewed (June 2004), case studies published and a synthesis volume prepared for AGM '04. A final workshop will take place in late 2004. It is envisioned that SPIA, through the hired consultant working with the centres (see Activity 1), will oversee the cases much in the same way that SPIA, using Drs. Evenson and Gollin, carried out its oversight function in the recently completed impact of CGI study.

Activity 3 is an assessment of the impacts associated with one of the longest running Systemwide programs that focus primarily on NRM activities (mainly through the eco-regional programs). The present activity will assess the impacts of the ASB programme as well as performing a more thorough evaluation of performance. In order to ensure effectiveness and efficiency in the use of CGIAR funds, the impact assessment would be carried out jointly with a more traditional ISC type of program evaluation. At this stage, SCOER and SPIA are in the early planning stages for this review with TOR developed and candidates identified for panel chair and members.

Status: On-going.

3.8 CGIAR Impact Website and Database Development

Background

It is essential that the CGIAR establish an effective mechanism to disseminate IA studies, promote "best practices," and foster dialogue among IA practitioners, both within the CGIAR and throughout the larger research and development communities. In addition, as a central focal point for System impact assessment activities, such will allow for dissemination to new audiences outside of the CGIAR arena. Amongst key stakeholders in the CGIAR, as

well as within the Centres, there is widespread interest in and support for this initiative. The website will link closely to other CGIAR websites.

Description of work planned

Once developed, the website will have much to offer for both practitioners and audiences. Areas of concentration for audiences will include an IA bibliography, and a library of IA studies. For practitioners, there will be a link to a “communities of practice” listserv, a calendar of IA-relevant meetings, and copies of methodological documents. Centre IA focal points will also be able to upload new studies, and augment the bibliography of IA publications. In addition, links to other key websites and groups involved in agricultural and related research impact assessment will be included. The website will be developed with input from potential users, including the staff of Centres.

Major outputs expected

(1) A prototype CGIAR impact assessment website shell with as much content as possible in this initial phase of development; (2) an agreement with the Centres as to how to move ahead with the website on a permanent basis, including how it would be funded and what the contributions and roles of each Centre would be.

Status: Planning underway, consultant contacted and TOR agreed.

4. NEW INITIATIVES UNDER CONSIDERATION

Based on discussions with CGIAR members, centres and on internal SPIA discussions, the following activities, not necessarily in order of priority, will be considered by SPIA for implementation over the next few years, in addition to the ongoing and newly initiated activities described in Section 3:

- A follow up study of the **impacts of the CGIAR in Africa**.
- Assess the **impacts of the CGIAR in Latin America and in Asia**; these would be parallel studies to one described above for Africa.
- Develop and apply IA methods for **participatory research/breeding** (specific assessments of activities of course should be done through the partners involved in the activities).
- Expand the assessment of the **impacts of the capacity strengthening activities** of the System, extending out from the on-going assessment of training to other types of capacity strengthening activities in the System and to field work involving systematic collection of lessons learnt from those who have been trained and the NARS groups in which they work.
- Participate with IFPRI and others in bringing **poverty impact assessment and “institutional learning and change” (ILAC) strategies and approaches** more into the mainstream of centres’ activities.
- Initiate assessment of **policy research impacts**, working closely with centres and consortia dealing with this topic; this includes actively supporting and participating in a **new consortium** dealing with assessment of the impacts of policy-oriented social science research (POSSR). (An international consortium of researchers and other professionals interested in measuring and enhancing the

impacts of POSSR was agreed upon at a workshop, hosted by the Government of the Netherlands and organized by IFPRI. The SPIA attended the meeting. SPIA members should be actively involved in the early development of this consortium and stay actively involved as it develops).

- **Follow-up on the Benefit-Cost Meta-Analysis of Investment in the IARCs of the CGIAR.** The *Benefit-Cost Meta-Analysis of Investment in the IARCs of the CGIAR* (study available at AGM03) found that in the absence of impact assessment standards that are broadly acceptable to target audiences it is difficult to define a precise range of benefit values. Consequently, SPIA proposes a workshop to foster improved stakeholder-assessor dialogue, and define methodological “best practices” according to audience demands. In addition to allowing for more precise definition of benefit values generated in Phase I, this activity can also serve as a key input into a number of SPIA initiatives, including the *Strategic Guidelines for Impact Assessment in the CGIAR*.
- **Selecting Priority Topics for Ex-post IA Studies: Towards Improved Understanding of Perceived (but Undocumented) Impacts** At present, *ex-post* IA coverage within the CGIAR is highly variable among research areas and Centres. This limited coverage poses a constraint to the use and application of IA findings, particularly for priority-setting processes. However, broadening the range of System activities covered by IA is far from easy. Many types of research pursued in the CGIAR have impact pathways that make attribution especially difficult (such as policy research), or lead to benefits that are difficult to quantify (such as certain kinds of NRM research). Moreover, these forms of research comprise a large and growing share of the CGIAR portfolio, which may imply that large-scale benefits are perceived as a product of such activities, even if such have not been formally assessed. To better understand the prevalence and qualities of perceived CGIAR impacts lacking formal IA coverage, SPIA would conduct a survey of key CGIAR senior researchers and managers, NARS, farmers’ organizations and NGOs to identify research activities that have had the largest impacts, according to different topical categories. The characteristics of these impacts would also be queried.
- **The Effects of Rising Restricted Funding on Priorities, Management, Efficiency and Impact Potential of Science in the CGIAR.** There is a need for empirical evidence and systematic analysis to better understand the implications that rising restricted funding has for the priorities, management, efficiency and impact potential of the System. A neutral body with experience in evaluation and relative independence from the CGIAR is needed for impartial investigation of such an important topic. This study would assess the strategic pressure exerted by strategic funding, effects on research management, changes in research efficiency and alterations in impact efficacy. This topic also was high on the SCOPAS priority list for future activity and any future activity related to the impacts of restricted funding would of course have to be considered by the new SC, since the needs go far beyond the mandate of SPIA.

In most of the cases listed, preliminary discussions and activities were started during late 2001 or the first part of 2002 in order to get stakeholder input. However, SPIA would welcome comments from Members on any and all of these activities. Many of these activities are considered important to various groups of stakeholders. These topics have strategic implications for the future of the CGIAR, both in terms of their potential for generating awareness of previously undocumented impacts and in providing the Science Council,

Executive Council and the System Office with strategic insights to use in planning for the future of the CGIAR.

5. CONCLUDING THOUGHTS

SPIA members would appreciate input from CGIAR Members and partners on the various ideas, concepts and suggestions put forth above for a productive transition to the new SC and for addressing important new issues for which SPIA believes impact assessment is needed. Additional suggestions for projects also are welcome.

It has become increasingly apparent to SPIA over the years that the quantity, quality and relevance of impact assessment activity in the centres are highly variable. Some centres have strong, state-of-the-art, productive and relevant impact assessment programs, while others are in need of improved, more effective and relevant IA programs. An impacts focus should be at the core of thinking and planning both in centres and for donors. Moreover, such a focus should be on impacts in terms of the mission and goals of the centres and the CGIAR System as a whole. There is progress, but much more is needed.

At the same time, while centres move on to increase the effectiveness and relevance of their own impact assessment activities, there also still is a need for a more intense, broader System focused impact assessment program. As the transition from the iSC to the new SC takes place, the current SPIA stands ready to help fill that System level need and, at the same time, support and work with the centres in their efforts to develop more effective and relevant impact assessment, both for accountability purposes and for strategic guidance and priority setting.

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