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**Report from  
iSC's Standing Panel on Impact Assessment (SPIA)**

(Agenda Item 6)

**For Discussion:** The attached report from SPIA will be introduced by its Chair, Dr. Hans Gregersen. iSC Members are invited to comment on the report, and to provide suggestions on the future directions of SPIA's work.

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# **iSC STANDING PANEL ON IMPACT ASSESSMENT (SPIA)**

## **Report to iSC 82**

### **1. Mandate and Composition of SPIA**

At the current time, pending changes resulting from a re-definition of the roles and structure of the Science Council and SPIA, the mandate of SPIA is to:

- provide 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;
- provide feedback to CGIAR priority setting, and create synergies by developing links to ex ante assessment and overall planning and evaluation functions in the CGIAR.

Drs. Ruben Echeverria (Peru) and Hermann Waibel (Germany) are the acting-Members of the Standing Panel, pending confirmation by the Co-sponsors. Alain de Janvry (France) and Elias Fereres (Spain) are ex officio members in their capacity as Chairs of SCOPAS/iSC and SCOER/iSC respectively. The Chair is Hans Gregersen (USA) who also serves as an ex officio member of the iSC. Tim Kelley is the person assigned to SPIA from the iSC Secretariat.

### **2. Current Status of SPIA Activities**

#### **2.1. *Environmental Impact Study***

This project is now completed and two reports emerging from the study have been edited and are in the process of being published in green-cover. The first is the report by Michael Nelson and Mywish Maredia (the Nelson Panel) on Phase 2 of the Environmental Impact Study (Environmental Impacts of the CGIAR: An Assessment), and the second is the report prepared by Mywish Maredia and Prabhu Pingali on the negative impacts of productivity enhancing research (Environmental Impacts of Productivity-Enhancing Crop Research: A Critical Review). The main conclusions of these reports were highlighted in the SPIA Report to the Group at AGM 01.

#### **2.2 *Germplasm Improvement Impact Study***

Although a final report on this project was presented at MTM 01, subsequently a number of major revisions were undertaken by the authors in response to a critical external peer review by three referees seeking further clarification on the methodology and interpretation of results. A book of 23 chapters containing the main elements of this SPIA activity will be published by CABI in 2002. All eight CGIAR crop centres participated in this study and the three country case studies--India, China and Brazil--were later added at the advice of Dr. Evenson, who served as study coordinator. SPIA provided financial support to encourage centre participation. Over the three years that the study ran, progress reports on the results of

the study were discussed regularly by SPIA, and presented to TAC/SC and to the Group. Tina David served as SPIA focal point for the centres and study coordinators on behalf of SPIA. SPIA thanks Tina David for her continuous involvement in this project and Alain de Janvry for his active involvement in guiding the project in its final stages.

### **2.3. *Training Evaluation and Impact Assessment***

At its 80<sup>th</sup> meeting, TAC decided to solicit the views of CGIAR members and Centres on the study proposal for the evaluation and impact assessment of training activities in the CGIAR. The TAC Secretariat received positive responses and the study was considered both important and timely. Centres and members also provided very valuable comments and suggestions towards improving the proposal. Additional useful inputs were received during telephone conversations with Centre focal persons nominated by the DGs.

At TAC 81, in September 2001, TAC decided to complete the on-going desk study, with the help of a consultant. TAC and SPIA subsequently decided to ask Dr. Leslie Cooksy to help at this stage of the study. Dr. Cooksy is an evaluation expert and has helped TAC/SPIA in the past in reviewing evaluation approaches and their utility. In the current activity, her responsibilities are to assist the iSC Secretariat in organising and analysing the data and information which has been submitted by the Centres. In addition she will provide advice on narrowing the focus and scope of the initial analysis and on the appropriate methodology for the study. She also will assist in defining the ToR for the study Panel. The main phase survey will be conducted by the Panel and it will focus on sub-components of training carefully chosen on the basis of information from the desk study. The current thinking is that a small expert Panel would be assisted by resource persons in the Regions. At TAC81, TAC decided to postpone the main phase until adequate funds were made available to it by the co-sponsors.

The desk study is being carried out at the iSC Secretariat and its output will feed into the work of the Panel and the final report. The compilation of information and data on the measures and levels of output of different CGIAR training activities is underway. Annual data, covering the period 1990-2000, is being collected on all training activities (type, theme, length etc., including, to the extent possible, funding) and on the participants of each training event (country, sex, age, institution, status, etc.). These data are being collected in order to analyse the changes in programs over the past ten years or so and the conformity with other information from and about NARS. The information compiled also includes: the ways in which Centres currently conduct quality control and evaluation for their training and other NARS capacity strengthening activities; how they follow-up on training activities; the extent to which there exists an overall capacity strengthening strategy in Centres; and the extent to which training is based on NARS needs assessments and the extent to which NARS participate in setting that strategy.

At this stage the iSC would like to thank the Centre staff and focal persons for their participation in the study and for their contributions of data and information. Most centres have provided valuable comments during the planning phase of the study. Given the strong interest in this study shown by NARS representatives, CGIAR investors and the centres, SPIA is confident that the co-sponsors (Executive Council) will give this activity high priority among the responsibilities to be carried over to the Science Council.

## **2.4. Impact of the CGIAR on Poverty Alleviation**

To determine how the poor have benefited from agricultural research, CGIAR centers need a stronger capacity to undertake poverty impact assessments on a continuing basis, not only to identify the conditions under which agricultural research is a sound investment for reducing poverty, but also to improve the targeting of research priorities to the changing needs of the poor. In response to this need, SPIA requested IFPRI to develop and coordinate a system-wide project to strengthen capacity for such poverty assessments.

### ***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, planned 14 case studies to cover a wide range of countries and types of CGIAR research. A first wave of seven studies was launched in 2000; the remaining studies are on hold until funding becomes available. The first studies provide only partial coverage of CGIAR centers and types of research (e.g., in terms of commodity and regional coverage and scale of impact). The inclusion of additional centers is imperative—that is, if the goal is to achieve system-wide capacity for undertaking poverty impact assessments.

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 centers 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 are using and adapting the sustainable livelihoods conceptual framework. This framework is gaining currency with those trying to understand the multiple and interacting causes of poverty at the micro, intermediate, and macro levels as well as with those seeking better methods for prioritizing interventions. Key aspects of this framework include:

- expanded understanding of the dimensions of poverty and how to measure it;
- emphasis on vulnerability to natural phenomenon, market shocks and trends, and social conflict, and how this shapes livelihood strategies and choices in technology;
- examination of physical, natural, financial, human, and social capital assets (and the constraints on access to assets) and how people combine these in their livelihood strategies;
- study of the varied range of livelihood activities and strategies that people pursue, recognizing that many different activities are pursued simultaneously, including on- and off- farm work;
- understanding how the institutional environment at the micro and macro levels influences livelihood strategies and outcomes and impacts of interventions;
- looking beyond aggregated household or head counts to consider the significance of social differentiation by class, ethnic group, gender, and other factors.

Each case study focuses on a set of research questions driven by the nature of the technology under study and its context. All questions, however, are informed by the sustainable livelihoods conceptual framework and fall within a set of themes that cuts across the studies.



The sustainable livelihoods framework will be used to structure the analysis, synthesize the information gathered, and make comparisons across case studies (see Table).

**Phase 1, Wave 1 case studies of impact of agricultural research under the IFPRI/SPIA project**

Country	Technology	Case study leader	Lead CGIAR center
Bangladesh	Modern rice varieties	Mahabub Hussein	IFPRI
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

The project is managed by IFPRI. An international Social Analysis Team includes researchers from IFPRI, the London School of Economics, and Wageningen University. Each case study is led by a senior researcher (usually an economist) at the respective CGIAR center, who works with senior social scientists (economists and sociologists) from national research institutes or universities and a team of less experienced social scientists for the purpose of capacity development. An External Advisory Committee meets once a year.

***Progress in Phase 2***

Significant progress was achieved on all “Wave 1” case studies in the past year, including

- Workshops for the five case studies that are gathering primary data were held with stakeholders from international and national research centers, government at national and local levels, NGOs, and community representatives. The goal was to identify and prioritize research questions and develop the detailed methods for each case.
- International and national interdisciplinary research teams were built for each case study.
- Research designs were developed that include state-of-the-art panel surveys, household-level qualitative case studies, focus groups, participatory rural appraisal, and key informant interviews.
- Quantitative and qualitative fieldwork was completed for three case studies, and data analysis is under way. Fieldwork is continuing for the two remaining case studies.
- The first annual External Advisory Committee meeting was held at IFPRI, where research designs and progress were reviewed, and strategies for dissemination of results within CGIAR and the broader international community discussed.
- The China and India case studies, which do not involve new fieldwork, are in the final stages of estimating the attribution of the benefits of technological change to CGIAR. Results indicate that agricultural research investments were among the most important public investments for reducing poverty in India and China, particularly in less favoured areas, and these investments also played a large role in reducing urban poverty in China.

***Future Work***

Over the coming year, fieldwork, data analysis, and final reports will be completed for all Wave 1 case studies. All seven reports will then be synthesized to draw out key findings and methodological lessons and propose a conceptual and methodological framework for further CGIAR poverty impact assessment work, including studies planned for Wave 2.

As CGIAR becomes increasingly oriented toward poverty reduction, this study aims to contribute to an improved understanding - within the CGIAR System and national partners - of the relationship between agricultural research and poverty, and ultimately, increase the poverty reducing impact of agricultural research.

Due to a shortfall in funding for the Wave I case studies, a number of those Wave I activities will be deferred over to the Wave II studies. Funding for Wave II case studies remains a serious issue of concern.

## **2.5. *Workshop on the Future of Impact Assessment in the CGIAR: Needs, Constraints and Options***

The proceedings of this TAC/SPIA sponsored workshop held 3-5 May 2000, was published in late 2001 by the iSC Secretariat and distributed widely. The volume contains summaries of the main sessions, keynote presentations, overview papers and 16 centre presentations. The overall goal of the workshop was to start the process of formulating a set of realistic and operational guidelines for future impact assessments in the CGIAR based on experiences gained from previous CGIAR impact studies and expertise available in the broader evaluation community.

## **2.6. *Conference on Impacts of Agricultural Research and Development: Why Has Impact Assessment Research Not Made More of a Difference?***

CIMMYT and SPIA/TAC jointly organized an International Conference on Impacts of Agricultural Research and Development, from 5-7 February 2002 in San José, Costa Rica<sup>1</sup>. The conference brought together impact assessment professionals with an interest in documenting and measuring the impact of international agricultural research. Over 145 people participated in the conference, including representatives from most CGIAR Centres, many NARS organizations, public and private universities, multilateral lending organizations, development assistance agencies, NGOs, philanthropic foundations, private corporations, and the media. This included senior staff representatives from IFAD, the World Bank, USAID, GTZ and the Rockefeller Foundation, all of whom had significant input into the deliberations. SPIA members Hans Gregersen and Hermann Waibel and Tim Kelley (iSC Secretariat) participated, chairing the opening session and several other sessions. Judging by the reaction of numerous participants during the week, the conference was highly successful. The conference highlighted experiences and case studies of impact measurement in the following areas:

- impact on agricultural productivity;
- impact on equity, poverty, social health, and nutrition;
- impact on the environment; and
- impact on institutions and human capital.

A number of papers dealt explicitly with hard-to-measure impacts in such areas as training, networks, participatory research and policy research, offering novel approaches to better

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<sup>1</sup> Prior to this conference, IFPRI and the DGIS of the Ministry of Foreign Affairs of the Netherlands organized a two-day policy-oriented social science research (POSSR) workshop at the Hague, 12-13 November 2001. The purpose of the workshop was to review recent experiences with the design and conduct of impact assessments of POSSR and to initiate a consortium to begin work in 2002 for an initial three-year period. The workshop was attended by more than 32 participants representing a wide range of countries and institutions, including TAC/iSC members Joachim von Braun and Hans Gregersen, chair of SPIA. IFPRI will initiate the design and coordination of the POSSR consortium, of which SC/SPIA could play a key role.

evaluate impact. Indeed, the conference produced a large number of quality papers. Plans are underway to publish many of these in special issues of refereed journals. SPIA will be involved (with CIMMYT) in follow-up activities, including writing overviews/forewords.

Further details of the programme can be found on the CIMMYT conference website at [www.cimmyt.org/research/economics/impacts](http://www.cimmyt.org/research/economics/impacts).

Based on discussions with many key people at the conference, there is widespread interest in seeing the impact assessment agenda move ahead rapidly. A draft agenda, highlighting the perceived needs and opportunities in system-wide impact assessment, was presented by SPIA during the final panel discussion session. Some of the priority areas identified at the conference serve as a solid basis for planning the future work in SPIA. These are enumerated below.

### **3. New SPIA Initiatives Planned/Underway**

#### **3.1 Strategic Guidelines for IA in the System**

One of the recommendations emerging from the May 2000 SPIA workshop was that SPIA, in consultation with the CGIAR investors, centres and others, should prepare a set of strategic guidelines for future ex-post impact assessment (IA) in the CGIAR. The need for establishing these guidelines was re-inforced yet again at the recent CIMMYT/SPIA sponsored IA conference in Costa Rica. These strategic guidelines would not be a detailed step-wise 'how to' manual for carrying out IAs, but rather lay out the basic principles and strategic issues (including user needs) for IAs, i.e., the what, for whom, and when questions. It would cover issues that help link what users of IAs need (donors, planners, administrators) with what doers of IAs can do, given resource, time and data constraints. It would explore basic issues such as the criteria of plausibility in IAs (ref: GTZ and EIARD concept notes), attribution, development of counterfactuals, logframe and impact pathways analysis generally. It would explore issues related to credibility, feasibility, transparency, and communication. Donors/investors are keenly supportive of the development of this set of guidelines, since they would be helpful to them in terms of setting up internal guidelines for judging IAs and explaining them to funding and political bodies.

**Proposed plan of action:** The SPIA Secretary would over the next two months draft an outline for "strategic guidelines" drawing on the wide variety of past documentation on the subject, both within and outside (e.g., from GTZ, EIARD, etc.). An annotated draft reviewed by HG, HW and RE would be presented to SC members prior to TAC/SC83 in Rome for further discussion with SCOPAS and SCOER.

#### **3.2 Website on 'Impacts of the CGIAR'**

Amongst key stakeholders in the CGIAR, and particularly within the Centres, there is widespread interest in and support for developing a CGIAR Impacts website. The rationale behind this interest is the expressed need to publicise and disseminate results of IA, and to bring together in one convenient place all the disparate information on IA being generated by the Centres. The plan envisages a CGIAR systemwide website, managed by SPIA and technically operated by one of the centres (CIMMYT was proposed initially, since they have considerable experience and capacity). At full development it would have five functions: (a) serve as a central focal point for IAs in the System; (b) provide general awareness for investors and the public through provision of one page summaries of IAs and synthesis



documents; (c) include full versions of peer reviewed IAs or links to such if found elsewhere on the web; (d) be a depository of data that could be used in a variety of IA activities; and (e) provide an interactive mechanisms for those involved in IA in and outside the system.

*Proposed plan of action:* Dr. Prabhu Pingali at CIMMYT will draw up a plan for establishing the website and provide a corresponding budget estimate to SPIA. Chair and Secretary of SPIA will explore funding options and work on details of functions, including protocols, procedures for clearing documents for the site. Contact with IA focal points at the centers will be made as soon as the preliminary proposal is in hand.

### 3.3 *Benefit/Cost Study of the CGIAR*

At AGM 01, the SPIA Chair discussed with a number of members the feasibility and value of initiating a benefit-cost assessment covering the entire CGIAR investment to-date. The proposition was further discussed by SPIA members with a number of persons at the recent IA conference in Costa Rica. The basic idea is to develop a benefit-cost measure of the present value of the *entire* CGIAR expenditure over time against the present value of the past and expected benefits of as many successful CG innovations as one can identify and justify in terms of estimated benefits (e.g., rice and wheat GPI, cassava mealy bug, GIFT tilapia, etc., would be included). Sensitivity analysis and probability or risk analysis would be included. Break-even values and cost-prices would be calculated using scenario analysis. (A similar type of study was produced some years ago for the US Forest Service forest utilization research budget and used in Congressional budget hearings.) The justification for undertaking the analysis is to address the criticism by many that only successful projects (costs and benefits) are compared in most project or program level impact assessments.

*Proposed plan of action:* Chair of SPIA will take the lead in developing the general framework and approach and a draft proposal which will be circulated to SPIA members for refinement. Secretariat (TK) will explore with Alston and Pardey the nature and availability of the data base used for their meta analysis of rates of return study. Chair and Secretary will produce a proposal with input from other SPIA members and comments from a number of knowledgeable people. The proposal will be considered by the SC, possibly at its next meeting. A short list of potential persons to carry out the study will be identified.

### 3.4 *CGIAR Impact in Africa Study follow-up*

At MTM 01, SPIA/TAC presented the available information on the contributions of the CGIAR, working with its partners in Africa and elsewhere, has made to agricultural development in Africa. The paper was well received, but the review was a preliminary one, not complete, and in many cases relied on anecdotal information for its assessment. The paper acknowledged the need to develop a more systematic and comprehensive assesment of the impacts of the CGIAR and its partners in achieving the goals of reducing poverty, hunger and malnutrition in Africa.

*Plan of Action:* One of SPIA's priorities for this year is to build on this initial assessment of CGIAR impacts in Africa, and expand on it further. An opportunity was presented to SPIA in Costa Rica to become involved in a new initiative with good prospects for funding (roughly \$300,000 available) to carry out case studies for assessment of impacts of four Centers in about 8 specific locations/projects in Africa. Frank Place (ICRAF) will send SPIA an outline of a specific proposal and SPIA will follow up to ascertain potential advantages for involvement linked to the above mentioned "Impacts in Africa" study. Ultimately, a revised and expanded study

would be developed, blending the field-level impact evidence with assessment of more macro effects.

### 3.5 *SPIA/IAEG Synthesis of Outputs*

Thus far, SPIA/IAEG has focused mainly on major Systemwide impact assessments. SPIA has assessed the impacts of the System's germplasm improvement work (Evenson et al.), assessed the impacts on the environment (the Nelson et al. and Maredia et al. panels) and IPM activities (Waibel), and made an initial assessment CGIAR impacts on sub-Saharan Africa. On-going studies are focusing on the CGIAR's impacts on poverty alleviation, and just started is the joint study with SCOER evaluating and assessing the impacts of the System's capacity strengthening activities. In addition, some activities, e.g., workshops and conferences, have been on-going with centres to help them organize their impact assessment work in a system context. It would be useful to synthesize into one document the significant lessons and salient findings from these assessments along with the recommendations emerging from the SPIA sponsored workshops and conferences.

*Proposed plan of action:* Chair of SPIA is preparing a first draft overview of the document that will cover IAEG/SPIA outputs and on-going and intended program outputs. The main audiences for this synthesis are donors, centers and the SC (as a briefing paper). SPIA members and Secretary will comment, add, and contribute material as appropriate. Target date for completion of first draft, May 2002.

## 4. **Future of SPIA and Impact Assessment Activity in the CGIAR.**

As in the previous SPIA report to TAC, SPIA wishes to emphasize here the desirability of keeping forward planning, monitoring and evaluation, and ex post impact assessment as closely associated as possible without losing the necessary independence of the impact assessment unit. In fact, SPIA has on-going joint projects with the iSC and agreed upon joint plans for systemwide assessments of the Alternatives to Slash and Burn programme (ICRAF as lead centre) and the common action and property rights programme (CAPRI, with IFPRI as lead centre). SPIA/SCOER are working with the lead centres to organize these studies in the most effective and efficient way possible.

Based on a review of past SPIA activity and experience, it is clear that the new SPIA under the new SC will need to concentrate more on: (a) working with centres in strengthening centre IA capacity and linking activities; (b) programme evaluation that involves inter-centre cooperation and collaboration; (c) working more closely with the System's science monitoring and evaluation activities to ensure that the complementarities between IA and M&E are fully realized; and (d) providing ex post impact assessment outputs that can serve the purposes of planning the new Challenge Programmes and reorienting overall System plans, i.e., work more closely with the forward looking planning activities performed at System level handled up until now by the iSC.

In addition, based on SPIA's self assessment of its past five years of activity, it is evident to the members that it needs to (e) open up more broadly to the outside evaluation/impact assessment world, including through networking, outsourcing and putting some of its future studies out for bid on a broader, competitive "request for proposal" basis, and (f) develop a more systematic process to assure high quality, independent scientific peer review of its analytical studies and their results.

Where ex post impact assessment is housed in the CGIAR is not as important as (1) how it is linked to the System's forward planning and monitoring and evaluation functions, and (2) how its independence, transparency and credibility are maintained. Strong linkages with forward planning

and M&E, and independence and credibility to the outside world are essential ingredients for a strong future impact assessment capability within the CGIAR.