

CGIAR SCIENCE COUNCIL

April 28, 2009

Defining the role of an Independent Science and Partnership Council (A Discussion Document contributing to the CGIAR Transition)

This document sets out the requirements for independent scientific council and advice that appear to be required by the new CGIAR on the basis of the structures and functions agreed in principle at AGM08. It proceeds to propose tentative **Terms of Reference for a new Independent Science and Partnership Council**. Supporting these tasks, the past experiences and expertise of the current Science Council are briefly listed in Annexes. Further, the document should be read in conjunction with **Monitoring and Evaluation: Processes and experiences**, a summary of lessons learned by the Science Council in carrying out its monitoring and evaluation role to date.

Noting that the CGIAR in 2009 is in transition and moving from principles to the implementation of change through several streams of work, this document is provided to represent current thinking of the Science Council and for the benefit of stakeholder dialogue in the finalisation of roles and responsibilities in the new CGIAR.

Introduction

The new CGIAR calls for an Independent Science and Partnership Council (ISPC) – as a standing body to support the Fund and Funders’ Summit and advise the Consortium Board.

The roles and functions of these two bodies – the Fund and the Consortium Board- are described as:

Fund – a CGIAR Fund that provides multi-year financing, with a Funders’ Summit and a Fund Council as its decision-making body.

It requires:

- Independent source of advice on feasibility and appropriateness of MegaProgram proposals for funding and periodic assessment of MegaProgram quality and performance.
- Assessments of synergies that might be derived from cross-cutting linkages between MegaPrograms or the expected consequences of emerging trends, new science or partners on current programs.
- Reassurance that investments lead to expected (or other) outcomes and impacts.
- Focussed advice on specific topics on demand of the Fund Council.

A Consortium of Centers – the Consortium consists of the previous Alliance of CGIAR Centers associated in a legal entity, with a decision-making CEO and a Consortium Board.

It requires:

- Scientific advice on program formulation, independent assessment of MegaProgram progress, and new science options and initiatives.
- Capacity to monitor contractual performance indicators of MegaProgram progress.
- Independent legal and scientific advice as inputs into CGIAR policy formulation and adequacy (including genetic resources policy), CGIAR structure and mergers, and other aspects of operation.
- Focussed advice on specific topics on demand of the Consortium Board.

Thus a new ISPC must serve and add value to these two clients in particular and the CGIAR system overall.

Draft Terms of Reference for a new Independent Science and Partnership Council (ISPC)

A mission for the new ISPC could be:

“To enhance and promote the quality, relevance and impact of science in the CGIAR, to mobilize and harness the best of international science for addressing the goals of the international agricultural research community and to advise the CGIAR Fund, the CGIAR Consortium, and the scientific community on strategic issues of importance to international agricultural research for development.”

The ISPC will provide its inputs and advice through:

(i) Providing assistance to strategic directions

- conducting foresight studies on emerging issues
- contributing to the development and updating of the CGIAR’s strategic framework
- contributing scientific advice to the CGIAR Conference

(ii) Promoting the quality and relevance of science

- assessing the quality and relevance (to CGIAR goals) of new program proposals (ex ante)
- providing guidance to the Fund Council on program-level evaluation (ex post)
- assessing the quality of the research in specific areas at the system level

(iii) Catalyzing linkages to science and promoting partnerships

- identifying new opportunities where advanced science, particularly in fields beyond conventional agricultural research, can be applied to the goals of the CGIAR
- mobilizing global linkages in science for development impact and fostering partnerships and innovative modalities [incentives and arrangements] for effective research collaboration and partnership

(iv) Ensuring accountability on overall system impacts

- generating a larger, credible body of evidence on system impacts for system accountability to investors
- enhancing the coverage and rigour of CGIAR impact assessment studies
- improving the utility of ex post IA for strategic feedback

The ISPC will principally provide support to the Fund Council (and Funders’ Summit) and provide advice to the Consortium Board.

Background and Rationale for the ISPC

The CGIAR Change Management Process has endorsed the principle of a Consortium-led programmatic approach separating program implementation from the platform of CGIAR investors and stakeholder supporting research for development outcomes (principally the Funding arm represented by a Fund Council). Stakeholder input to and endorsement of CGIAR strategy will be mediated through a meeting which will endorse CGIAR strategy (presently foreseen as the Global Conference on Agricultural Research for Development or GCARD) and wider contributions by science and development providers to the development and conduct of MegaPrograms. The Change process agreed at AGM08, further endorsed the separation of independent guidance to the Fund Council on new science of CGIAR programs from the day to day monitoring of the performance of those programs. The Change Process therefore revised the general notion of a Science Council towards an Independent Science and Partnership Council (ISPC) providing advice to the Fund Council. However, this outline sketch of an ISPC requires further definition in line with the principles agreed at AGM08 and consultation with stakeholders. This document discusses these developments to illustrate where independent scientific advice will be required by the new system, the subset of tasks that might be allotted to a standing scientific advice body, the TORs of such a body (envisaged as the ISPC) and the background experience afforded by the history of the current Science Council since 2004.

Modus operandi of the new ISPC

The CGIAR Change process invites a substantial change from the Science Council. The name strongly enforces the *independence* from the other (implementing) players in the system; and the introduction of the word *partnership* reflects the philosophy of a CGIAR operating increasingly as one the world's actors in agricultural science for development. Reference to the draft TORs for the ISPC (see p3 - themselves based on the tasks allotted to the new Council by the Business Meeting at AGM08) puts new emphasis on assistance to strategic direction for the CGIAR through the conduct of foresight studies; a role in the assessment of scientific quality (of the new programs); a catalysis of new partnerships; and ensuring effectiveness through evaluation of the overall system impacts. A reduction is foreseen in the range and scope of monitoring and evaluation functions compared with previous activities¹. Flow charts of the new CGIAR structure indicate that the advice and counsel of the ISPC primarily serves informational and decision-making needs of the donors, i.e. the Fund Council, to whom the ISPC is directly accountable. Secondary clients include the Consortium Board, the implementers of programs and the GCARD stakeholder forum. It is important to distinguish between the ISPC's primary role to provide independent advice to the Fund Council and the influence it can have at the System level through the System's other operating bodies².

¹ For this reason the Science Council has prepared a lessons learned or "hand-over" document on CGIAR monitoring and evaluation for any new body that assumes this function.

² It is important, at a time when several planning processes are proceeding simultaneously, including the development of a CGIAR Charter, that the ISPC takes steps to clarify the scope of its likely activities and the means by which they will best be carried out. This will also help maintain clarity in the associated processes - not least of which includes such things as the skills required across Council membership and the main elements of a new ISPC work plan which should be drafted for the next biennium (2010-2011).

Transition from SC to ISPC

The Science Council was originally formed, superseding the earlier Technical Advisory Committee, or TAC, to play four fundamental roles in the CGIAR, namely:

- Priorities and Strategies for research
- Monitoring and Evaluation of Centers and their programs for relevance and quality
- Independent Impact Assessment of Center programs and of the aggregate system
- Mobilisation of Science.

Of these, three remain central to the new CGIAR. The Science Council (and the Technical Advisory Committee before it) served by its secretariat has conducted a substantial body of work on behalf of the CGIAR and provided independent advice to the Members in these three areas. It has accumulated broad experience in several areas of the CGIAR endeavour, particularly related to the quality, relevance and effectiveness of CGIAR research.

Based on this experience the SC suggests that the ISPC could provide inputs and advice to its main clients through:

(i) Providing assistance to strategic directions

- Foresight studies on emerging issues
- contributing to the development and updating of the CGIAR's strategic framework
- contributing scientific advice to the CGIAR Conference

SC experience and future considerations:

The SC has contributed to system-level strategic priority setting and conducted strategic studies (see Annex 1). Much of the existing material, obtained through expert and peer reviewed processes are immediately relevant to the workings of the Strategic Results Framework and to Mega-Program developments. Several of the strategic studies address the context of research as much as priorities and were expressly undertaken to enhance system level research policy. These findings are important for the oversight role of Center Boards and are expected to provide inputs to the system-level policy formulation processes of the Consortium (and to reassure Funders).

The strategic inputs of the new ISPC are expected in the first instance to be in relation to the formation of the SRF and its subsequent updating and the needs of the Fund Council in following the importance of emerging trends and opportunities in new science. The ISPC expects to seek additional inputs from primary clients and other stakeholders into the development of an ISPC workplan balancing CGIAR needs and demand. It will also establish criteria for identifying foresight studies and undertaking those for which the ISPC has comparative advantage, and has the independence drawing on commissioned studies or the modelling and *ex ante* assessments of others. Such advice will also be made available broadly to the CGIAR Conference and other stakeholders.

(ii) Promoting the quality and relevance of science

- assessing new program proposals (ex ante)
- providing guidance to the Fund Council on program-level evaluation (ex post)
- assessing the quality of the research in specific areas at the system level

SC experience and future considerations:

The Science Council's experience and lessons learned from its role in monitoring and evaluation have been encapsulated in a separate paper. A further Science Council paper outlines the minimum requirements for both system and program evaluation in the new CGIAR (both papers referred to in Annex 2). The experience with the system's PMS would allow the ISPC to provide advice on the characteristics and content of future program performance contracts, as well as advice to Mega-program development (building on the accumulated experience with the CGIAR's consortium approaches to date e.g. CPs, SWEPS).

Whilst the Consortium will take on Center and MegaProgram contract monitoring, the Fund Council will need reassurance on the quality of proposed programs to initiate funding (through concept note or Mega-Program plan review) and, additionally, an independent source of advice on program performance and the continuing relevance of directions once programs have been implemented. To perform this latter role, the ISPC will either have to enter into Program review or to provide commentary and advice to the Fund Council on the basis of reviews and evidence provided by third parties. The evaluation of emerging trends may also require that the ISPC collaborate in cross cutting (thematic and system-wide reviews rather than of individual MegaPrograms) to provide advice on matching CGIAR capacity. This essentially provides a future mechanism for oversight of quality at the system-level.

(iii) Catalyzing linkages to science and promoting partnerships

- identifying new opportunities where advanced science, particularly in fields beyond conventional agricultural research, can be applied to the goals of the CGIAR
- mobilizing global linkages in science for development impact and fostering partnerships and innovative modalities [incentives and arrangements] for effective research collaboration and partnership

SC experience and future considerations:

The SC's work to derive an overall strategy (scope and scale) for its work in mobilizing science is directly relevant to the continuing function foreseen for the ISPC (see Annex 3). The SC sees its role only as operating at the broader system level, since individual Centers and programs have a comparative advantage in catalysing direct scientific links and partnerships at the program and activity levels. Thus the ISPC expects to consult widely on the concrete areas of activity to be entered into its future workplan. The Science Forum09 (but also later versions) will highlight areas of innovative science that have the potential to address significant agricultural research challenges and deliver a positive impact on development, and highlight where critical partnerships and research collaborations are needed to deliver the impact of advanced science on agriculture for development. The ISPC will provide the outcomes of the Science Forum and other advice as inputs to GCARD, the consideration of future strategy updates and the Fund Council.

(iv) Ensuring accountability on overall system impacts

- generating a larger, credible body of evidence on system impacts for system accountability to investors
- enhancing the coverage and rigour of CGIAR impact assessment studies
- improving the utility of ex post IA for strategic feedback

SC experience and future considerations:

Ex post IA has become an essential ingredient in ensuring the continued support by investors to the CGIAR. It is integral to the monitoring and evaluation processes of the CGIAR system. The Science Council has made extensive contributions to system-level *ex post* IA through its Standing Panel on Impact Assessment (SPIA) which is expected to continue under the ISPC (see Annex 4). Maintaining a clear focus on generating impact-related information for donors that satisfy their accountability requirements implies the need for frequent interaction with the Funders.

SPIA experience will be valuable in any revision of the system's performance measurement system based on programmatic considerations as the system must also address what it would mean to outsource the impact elements of the PMS to third parties. The emphasis of the new ISPC is on independence. Currently SPIA enhances its work and helps promote an impact culture in the CGIAR through its rapport with Center impact assessment focal points based on collaborative projects, joint meetings held biennially, joint symposia at international conferences, open dialogue on PMS, etc. In the context of the new structure, SPIA is actively considering the mechanisms and the appropriate incentives to balance demand for providing guidance to Center impact assessment specialists on the one hand with independence of assessments on the other. Looking beyond the transition phase, there would be a need for the ISPC to reassure donors on system-level impacts and to participate in *ex post* assessment of research programs in the future. Certainly it will be critical for the CGIAR that existing networks of specialists, as well *ex post* IA expertise in MegaPrograms, are maintained.

New impact assessment-related challenges are emerging. Accordingly, the ISPC/SPIA approach over the medium term is expected to be focused on four key tasks: (i) developing and applying new IA methods in hard-to-measure areas such as NRM, policy and biodiversity research and training and capacity building; (ii) broadening the scope of IA beyond partial (economic) assessments, advancing further down the impact pathway toward indicators that reflect more closely CGIAR goals; (iii) making *ex post* IA more utilisation focused & improving use for strategic feedback; and, (iv) enhancing the coverage and rigour (credibility) of CGIAR IA studies. These challenges are relevant at both the Mega-program and broader System levels.

Implications

It will be necessary for all elements of the CGIAR transition process to advance discussion of the role and responsibilities of the ISPC in tandem with those of other elements of the CGIAR. There is much still to be worked out governing responsibilities and needs in the new system that must be pursued in an interactive and mutually coherent manner. This paper is provided as input into these discussions between parties.

In a transition year, perhaps extending until after the GCARD of March 2010, there is still a need to ensure the continuing functions of the SC. At the same time (as can be seen from the accompanying papers) the SC is moving proactively to wrap up certain aspects of its current remit (where it is sensible to do so) and to derive lessons learned that may be applicable to new entities in the CGIAR. The SC is convinced that a research system and its stakeholders need an independent source of advice in relation to program quality and relevance. The SC/ISPC will continue to canvass opinions within the new CGIAR structure and particularly from the Funders to determine demand. A new workplan for the new ISPC can only be finalised following confirmation of its roles and responsibilities (we suggest close to or around the functions outlined in this document), and a definition of responsibilities must also extend to means. There may be a need to restructure the ISPC and recruitment to the Council subsequently.

Annex 1: Priorities and strategies – supporting the directions of CGIAR research

The Science Council (SC) has commissioned and conducted a number of strategic studies designed to support the establishment of CGIAR research priorities or to examine the context of agricultural research and to propose efficiencies or policy adjustments in the way CGIAR research is carried out. The contribution to priority setting was a mandated activity of the SC on behalf of the System. The topics were chosen on the basis of the System-level view and experience of the iSC/TAC gained from reviewing the activities of the Centers and other collaborative programs. They address opportunities in science or, conversely, lacunae perceived in CGIAR processes or policy. Studies have been either SC-led or, more usually, the reports of world experts against terms of reference set by the Science Council which then also provides commentary and advice to the CGIAR as necessary. The SC believes that this mode of working is appropriate to the conduct of foresight studies anticipated for the ISPC in the future, as they are expected to focus on new science opportunities relevant to the system's program portfolio and global trends or other issues affecting the conduct of agricultural research in the future.

The several SC studies published since 2005 and their importance are annotated in the attached Table. The last column highlights their utility for the current CGIAR Transition process, and suggests how they can provide a resource for existing elements of the CGIAR and the system's future policy-making organs. The SC would be pleased to provide advice and to respond to future requests related to these studies, including their updating or conversion into guidance notes.

Table 1 – list of Science Council’s Strategic Studies by topic and potential user in the Change Process

Activity	Outputs	Relevance	Potential target audience
(i) Strategic Research Priorities			
System Priorities	<u>Report</u> <i>System Priorities for CGIAR Research 2005-2015</i> (2005, reprinted 2007).	<p>Product of a three year Delphi-type process identifying science areas of relevance to the CGIAR and to the MDGs.</p> <p>One framework plan showing how an area could be implemented was developed (for conservation and use of plant genetic resources “1A”) and several others at a lesser level of detail.</p> <p>Although the strategy and results framework for the new CGIAR will replace the system priorities in due course, much of the definition of scope of activities and their descriptions, including the integration of priority areas for research, all remain relevant for discussions of MegaProgram development</p> <p>Document indicates how cross cutting programs of research under “development challenges” may be considered/ structured</p>	<p>Team developing Strategy and Results Framework</p> <p>MegaProgram portfolio development</p> <p>MegaProgram development</p>
Evaluation of Poverty in priority setting	<u>Study report</u> <i>Global Poverty Mapping in Support of CGIAR Research Priorities</i> (2005)	<p>The study noted that poverty data had not yet been collected/ consolidated at the global level in a manner useful for priority setting by the SC across developing countries.</p> <p>The conclusion of the study would stand re-examination in 2009 as part of the SC’s foresight studies and input to CGIAR planning.</p>	<p>SRF team</p> <p>MegaProgram portfolio Planning / Consortium Board/ISPC workplan</p>
Research for Development	<u>Report</u> <i>Positioning the CGIAR in the Research for Development Continuum</i> (2006) <u>Workshop on</u>	<p>Discusses the placement of the CGIAR conducting research for development with observer inputs on worthwhile approaches to portfolio design.</p> <p>Includes paper by J.Ryan which described the SC’s position on International Public Goods (IPGs - a criterion in program design), and a secretariat paper presaged some of the</p>	<p>SRF</p> <p>MegaProgram portfolio development</p> <p>Planning individual MegaPrograms</p>

	IPGs at AGM (2008).	partner considerations in the delivery of an IPG approach relevant to MegaProgram design. Reinforced planning, intent of research and description of impact pathways as the important ingredients of an IPG approach to research for development.	
(ii) Evaluation of individual or cross-cutting research fields or areas			
Livestock & Fish genetic resources	<u>Report Conservation of Livestock and Fish Genetic Resources</u> (2005).	Provides reviews of needs and likely research and other components of programs for AnGR and FiGR linked to international Plans of Action being developed under the umbrella of the FAO. The livestock report was used as the basis for the first Framework Plan 1C on animal genetic resources.	SRF Available for planning of any CGIAR MegaProgram(s) on genetic resources conservation. FAO-CGRFA: The FiGR report is relevant to the possible IPA on global fish genetic resources (2010/11)
Food Safety	<u>Workshop Report Food Safety in the CGIAR</u> (2007)	Provides discussion and potential entry points for CGIAR in relation to research and policy studies on food safety (in the light of the CGIAR mission and strengths of other actors). Highlights need for systematic review of experiences involving poor producers, food safety and markets, and development of best practice methodology for the CGIAR and its partners.	SRF MegaProgram portfolio development MegaProgram development in relation to nutrition and food safety.
(iii) Evaluation of the research context for system efficiency or revised CGIAR policy			
Intellectual Property Rights (IPR)	<u>Report IPG in the context of IPR</u> (2006) <u>Discussion draft Stewardship &</u>	Papers assess the preparedness of the system and of the Centers to meet IP requirements and the needs that arise for CGIAR research in relation to the acquisition and use of third party IP and freedom to distribute products in line with the mission of the CGIAR. A paper discusses the role of intermediaries in brokering IP use for humanitarian and development purposes.	Center Boards The Consortium (including the Consortium Board) The CGIAR Charter

	<i>Liability in IPR submitted to GRPC25 & SC11 (2009)</i>	CGIAR Guidelines for Centers and Challenge Programs for managing and accessing IP need to be redrafted. This must include product stewardship and liability which are identified as key elements for both the CGIAR itself and its NARS partners who will deploy the products of collaborative science.	GRPC - System and Center level policy on Intellectual Policy MegaProgram design
Genomics	<u>Study</u> (2005) <u>GTF document</u> <i>Enhancing the delivery of genomics research outcomes - genomic research in the CGIAR: effective means of establishing platforms for genetic research</i> (2006)	Reviewed progress in genomics research and expectations for the future. Discusses rationale for a system-wide approach to obtaining inputs and conducting genomics research across Centers and Programs. Supported to the re-establishment of the Genomics Task Force (GTF)	Center Boards and CP Steering Committees. The Consortium (including the Consortium Board) for the establishment of effective and efficient System-wide policy and operations in research MegaProgram design
Biosafety	<u>Panel Report</u> <i>Biosafety Policy and Practices of the CGIAR Centers</i> (2004) <u>Workshop report</u> <i>Biotechnology, Biosafety and the CGIAR</i> (2009)	Catalogues extent of CGIAR research on LMOs and discusses extent of biosafety requirements. SC supportive of appropriate policies and procedures but not with the extent of biosafety research suggested. Updates CGIAR experience with transgenesis research – however notes no release to date. Recommendation for the establishment of a Biosafety Research Support Network, and for coordinated System-wide representation at international policy fora.	Center and CP Boards and management. CGIAR Charter The Consortium (including the Consortium Board) for the establishment of safe and efficient System-wide policy and operations in research MegaProgram design
Ethics	<u>Report: (Compilation of three</u>	First study identifies areas in which ethical considerations impinge on the choice, targeting and conduct of CGIAR	Center and CP Boards and management.

	<p><u>studies)</u> <i>Ethical challenges</i> (2004), <i>Ethics & CGIAR Research</i> (2006), <i>Ethics & CGIAR Mission</i> (2008).</p> <p>Some elements considered by Change Mgmt. WG1.</p>	<p>research.</p> <p>The second study examines the requirement for adequate ethical policies at the CGIAR system and Center (and by extension) Program level. In the light of gaps, the report provides recognised international blueprints which could be used to derive adequate ethical policies at all levels.</p> <p>The third study identifies how ethical concerns for human welfare (understood by the CGIAR principally as combating poverty and under-nutrition, and improving human empowerment and the sustainability of nature) play a role in wording the mission of the CGIAR and in the choice, targeting and conduct of CGIAR research programs.</p>	<p>CGIAR Mission statement and Charter</p> <p>The Consortium (including the Consortium Board) for the establishment of ethical System-wide policy and operations in research</p> <p>MegaProgram design</p>
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Annex 2:

The Science Council's Standing Panel on Monitoring and Evaluation (SPME) has contributed a large part of performance quality assessment in the CGIAR contributing to Center, Program and cross-cutting reviews as well (with SPIA) to aspects of performance included in the System's Performance Management System. A summary of these experiences can be found in a companion paper (**Monitoring and Evaluation: Processes and experiences**, CGIAR Science Council draft of 2009). A forward looking estimation of where monitoring and evaluation will be required by the new CGIAR (considering the change to MegaPrograms, Consortium and Fund organisation etc, but not the specific roles of the ISPC) are also collected in a second paper (**Monitoring and Evaluation in the new CGIAR**, CGIAR Science Council draft of 2009b). Readers are referred to the two documents and the information is not repeated here.

Annex 3: The SC strategy for mobilizing science

Challenged by a rapidly changing research landscape, the emergence of new actors and donors, the globalization of institutions, and new opportunities to apply novel disciplines to agriculture and natural resource management, forging linkages that mobilize science more effectively and efficiently for development assumes an even greater importance than before.

The CGIAR is one actor in the global effort to reduce poverty, enhance nutrition and improve the management of natural resources through scientific research. Consistent with its ongoing evolution, partnerships, research collaborations and strategic linkages with the global research and donor communities become ever more critical to the CGIAR in carrying out its mission.

There is a growing need for strengthening both upstream and downstream linkages. Upstream linkages respond to the rapidly changing frontier of modern science by engaging with traditional and non-traditional research partners, in particular with the private sector. On downstream linkages there is a pressing need for better coordination among the various science providers in developed countries, in such a way that appropriate technologies are transferred to the poor in a beneficial manner, reducing the burdensome effect of transacting with multiple providers.

Looking forward; where the System's needs in mobilizing global linkages can be addressed by the Science Council

In response to these growing needs, the Science Council has been a vocal advocate of the CGIAR mission of science for development. Its commitment to help harness the best science internationally, by mobilizing global linkages in support of science for development has is evidence through its past activities (e.g. contribution to the 2008 World Development Report of the World Bank - Chapter 7 'Innovating Through Science and Technology'; Science for Agricultural Development (2005); and the previous Science Forum 2007 and Science Forum 2005)

The Council continues to consult with stakeholders in refining its plan of action for mobilizing global linkages in science for development (which was initiated at the request of ExCo-14 and endorsed by ExCo-15). The role of the Council is one of advocacy, a facilitator and a catalyst, facilitating linkages between the CGIAR and new and existing actors in a changing landscape.

The ISPC should continue to approach this challenge on four major fronts.

Promoting the CGIAR mission with key communities and stakeholders

The ISPC will continue to build on its work to identify the various, newly emerging actors, and individual members continue to use their profile and networks to promote the CGIAR mission within these communities, including significant investors in research that are not currently donors to the CGIAR.

Directly facilitating the mobilization of linkages in science for development, through the biennial Science Forum

The ISPC will organize, in partnership with key stakeholders, biennial science fora. These will provide a forum to highlight opportunities where **linkages and partnerships can be forged to capture innovative science, particularly in disciplines beyond conventional agricultural research, with the potential to deliver an impact on development goals.** Examples of successful partnerships that synergized significant impact will be explored. The Science Forum format is designed to promote dialogue with donors, policy makers, and other stakeholders on key strategic research and development issues, bringing together global experts, the CGIAR community, NARS, ARIs, and the private sector. The Science Forum will also serve as a platform for the science for development community to be heard as a unified voice, to better promote the issue on the international agenda and to continually raise awareness among decision-makers in the broader international community of the importance of continued investment in science for development.

Science Forum 2009 (16-17 June, Wageningen) is organized by the Council in partnership with the CGIAR Secretariat, the Alliance of the CGIAR Centers, GFAR and Wageningen University and Research Centre. The 2009 forum will focus on innovative science and the arrangements that can help mobilize it more effectively for development. It will bring together scientists from every CGIAR Centre and Challenge Program, and scientists from NARS, ARIs as well as other key stakeholders, and will seek to identify areas of rapid scientific innovation that have significant potential to deliver development impact. It will serve as a forum to broker new partnerships. The Forum will focus on six domains and will address the following questions: what is the nature of frontier science in this area? What is the potential for development impact? Which applications of science in this domain could feasibly achieve development impact through immediate take-up into national systems, and which have a longer-time horizon for impact on development? In which areas do partnerships need to be forged to help capture innovative research for development?

The conclusions of the Forum will highlight crucial areas for future research collaboration and partnership for the CGIAR. **Science Forum 2009 will contribute to the Global Conference on Agricultural Research for Development (GCARD) in seeking to inform both regional consultations and subsequent global discussion as to how innovative science can be more effectively, and efficiently, mobilized in support of development.**

Promoting improved linkages between the CGIAR and ARIs

Engaging in partnerships with other centers of excellence in science is a widely acknowledged value in the CGIAR. Complex problems, however, often demand multiple approaches and/or a variety of scientific tools. New and improved engagements with careful and optimal partnerships from the larger pool of the global scientific infrastructure and talent will be needed to address the complex challenges faced by agriculture. ARIs and their scientists could uncover new sets of opportunities for application of their science through the CGIAR and its network of scientific infrastructures and associated partnerships. A more comprehensive and more focused engagement of international agricultural research by the global scientific community should lead to new and significant findings that generate greater impact. Furthermore, partnerships that connect the CGIAR and partners with the vast public investment brought to bear in building the research capacities of the ARIs, can leverage the impact of donors' investment in science for development.

The ISPC will organize symposia and workshops, foresight meetings and science dialogues which CGIAR scientists convene with colleagues from related scientific fields from both the public and private sectors to review new developments, debate the merits of new and different approaches to address key constraints of major strategic objectives. These meetings may be attached to other major conferences or professional scientific meetings, or held on an ad hoc basis to tackle complex research problems that require special partnerships and attention.

Promoting linkages between the CGIAR and institutions involved in product development and deployment

Much of the developing world is bracing for change. The agricultural research and development landscape is changing with a growing number of actors. In some parts of the world, such as sub-Saharan Africa, these developments have been motivated by the unprecedented level of resource commitment to agricultural research and development efforts. Yet, the eventual development and deployment of products for impact will remain the responsibility of local NARS and SMEs, currently with meager resources and limited capacity. A coordinated effort and direction is essential to relieve this tension and to impart maximal impact and generate greater return on research investment. The CGIAR strives to be central to such an effort, as a key science provider of the developing world. Although there are many more external institutions engaged in agricultural research in Africa, including several US and European universities, none has the level of infrastructure, scientific cadre, and the wealth of tested technology base on the ground that the CGIAR centers possess. The creation of a coordinated and mission oriented program with selective engagement in partnerships, leading to proper division of labor and resource commitment, would lower the burden. The mode of engagement will be regular dialogue through organized joint meetings or designated program coordinators. This will be a place where technologies ready for scaling up to achieve the set development targets for each region or production system could be addressed. Key research areas under development but requiring continuing effort and critical to enable NARS to undertake large scale application could be discussed. The ISPC can promote awareness, offer direction, and bring significant players together towards developing a shared understanding for a highly needed coordination and integration.

Looking forward, an ISPC that is engaged in mobilizing the global scientific community, and champions the CGIAR mission with policymakers of the developed and developing world, can act as a conduit to facilitate the development and deployment of technologies for impact on development.

Annex 4: Documenting Impact in the CGIAR: Past Achievements and Current Challenges of SPIA³

In 1996, the CGIAR established the independent Impact Assessment and Evaluation Group, later renamed the Standing Panel on Impact Assessment (SPIA), with a mission to provide CGIAR Members with credible information about the impact of past CGIAR research Center investments and to enhance and systematize more the quality of on-going CGIAR Center *ex post* impact assessment efforts. It was felt that rigorous impact assessments (IAs) were essential in providing convincing evidence as to whether and to what extent agricultural research is an effective instrument for achieving poverty alleviation and other development goals. From the outset, the need for this system-level body to maintain independence and objectivity was essential for ensuring credibility.

The mandate of the Science Council's SPIA is threefold: (i) to provide CGIAR Members with timely, objective and credible information on the impacts at the system level of past CGIAR investments and outputs in terms of the CGIAR goals of enhanced food security, poverty alleviation and sustained natural resources; (ii) to provide support to and complement the Centers in their *ex post* IA activities; and (iii) to 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. SPIA's vision is of a CGIAR as a leader in the design and conduct of *ex post* IA, members have added confidence in the value of past and future investments, and that Centers have institutionalized IA such that *ex post* IA is regarded as essential in research management and planning⁴.

Impact Assessment Achievements in the CGIAR

It is widely perceived that the CGIAR has had, over its lifetime, a significant and sustainable impact on poor people by helping to develop technology options and agricultural management tools that have permitted increased food security and dramatic lowering of the cost of producing the major food staple crops of the world. This, in turn, has benefited both poor producers and consumers. CGIAR system-level assessments by Nelson and Maredia (2000), Evenson and Gollin (2003), Maredia and Raitzer (2006), Raitzer and Kelley (2008) and others that have validated these perceptions would not have been possible without the basic analyses done by CGIAR Centers themselves.

SPIA initially focussed its efforts on synthesizing the available evidence of impact at the system level and on filling gaps in IA coverage. Accordingly, SPIA commissioned a range of studies to: synthesize and review Center IA studies (Cooksy, 1997), investigate factors affecting the adoption of CGIAR innovations through case studies at eight Centers (Seechrest *et al.*, 1999), undertake a comprehensive analysis of the impacts of crop genetic improvement research to date (Evenson and Gollin, 2003), support a literature review and seven case studies of the poverty impacts of CGIAR research (Kerr and Kolavalli, 1999; Adato and Meinzen-Dick, 2007), synthesize the evidence about the environmental impacts of CGIAR technologies (Nelson and Maredia, 2000; Maredia and Pingali, 2001), evaluate the system's integrated pest management research (Waibel, 2000), review the milestones in the CGIAR IA

⁴ A more extensive history is provided by Kelley *et al.*, 2008 to which interested readers are referred.

over time (Pingali, 2001), conduct a cumulative benefit-cost meta-analysis of the entire CGIAR investment (Raitzer, 2003) and one for CGIAR and partners' research investments in sub-Saharan Africa (Maredia and Raitzer, 2006).

While the scope of IA research at the Centers expanded over time, major areas of research remained under-assessed with respect to impacts, e.g., natural resource management, social science and policy, and biodiversity research. Partly this was due to methodological challenges and constraints. Furthermore, there still remained a critical need to assess system-level achievements in terms of poverty alleviation impacts.

SPIA has given increased attention to developing and refining IA methods for harder-to-measure research themes. Some of these initiatives are on-going but recently completed ones include an assessment of the impacts of selected natural resources management research activities within the CGIAR (Science Council, 2006a; Waibel and Zilberman, 2007), a system-level strategic evaluation of investment in training in the CGIAR (Science Council, 2006b) and a scoping study and set of case studies documenting impacts from CGIAR policy-oriented research (Science Council, 2006c; Raitzer and Ryan, 2008; Science Council, 2008). Despite the range of topics addressed and studies completed over the past six years (see Box 1), many gaps remain and these constitute SPIA's current challenges.

Box 1. Key publications of studies commissioned/coordinated by SPIA since 2003

Meta Analysis of Global and Regional Impact Assessment

- 3 study reports: South Asia (2008), sub Saharan Africa (2006) and Global (2003)

Commodity Improvement Research Impact Assessment

- 9 CGIAR mandate crops (Evenson and Gollin, 2003)

Impact of Agricultural Research on Poverty and Livelihoods (IFPRI coordinated study)

- Synthesis and 7 case studies (Adato and Meinzen-Dick, 2007)

Natural Resource Management Research Impact Assessment

- Synthesis and 6 case studies (Waibel and Zilberman, 2007)

Policy Oriented Research Impact Assessment

- Scoping study (2006) and Synthesis and 7 case studies (2008)

Evaluation and Impact of CGIAR Training Activities

- Joint study report with SPME (2006)

Impact Assessment of Participatory Research Approaches

- Integrated into 1st External Review of the PRGA, joint study with SPME (2007)

Strategic Guidance for Conducting Ex post IA

- [Strategic Guidance for epIA of Agricultural Research](#) report (2008)
- Enhancing the Value and Use of *Ex post* Evaluation of Outcomes and Impacts in the CGIAR (2008)
- Donor Demands and Uses for Evidence of Research Impact in the CGIAR (2005)

Advancing Ex-Post IA of Environmental & Social Impacts of CGIAR Research

- Two consultancy reports and proposal for study of environmental impacts of CGIAR research (2009)

Current and Emerging Impact Assessment Needs of the System

The need which inspired the creation of a centralized impact assessment group for the CGIAR more than 10 years ago remains today. The IA priorities, however, have evolved and the new challenges fall into five major areas discussed briefly in turn:

(i) Clarifying objectives of and priorities for ex post IA

As a summative form of evaluation, *ex post* IA is more appropriate to strategic, longer-term information needs, and it remains a significant challenge to identify the means by which

feedback most effectively can be provided to those strategic decision processes for which insights regarding impact are most appropriate. To complement this strategic feedback, a broader array of evaluation approaches is needed. SPIA and the CGIAR members (Raitzer and Winkel, 2005) have emphasized the critical importance of the accountability function, which they believe should be preserved as a primary objective for SPIA. At the same time opportunities for adding value through learning from these studies are being considered (see below). The challenge is to preserve accountability while enhancing feedback and operational learning to improve the design and conduct of future research efforts.

(ii) Developing and applying new IA methods in difficult areas such as NRM, policy and biodiversity research and training/capacity building

Ex post IA coverage is still primarily restricted to select classes of research, and particularly that related to crop germplasm improvement. Despite SPIA and Center's recent activity in some of the neglected areas of natural resource management research, policy-oriented research, and training, more needs to be done in documenting adoption, influence and impact in these areas – with careful attention to establishing the appropriate counterfactual and addressing attribution issues. SPIA will continue its work with CGIAR center IA focal points and a range of outside IA experts to develop appropriate methods for *ex post* IA for these research areas. SPIA plans to launch a new initiative to document impacts of CGIAR investments in germplasm collection, conservation, characterization and evaluation and training beginning in 2010. Note, even in areas where there has been a strong history of IA, such as crop germplasm improvement, conceptual issues and opportunities for improving methods still remain.

(iii) Broadening the scope of IA beyond partial (economic) assessments, advancing further down the impact pathway toward indicators that reflect more closely CGIAR goals

A major criticism of the *ex post* IA work within the CGIAR to-date has been its characteristically strong economic/monetary focus with over-reliance on internal rates of return and benefit to cost ratios as the standard measures used. This is a deficiency in current IA work in the CGIAR. Other dimensions of impact exist that cannot, at least easily, be valued or monetized, but must still be quantified. This relates especially to food and nutrition security effects and environmental benefits/losses. To-date, few CGIAR *ex post* IAs have attempted comprehensive assessments that encompass the full range of ecological or social effects, direct and indirect effects, distributional effects. While it is not necessary that every *ex post* IA cover every potential impact, there is greater scope for conducting more comprehensive assessments of the economic, social and environmental impacts of agricultural research. Accordingly, an attempt to document the impact of CGIAR research on the environment via case studies has recently been initiated (Science Council, 2009). SPIA is also planning to initiate a series of *ex post* IA studies in 2010 that explicitly focus on social impacts, e.g., food and nutrition security, poverty alleviation and distributional effects.

(iv) Making ex post IA more utilisation focused: improving use for strategic feedback

The relatively small and selective sample of CGIAR *ex post* IAs thus far generated clearly limits the extent to which reliable lessons and generalizations can be made. Hence, as the set of *ex post* IAs grows, a greater body of evidence will exist on which strategic lessons can be drawn for the system. These lessons relate to: what type of research is most effective from an impact perspective (where and under what type of conditions and for whom)?; how close have *ex post* IAs been in terms of results to the earlier projections from *ex ante* IAs?; How can spillovers be maximised so that the returns to R & D investments are enhanced? This is especially relevant for the CGIAR, as it pursues the production of international public goods

with wide applicability rather than location-specific ones where others have a comparative advantage. In the future, SPIA plans to follow-up on its earlier exploratory study on “Enhancing the Value and Use of ex post IA and outcome evaluations” by engaging directly with research managers to assess the use of and potential for making greater use of impact related information. SPIA also intends to engage more closely with the professional Evaluation Community, e.g., NONIE, 3Ie, Evaluation Cooperation, etc., and with ILAC.

(v) Helping Centers enhance the coverage and rigour (credibility) of their IA efforts

Notwithstanding improvements in methods and coverage of *ex post* IA conducted in the CGIAR, there is still substantial variation in the prevalence and quality of *ex post* IAs among Centers. Many, including investors and Center scientists and managers, recognize the need to improve the consistency of IA coverage across the system. SPIA currently is involved in several activities to help facilitate improvements in the quality and hence credibility of *ex post* IAs. Oversight and guidance on cross Center IA studies in difficult to measure areas is the major area but others include close interaction with the Center impact assessment focal points vis-à-vis joint meetings held biennially, joint symposia at international conferences, development of strategic guidelines for IA, and open dialogue on the PMS exercise. These SPIA activities – aimed primarily at helping Centers institutionalise IA – may or may not continue under the new Consortium model.

Reflections on the role of a system-level impact assessment body within the CGIAR

Ex post IA has become an essential ingredient in ensuring the continued support by investors to the CGIAR and is now integral to the monitoring and evaluation processes of the CGIAR. Key lessons include, *first*, that *ex post* IA in the CGIAR has its comparative advantage in addressing the accountability imperative for a publicly-funded institution like the CGIAR. It is not as appropriate for institutional learning, nor has its full potential as an input into *ex ante* IA and priority assessment been realised. The *second* is that the scope of *ex post* IA should be broadened beyond the narrow economic indicators such as internal rates of return and benefit-cost ratios. With increasing concerns about poverty, food and nutrition security and sustaining the environment, investors are seeking assurance that these goals are being effectively met by international agricultural R & D. *Third*, continued methodological advances in IA are needed to address issues such as attribution and counterfactuals, not only in the more challenging areas of IA (natural resources management and policy research, training, biodiversity), but also for the traditional areas where IA has been applied, such as germplasm improvement and crop loss avoidance technologies. There may be scope to embrace experimental evaluation methods and some of the approaches. Additional needs are for testing and validating more qualitative methods derived from the sociological and anthropological traditions in development studies, as complements to economics-based IA approaches that could form part of a multi-dimensional comprehensive approach to the study of impact.

SPIA as a component of the CGIAR Science Council, and in close communication with the CGIAR investors, has been an effective instrument in helping the CGIAR generate a larger and more credible body of evidence to satisfy the accountability imperative of investors. The accountability imperative must be preserved at all costs, but at the same time such a system-level unit must look for ways and means of discovering new insights about what avenues of research might offer the most promising prospects for success in future, ideally through compiling and occasionally synthesizing a larger body of evidence of impacts on the poor and the environment emanating from diverse types of CGIAR research.

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