



**CONSULTATIVE GROUP ON INTERNATIONAL AGRICULTURAL RESEARCH**

**WORK PLAN & BUDGET for 2011**

**of the**

**INDEPENDENT SCIENCE & PARTNERSHIP COUNCIL (ISPC)**

*(28th September 2010)*

**Summary**

The Independent Science and Partnership Council presents its WorkPlan & Budget for 2011 for the endorsement of the Fund Council. The plan builds on the activities of the interim ISPC in 2010, focusing on the ISPC's new roles and responsibilities, and with a focus on activities to provide assistance and advice to the CGIAR at a time of change. Noting that the membership of the new ISPC will itself undergo quite extensive turnover, the proposed plan for 2011 is provisional, subject to the confirmation of the new ISPC Chair.

The plan emphasizes activities focused on the issues affecting the CGIAR change process (MP criteria and review, advice on strategy development and a new study to provide independent assessment for the Consortium Board on the placement of genetic resources conservation, research and policy) and includes a rationale for the proposed Science Forum in 2011 as requested by the Fund Council. Interim activities (e.g. assistance to performance monitoring) have been phased out assuming that the Consortium Board, Consortium Secretariat and the Independent Evaluation Arrangement of the new CGIAR will all be in place and ready to shoulder their full responsibilities in 2011. Highlights of the Plan include the ISPC's work on foresight, mobilization of partners around the theme of the environmental issues surrounding agriculture, including assessment of the CGIAR's impact on natural resources and the land saving argument of agricultural technology innovation. Most prominently, the ISPC seeks to take on a more independent stance in its impact assessment and has increased the scope of its activities to look at social and environmental effects and measures.

The ISPC presents a Work Plan and Budget for new activities in 2011 budgeted at USD 3,850 million. The increase in budget over 2010 is a direct result of the enlargement of impact assessment activities commensurate with demand. There are new foci on science foresight and the mobilization of science. There is an attempt to both stabilize and streamline the ISPC Secretariat at a time of substantial turnover at the Council level.

# I INTRODUCTION

## 1.1 RESPONSIBILITIES OF THE NEW ISPC

The “ISPC will primarily provide independent advice and expertise to the CGIAR through services to the Fund Council and in support of the Funders Forum, as well as serve as an intellectual bridge between CGIAR funders and implementers, thereby seeking to improve the productivity and quality of CGIAR science, catalyze the partnering of the Consortium and Centers with other institutions of international agricultural research, and support the CGIAR by serving as an honest broker in relevant international fora.”<sup>1</sup>

Whilst the ISPC reports to the Fund Council, “the Consortium may seek advice from ISPC in areas that do not create a conflict of interest for either party.”<sup>2</sup> Annex 1 outlines the ISPC roles and responsibilities.

The ISPC interprets these roles under four headings:

1. Promote the quality and relevance of science programs in relation to goals and objectives of the new CGIAR through independent program review, particularly:
  - Undertake assessment and scientific review of MegaProgram or other investment proposals;
  - Analyze M&E results from specific research programs to provide synthesized advice to funders;
  - Contribute to the development of analytical methods, tools and approaches in the formulation of research priorities and assessment of the potential impacts of new proposed investments.
2. Contribute through foresight studies to defining strategic directions for the CGIAR System:
  - Conduct and /or contract foresight studies on agricultural and food system trends and needs and analyze the emerging issues with the objective of quantifying the research challenge and the potential impact in response to opportunities and needs identified by ISPC and other stakeholders;
  - Mobilize the science community on high priority issues to contribute to the scientific deliberations of the Consortium and its partners;
  - Provide input to the development of the Strategic Results Framework (SRF).
3. Mobilize science and promote effective partnerships:
  - Search for new advanced science opportunities, beyond the current scope, to address research problems related to the System objectives;
  - Develop strategic thinking on effective partnerships in the R&D continuum to enhance the organizational relevance, effectiveness, and global impact of agricultural science to meet developmental goals;
  - Assess the added value of current partnership arrangements and incentive modalities as part of MegaProgram assessment with emphasis on improving the utility and impact of research outputs.

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<sup>1</sup> (CGIAR January, 2010)

<sup>2</sup> Ibid. Chapter 3, section 6

4. Ensure accountability on overall System impact
  - Provide evidence on the effectiveness of research investments through ex-post impact assessment of system programs;
  - Increase the rigor and the reach of impact assessment studies on program areas and system wide activities;
  - Facilitate impact assessment activities on crosscutting issues such as partnerships, capacity building, diversity, gender and any other relevant ones that may emerge;
  - Contribute towards improved strategic decisions by improving feedback from impact assessment results and by enhancing the rigor of trend and foresight analysis;
  - Support, through appropriate collaborative mechanisms, stakeholder accountability fora that will contribute to the assessment of the effectiveness of the CGIAR in meeting developmental objectives.

In 2010, the interim ISPC maintained the structure and make-up of the former Science Council. In 2011, the CGIAR Fund Council expects to adjust the skill mix of the ISPC to meet the changed role of the Council.

## **1.2 MAKE-UP AND MODE OF OPERATION FOR THE NEW ISPC**

At its inaugural Meeting in February 2010, the Fund Council specified the make-up and selection procedures for the new ISPC. From 2011, the ISPC will consist of a Chair and seven Members (six Members and the ex officio Chair of the Standing Panel on Impact Assessment or SPIA). In 2011, the Chair and four of the Members will be new appointments and up to two of the Members will be continuing Members of the interim ISPC. Assistance to the impact assessment group (SPIA) is provided by two Panel members. One or two additional Panel Members will be appointed at the discretion of the ISPC Chair to the Council at large to increase specific expertise depending upon the final make-up of the Council (the Interim ISPC currently operates with three Panel Members). The Council will continue to hold two meetings annually (generally at CGIAR Centers), making decisions in open sessions. Council Members are appointed with particular responsibility for acting as focal points for different aspects of the ISPC responsibilities but ISPC decisions and advice are provided as the advice of the whole.

The ISPC Secretariat, based at FAO in Rome, provides technical and administrative support to the ISPC, implementing its decisions and following up with all related technical activities. Professional Officers of the Secretariat provide technical support to working groups, task forces and panels, management of reviews and assessments, information management, meeting preparation and follow up of recommendations, special projects (including desk research and literature surveys, analyses and synthesis) and other Council-wide activities. The staffing of the Secretariat is planned as an Executive Director (D1-level), 6 professionals (4 Seniors and 2 Juniors) and 4 administrative staff (the latter a reduction compared with the SC secretariat). Not all professional positions are filled at the time of writing.

## **II THE WORK PLAN FOR THE ISPC IN 2011**

The ISPC has in its mandate a number of activities that relate to:

- Providing the Fund Council and the Funders' Forum with foresight advice on trends and emerging issues, as well as potential strategies for addressing them. This will be guided by the CGIAR Strategy and Results Framework. In undertaking this role the ISPC will act

as commissioner and coordinator of any required foresight studies, drawing on expertise both from within and outside the Consortium.

- Complementing the GCARD process, and in consultation and partnership with the Consortium and GFAR, convening periodic high-level scientific dialogues on high priority issues that will inform the scientific deliberations among CGIAR scientists and their research partners and help catalyze partnerships of the CGIAR with other actors in the global science community.
- Improving strategic investment decisions and increasing the rigor and the reach of impact assessment studies within the CGIAR by commissioning, in partnership with the Consortium, ex-post impact assessment of the development effectiveness of CGIAR investments.

The ISPC lays out its approaches and activities under the headings of Strategy and Trends, Program Evaluation, Mobilizing Science Partnerships and Impact Assessment. The proposed Work plan builds on the activities previously endorsed by the Fund Council for 2010<sup>3</sup>. Further to the Fund Council request to provide input into the immediate issues of the CGIAR Change Process, a number of proposed activities have been adjusted or have been updated according to progress and the state of the CGIAR transition process. Developments of these and new activities for 2011 are also described. There is an increased emphasis on Impact Assessment functions and a refined set of activities in relation to strategy and trends and to mobilization of science and partnerships. In 2011, evaluation activities focus on the MegaPrograms. It is assumed that other units of the CGIAR will be sufficiently developed to take on the required monitoring and evaluation processes foreseen in the description of the Change process. Activity costs, in square brackets, are given in USD. A summary can be found in Section IV, Table 2.

### **III ACTIVITIES 2011**

#### **3.1 STRATEGY AND TRENDS**

In order to fulfill these requirements, the ISPC will include in its work plans activities that relate to Assessments, Projections and Foresights (APF), to assist in sensing the major trends and threats to meeting food production needs of the future and define the research agenda that will provide the needed solution to the long term problem of hunger and poverty, nutrition and health, rural livelihood and inequity and the environmental sustainability of the food system of tomorrow (also summarized as food for people, environment for people and policies for people). In general, these activities will cover the planning and organizing of a number of workshops, think-tanks and seminars, bringing together the main players in the areas of agricultural and food system APF. The ISPC will continue to take an independent and system-level view of trends and scientific opportunities.

To complement work already in train on the Global Futures project within the CGIAR, the ISPC will work closely with the proposed Forum on Assessments, Projections and Foresights recommended at the GCARD meeting in Montpellier 2010, so as to simultaneously build on the work of several multidisciplinary international teams. However, the comparative advantage of

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<sup>3</sup> Previously, the SC/iISPC developed its workplan and budget biennially to address multi-year activities and this accords with work planning and budget cycle of its host institute, the FAO. The ISPC will continue to plan work in this way, providing annual updates at the request of the Fund Council.

the ISPC is in fairly narrowly focused foresight studies with system-wide implications and a strong scientific content; these tend to be more qualitative than quantitative.

Past exercises have considered the future of the global food and farming system based on integrated models. The APF community will continue to review in more detail existing global, regional and national agricultural models and their ability to play out alternative agricultural systems scenarios at different resolutions. The trend is to move to geo-referenced models to increase the accuracy of the scenarios, which may help in assessing not only how, but also where agriculture will be done.

However, the ISPC cannot depend exclusively on model outputs that will provide scenarios but not verifiable predictions to extract trends and make recommendations on investment priorities. Many key research issues have already been raised in numerous reports (World Development Report 2008, IAASTD, 2008, Comprehensive Assessment of water management in agriculture 2007 etc.), but there has been little quantification and prioritization so far. Models used in foresight studies can be useful to assess *ex post* the relative merits and impacts of certain approaches and the respective up-stream research topics. However, expert analysis and scouting for emerging issues that are difficult to capture in models will be an essential complementary activity. This would include expert consultation on integrating concepts of resilience, marginality and multifunctionality of agriculture into the design of food production systems. Integrated foresight studies that take a systemic view of production to consumption chains and feedbacks are also needed (e.g. Agrimonde, T21 Millennium Institute) as such models will give the full picture to research policy makers on what to expect and how to deal with it. (A future example of a foresight study could be on implications of rising energy prices on N use in agriculture. In 2011 more immediate assistance to issues emerging from the development of the CGIAR portfolio have been favored, see below).

The APF activities will be closely coordinated with the ISPC's activities in mobilizing scientific partnerships so that new or challenging areas are discussed in the spirit of drawing in the appropriate areas of new science.

In the short term, the ISPC will provide direct assistance to the CGIAR and the Consortium Board through providing commentary<sup>4</sup> on the development of the system's Strategic Results Framework (SRF). This is likely to be an evolving document as MegaPrograms have been developed in parallel with the SRF, rather than the SRF leading the program development. Currently, the Consortium Board expects to revise the SRF in an iterative fashion in two years (to 2012). The results of carefully chosen strategic studies undertaken now can be influential in assisting the choice (by the Consortium Board and Funders) of new strategic directions for the CGIAR. The ISPC will work to provide analytical studies in a gap-filling mode as issues appear in relation to quantification or important areas not encompassed by the MPs or supporting frameworks. One such area is the area of genetic resources conservation, research and policy (identified below).

The ISPC will assist the CGIAR in its research prioritization by bringing together the foremost experts from around the world to debate threats and opportunities in agricultural research, both at the disciplinary and at the integrated systems level. The ISPC will review the state of the art in

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<sup>4</sup> Indeed the SF/iISPC has offered its written advice and the ISPC Chair provided the ISPC perspectives on the SRF to the Funder's Forum in July 2010. The iISPC has also convened a workshop (June 2010) which has provided the basis for the further development of common criteria for the CGIAR's assessment of MPs (August 2010).

advancing science directed to problem solving and examine major constraints. It will also synthesize the results in order to guide the CGIAR research agenda, and commission new studies as may be needed to complement the internal capacity of the system.

### ***3.1.1 Achieving impact at scale from natural resources management (NRM) research***

The team charged with the development of the Strategic Results Framework for the new CGIAR has applied analytical procedures in the formulation of research for development priorities that might be addressed in the new CGIAR portfolio. However, the models used tend to be strong on factors directly impacting production but weak on the natural resource and social system contexts in which this production has to be achieved. Studies by the SC/SPIA so far have noted relatively low, or project-specific, impacts to NRM research conducted by the CGIAR. Current work is looking at the system impacts of agricultural innovation. To support priority setting and especially to address research needs in times of changing climates there is a need to have better understanding of entire production systems - both agricultural production and the environmental systems within which they are located. This will be fundamental to achieving impacts at scale in different systems under changed climates. Such system's understanding will be essential to achieve the SRF goals of enhancing the resilience of farming systems. This study will therefore examine the needs and implications for the CGIAR and its partners of conducting research on the NRM systems in which production occurs as a basis for achieving scalable impacts. The study will be pursued in tandem with further specific studies by SPIA of assessing environmental impacts from CGIAR research (see 3.4.1). Together these more detailed evaluations will augment the implementation of balanced approaches to NRM research in the current and future development of the SRF [*total budget 100,000, of which 80,000 required in 2011*].

### ***3.1.2 A strategic study of genetic resources research and policy directions for the CGIAR***

Building on earlier ISPC concerns (of the first SRF team report) the Consortium Board has similarly found that the important area of genetic resources conservation and use are so far inadequately dealt with in the new strategy and programs or supporting structures for the CGIAR. It is clear that the gene banks are major global and CGIAR assets - but there is uncertainty how these should be optimally utilised and financed under a program structure. However, the ISPC notes that there are three major elements to be encompassed by a System's approach to genetic resources, namely a) strategies for conservation, characterisation and information management relating to key genetic resources of importance to developing country agriculture and the appropriate use of such resources in breeding and research, b) a structured approach to research on agro-biodiversity in general, its role in CGIAR programs and in support of international efforts, c) an appropriate means for the CGIAR to have a voice on the international policy dimensions of genetic resources conservation and use and to interface with international debates and fora, as well as to guide CGIAR best practice.

At a time of change in the CGIAR, the ISPC notes the evolving role of several players: the Centers holding genetic resources in Trust, the System-wide Genetic Resources Program and the central emergence of the Global Crop Diversity Trust, the Genetic Resources Policy Committee (GRPC) and Bioversity International. There is also the Multi-Year Programme of Work (MYPOW) adopted by the FAO's Committee of Genetic Resources for Food and Agriculture which seeks to address additionally the global state of non-crop plant genetic resources (including livestock, fish and microbial genetic resources) and in which the CGIAR is an anticipated partner. This also bears on the question of the extent to which production system agro-biodiversity enters into the research remit of the CGIAR (and how this will be reflected in MPs).

Thus, at the invitation of the Consortium Board Chair, the ISPC proposes to conduct a study of genetic resources conservation, characterisation and use in the CGIAR focussing on the role and placement of existing gene banks, research on agrobiodiversity for the CGIAR and in support of global efforts, and examine the most appropriate organs to be recommended for developing policy advice for and on behalf of the CGIAR system. The ISPC and Consortium Board will draw up joint terms of reference for this study. It is expected that elements of the study would be conducted by four independent expert consultants, through interviews and reviews of existing documents. Different aspects of the review may be phased to provide early input to the Consortium Board in 2010, but the ISPC synthesis and final report could be available for CGIAR consideration early in 2011.

The subject matter for this study was undecided in the earlier plan. The choice results from an evaluation of the emerging CGIAR program portfolio and supporting platforms and where independent study may bring immediate benefits to the system as a whole. *[150,000 has been allocated overall to this activity which has been delayed awaiting the completion of a scoping study by the Consortium Board; 45,000 of the total is budgeted in 2011].*

### **3.2 MOBILIZING SCIENCE AND STRATEGIC PARTNERSHIPS**

The ISPC will facilitate a continuing dialogue with the main suppliers of international agricultural research as part of a process of continuously assessing the position of the CGIAR in a new and changing landscape of agricultural knowledge and innovation systems.

The ISPC will seek to mobilize international linkages and promote strategic partnerships in the CGIAR, partly through the existing involvement of ISPC members in those fora that bring the major research providers together. It will also convene meetings and undertake studies, underpinned by broad consultations and analyses that will lead to recommendations of the best way that the CGIAR can exploit emerging opportunities. It will disseminate information and highlight choices and options to the Consortium, and make recommendations to the Fund Council.

#### **3.2.1 *Review of Scientific Networks and Consortia***

The ISPC's role in enhancing CGIAR partnerships will be in the mobilization of opportunities for new science partnerships and in identifying and fostering organizational arrangements for the conduct of programs appropriate to CGIAR's goals. Evidence of such opportunities to learn from other international organizations came from the stakeholders contributing to the ISPC-led meeting on "Common criteria for assessing MegaPrograms". Thus the ISPC has begun by undertaking a desk study as to whether innovative international practice, or the Challenge Program or other collaborative modalities used by the CGIAR, provide appropriate organizing principles around which future CGIAR programs can be based. The ISPC will then determine whether it will conduct a more in-depth stripe review with experts external to the CGIAR that would seek to explore effective modes of organizing science and the effectiveness of existing (partnership) arrangements in the CGIAR. The stripe review would begin in late 2010 and aim to present a preliminary report to Science Forum 2011. *[The initial step is a desk study by the Secretariat; no additional costs associated with this part of the activity in 2010: The overall budget is estimated at 73,000, with 50,000 budgeted for 2011].*

#### **3.2.2 *Workshops on scientific and technical challenges***

The ISPC will undertake to plan and organize workshops on specific scientific and technical challenges that pose particularly intractable problems for developing country agriculture. The

ISPC will seek to organize these jointly with scientific organizations such as AAAS and ASA, with a view to improving opportunities for links between the CGIAR and these organizations, as well others such as AGRA and BMGF, and primarily with a view to engaging the scientific resources of the ARIs to address challenges facing developing country agriculture. In choosing workshop topics, the ISPC will seek to identify i) those that cut across the interest of several of the MegaPrograms ii) those that have a strong potential for spill-over benefits across several regions iii) fields in which there are recent scientific developments that have a strong potential for development impact and iv) areas in which the CGIAR must build more effective partnerships if it is to accelerate progress in achieving its goals. The first workshop will be designed to feed its outputs into Science Forum 2011. [30,000 will be held over from the 2010 budget to fund a workshop early in 2011. The intention is to seek co-sponsorship for this and similar events in the future].

### 3.2.3 Science Forum 2011

In its current phase of growth, the CGIAR is committed to placing its science in a global context to help address and leverage solutions to major problems in agriculture and natural resources management. As a contribution to this, the Science Council convened Science Forum 2009. Meeting the delivery-orientation of the new CGIAR will require that the system continue to develop an array of strategic partnerships in order to strengthen the impact of its work.

The overall objective of the Science Forum series is to open up debate on emerging issues amongst new potential CGIAR partners. The Science Fora address issues of interest to all Programs and Centers but that fall outside the range of existing networks and communities of practice. Science Forum 2009 brought together more than 300 scientists, donors, civil society groups and private sector representatives, to examine recent advances in six scientific domains, and to discuss arrangements that can mobilize them more effectively for development. All Centers and Challenge Programs participated. The impact of the Forum was twofold: it highlighted a cross-section of research activities and approaches that have the potential to boost sustainable agricultural production and natural resource management in the developing world, and it engaged new areas of the international scientific community in the science for development mission of the CGIAR, broadening awareness of the opportunities for complimentary research activities and partnerships. It did this at modest cost and focused on core areas of CGIAR research. The publication of a selection of peer-reviewed papers from Science Forum 2009 in a special edition of the journal *Crop Science*<sup>5</sup> is intended to disseminate the research presented at the Forum and expand the potential for partnership with the CGIAR to an even wider scientific audience. The publication was provided in time for GCARD and to inform the debates on MegaPrograms wrestling with meeting these major challenges.

*SF 2011* will further explore some of the issues that emerged from SF 2009. It will respond to a number of new developments on the agricultural research landscape, notably the emergence of concern about *the environmental impacts of achieving global food production targets*. Evidence of this concern comes from:

- Major initiatives by UNEP and several international environmental NGOs to promote “Green Economies”.
- The analysis of the IAASTD of options for more diversified, locally adapted and ecologically efficient agriculture.

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<sup>5</sup> Available free to download from our homepage <http://www.sciencecouncil.cgiar.org/> or alternatively at [https://www.crops.org/publications/cs/articles/50/Supplement\\_1/v](https://www.crops.org/publications/cs/articles/50/Supplement_1/v)

- The role of agriculture in achieving global climate change goals through “low carbon agriculture”.
- The impacts on agriculture of “peak” oil, phosphorous and nitrates.
- The potential for biotechnology to move from a few traits on major commodity crops towards a broad menu of “designer” crops.
- The general interest in several CGIAR Center strategic plans and the CBD on broadening the biodiversity of agricultural systems.
- Reversing the trend from the green revolution focus on commodity crops towards diverse locally adapted resilient and productive farming systems.
- The need to develop agricultural systems that require fewer pesticides and other non-renewable inputs.
- The likelihood that consumers will, in the future, require a greater diversity of products from agriculture including industrial raw materials and ecological services.
- A general recognition that ecological efficiency will be a major issue in future agriculture (not just in developed countries).

The ISPC is concerned that the CGIAR connections to major sectors of the global agricultural research for development (R4D) infrastructure in these areas are still not optimal. There is potential for greater engagement with the research community in BRIC countries as significant suppliers of agricultural R4D. The following considerations will be taken into account in planning SF 2011:

- The increasing role of BRIC agricultural R4D in Africa, South America and East Asia.
- The emergence of biotechnology leadership in BRIC countries.
- The experience in some BRIC countries of agricultural systems that are designed for tropical and sub-tropical conditions and that provide efficient models for smallholder systems that integrate livestock, fisheries and arable crops.
- The increase in the range and quality of scientific publications in BRIC countries and languages and the lack of access to this literature by existing CGIAR bodies.

The ISPC has already held exploratory talks with representatives of agricultural research bodies in BRIC countries and determined that there is interest in hosting and co-sponsoring SF 2011 in one of those countries. The model proposed is:

- To secure agreement from a BRIC country to host SF 2011 and co-sponsor the event.
- Identification of 6 (or fewer) sub-themes based upon the issues listed above to provide the focus of parallel streams at the Forum.
- Identify teams of authors from the host country, CGIAR bodies and ARIs to prepare background papers for the parallel sessions – the aim will be to have a lead paper and 2-4 supporting papers for each stream.
- Papers will be peer reviewed in advance of SF 2011.
- Identify a journal which will allocate a special issue to the papers presented at SF11 – and explore the possibility that papers might be published both in English and in the language of the BRIC host under a co-publishing arrangement.
- The papers will be revised on the basis of the debates at SF11 and submitted for publication subject again to a peer review process.
- The ISPC will provide the outcomes to the next GCARD and will further expand the communities of practice in support of CGIAR goals and programs.

ISPC will seek diversity in participation in SF 2011 with approximately 30% of participants from amongst the active scientists in CGIAR bodies, 20% from the host country, 20% from ARIs and 20% from NARS and civil society organizations in CGIAR client countries and 10% from civil

society globally. SF 2011 will be slightly longer than SF09 – with three full days allocated for the scientific program – it is anticipated that, as at SF09, various CGIAR bodies will wish to organize side events particularly to explore expanded partnerships with scientists from the host country.

The ISPC will begin preparatory work for Science Forum 2011 (SF11) in the third quarter of 2010. The findings of the ISPC study on integrative natural resources management research and impact scale (3.1.2) will also be featured. It is anticipated that, as with SF09, the ISPC will secure a co-sponsor(s) to share the costs. [*The ISPC budget will be 150,000; 130,000 in 2011*].

### **3.3 INDEPENDENT PROGRAM REVIEW**

The major review role of the ISPC in 2011 will be the review of MegaPrograms (started in 2010). The ISPC will contribute its independent feedback to the Fund Council on the science quality and relevance of proposed MegaPrograms, the quality, rigor and validity of the underlying analysis/assumptions on which priorities and activities are proposed, and the potential for proposed activities to contribute towards CGIAR goals. There will be a continuing need to provide inputs to the development of performance indicators. However, no other program reviewing or contributions to the earlier PMS measurement exercise are anticipated for 2011.

#### **3.3.1 Ex ante reviews of Mega Programs**

The ISPC is engaged in the conduct of ex ante assessments of MegaProgram proposals in 2010-2011 engaging external experts. In 2010, the ISPC has conducted a design workshop with stakeholders and provided leadership in the design of common criteria to guide the development and assessment of MPs by the different bodies of the CGIAR. Each body will develop Terms of Reference for the different purposes (of design and finalization of proposals, review, funding review, monitoring and evaluation) by the responsible bodies.

The review process makes best use of the common criteria and prior reviews conducted in the process of proposal development and other inputs by the Consortium whilst maintaining the independence of the ISPC and its advice. The workshop also provided ideas that can be used for defining performance and success indicators for the MPs.

The MegaPrograms are being developed as large multi-component and multi-partner R for D programs. Selection and assessment of such MegaProgram proposals therefore differs considerably from assessment of previous CGIAR programs (although there are elements of similarity with the selection of Challenge Programs that can be helpful in the process). The size (generally teams of six experts) and diversity of the selection panels will depend to some extent on the characteristics of each MegaProgram. It is currently foreseen that there will be 15 MPs and the ISPC has provided its advice to the Fund Council on the early, fast tracked MPs formally proposed by the Consortium Board. To date these have included the GRiSP, a global program for rice research; and the proposal for a program on Climate Change, Agriculture and Food Security. It is expected that the review process will continue at least through 2011. [*Because of the large number of MPs to be assessed, external consultant costs have been anticipated at 200,000 spread equally over 2010 and 2011*].

### **3.4 INDEPENDENT IMPACT ASSESSMENT**

Impact assessment (IA) in the CGIAR has moved beyond traditional economic rate of return studies. As well as being reassured that investing in the CGIAR pays handsomely, donors are most interested in how the CGIAR contributes to global development goals, as defined in the MDGs: poverty reduction, food security, gender equality, and environmental sustainability. The

Standing Panel on Impact Assessment (SPIA) has recognized the need to push assessments of impact further down the impact pathway toward these goals. Recently completed and current studies aim to document the impact of CGIAR research on the environment -- both positive and negative impacts, and an earlier attempt was made to examine how CGIAR research impacts on poverty (e.g., IFPRI-led case studies). More work needs to be done in those areas, as well as addressing food security, gender and social impacts more generally.

Accordingly, SPIA intends to focus its work over the next three years around filling critical gaps in IA, including work that will improve methods for undertaking studies on the impact of research on poverty reduction, food security, gender equality, and environmental sustainability. It also intends to push out the knowledge frontier of IA into more difficult areas that have not been subject to IA, e.g., genetic resources, livestock and irrigation management. Finally, a challenge for the CGIAR is to maintain its flagship areas of IA, especially in crop germplasm improvement, updating previous information and measuring impacts that are of major interest to donors.

SPIA has reflected on its traditional business model of collaboration with Centers, i.e., providing intellectual guidance and financial support to selected Center *ex-post* IA case studies focused on a particular impact or research-related area. SPIA has concerns about the quality of some SPIA-coordinated Center IA case studies and the limited capacity within Centers to successfully undertake these studies. These concerns were reinforced by a key finding of the recent Social Science Stripe Review which highlighted the weak capacity in the Centers for conducting IA, as reflected in many studies of low quality and credibility. The same report, however, sees an important continuing role for SPIA and recognizes that the Panel is significantly under-resourced to undertake a comprehensive agenda.

In view of these assessments, SPIA is adopting a new model of operation. SPIA will commission (or undertake itself) the primary *ex post* IAs on behalf of the donors. Centers, however, would still be critical in providing and facilitating the collection of the relevant data, information and preliminary analyses for these externally commissioned independent IAs. Increasingly, with the commissioning of the poverty and food security impact indicators studies, the crop genetic diversity study and a legume improvement impact study (see below) in 2011, SPIA expects to adopt this new mode of operation, overseeing the conduct of independent IAs of CGIAR research. The expanded activities proposed under this new business model lead to an increase in budget request for the work of SPIA in 2011 as well as increasing the overall activity budget of the ISPC.

### **3.4.1 Deepening impact assessments of CGIAR research – measuring environmental impacts**

The CGIAR has done relatively little to document environmental impacts resulting from its R&D initiatives that affect the soil, water, wildlife and biodiversity of the local, downstream and global landscapes and environments. Efforts to document these 'externalities' have been impeded by difficulties of attribution of the impacts to research, data constraints, lack of appropriate indicators for tracking environmental impacts, and valuation issues for costs and benefits not priced in the market. To build up an inventory of credible environmental impact assessments (EIA) and develop appropriate methods for measurement and valuation, SPIA is currently providing external technical guidance and support to five CGIAR-research related EIA case studies (CIAT, CIP, ICARDA, ICRAF and IWMI) plus one NARS (ICAR in Delhi). The current case study exercise, which is supplemented by a collection of conceptual and synthesis type analyses authored or commissioned by SPIA, will be helpful in identifying selective examples of positive and negative environmental impacts from CGIAR related research. But this still leaves

open the big question as to how much land has been ‘saved’ (vs. brought into new cultivation) by the introduction of new, higher yielding, cost-reducing CGIAR technologies. In 2011, SPIA intends to commission one or possibly two empirical studies for CGIAR mandate crops in order to contribute new evidence to this important debate, focusing on cases where there has been large-scale adoption of CGIAR-led improved technologies to assess the extent of: a) land-saving / incentives for clearing; b) negative externalities and c) positive environmental impacts, and to combine these in a trade-off analysis. [*Total cost 140,000, of which 40,000 budgeted for 2011*].

### ***3.4.2 Deepening impact assessments of CGIAR research – measuring social impacts: poverty, food security and gender equity***

To deepen the assessments of impacts most closely related to CGIAR goals, several critical dimensions of ‘social impact’ will be investigated over the next few years, viz: a) impacts of CGIAR research on poverty reduction; b) impacts of CGIAR research on food security; and c) impacts of CGIAR research on gender equity. In regard to poverty reduction, there has been a significant improvement in the availability of data across three important classes of methods for assessing the poverty impacts from agricultural research: i) Micro-level analysis with household data sets; ii) Spatial maps of poverty at sub-national level; and iii) Macro-level Computable General Equilibrium (CGE) models.

Following development of a scoping paper in 2010 that will document these methodological developments, and a workshop in October 2010 with global experts from advanced research institutes (ARIs), a second phase will be launched in 2011. It is expected that this will run over two years (2011-12) during which time SPIA will try to link the three approaches for analysis of major CGIAR interventions. SPIA will create links with the on-going work streams on impacts of improved crop varietal adoption in SSA (Item 3.4.3), and with the legume stripe review (Item 3.4.4) to give them an explicit poverty focus. However, additional empirical work in this area will also be commissioned on a competitive basis.

The strong likelihood of a grant of USD 500,000 from USAID to IFPRI in 2010-2011 provides a mechanism through which SPIA will provide oversight to new collaborative work among ARIs and CGIAR Centers in this area. In particular, it is envisaged that part of this grant will be devoted to a process of simulating counterfactuals to the incremental increases in agricultural productivity observed over the last 20 years. This will likely be done using CGE/trade models to examine the question of what would have happened to food prices and other intermediate outcomes (e.g., land use changes) in the absence of these productivity gains. The goal would then be to combine this analysis with micro-level analyses of the impact of productivity changes on poverty, food security and nutrition. [*Continuing activity; total budget 220,000; of which 150,000 in 2011*].

### ***3.4.3 Crop germplasm improvement: updating databases and analyses of varietal adoption and assessment of economic, social and environmental impacts***

Despite the considerable amount of IA of crop improvement research during the 1980s and 90s that proved essential in documenting widespread impacts of the CGIAR’s investments, relatively little effort was made to sustain and update that work. Even the Evenson and Gollin study (2003), the most comprehensive assessment to-date, used data from the Centers up to 1997, and some even earlier. If crop improvement research is considered the major success story of the CGIAR, it is essential to update that study. Basic data on adoption of improved varieties should be collected on a regular and systematic basis and made widely available. SPIA is currently providing oversight and intellectual support for a 3-year study on “Tracking Varietal Change and

Assessing the Impact of Crop Genetic Improvement Research in Sub-Saharan Africa”, led institutionally by Bioversity on behalf of the Centers. There are three major components to the project: widening understanding of genetic improvement; deepening understanding of varietal adoption; and gaining a comprehensive and deeper understanding of the impact of varietal change. Three SPIA members sit on the Project Steering Committee (PSC), along with two Bioversity staff members. No funds from the project grant are going to SPIA. However, an operational budget is required to support SPIA’s work on the PSC (travel & per diem). A separate study covers the impact of varietal adoption and impact in South Asia which SPIA is also contributing to. [Total budget 60,000; of which 20,000 in 2011].

#### **3.4.4 Impact of legume research in the CGIAR**

As part of its new operational model, SPIA will commission Systemwide *ex-post* impact assessments in broad thematic areas of CGIAR research over the next three years which to-date have not been evaluated but for which anecdotal evidence suggests considerable impact, e.g., legume improvement research, livestock management research, irrigation management. In 2011, SPIA will commission an external team to assess the cumulative impacts of legume improvement research across the system to better understand and document impacts of CGIAR research on pigeonpea, chickpea, lentil, lathyrus, common bean, soybean and cowpea in terms of their economic, social and environmental impacts in specific regions of the world. Legumes are likely to show especially important impacts on gender equity, nutrition, and sustainable soil management. While the external team will be leading the impact assessment research, analysis and write-up effort, it is anticipated that scientists at ICARDA, ICRISAT, CIAT and IITA would play a key role here interacting closely with the team, in particular, contributing critical adoption, yield and price data and, in some cases, preliminary analyses [total budget 395,000 spread over 2011/2012; 205,000 required in 2011].

#### **3.4.5 CGIAR influence on global policy dialogue**

There are areas of CGIAR research and research-related activities, e.g., policy research and training & capacity building, which do not easily lend themselves to documenting impacts in terms of CGIAR goals of poverty reduction, enhancing food security and improving environmental sustainability. Since the CGIAR sees an increasing role in influencing global policy dialogue, and some Centers devote considerable resources to these efforts, it is timely to review the impacts of recent efforts. At least one study will be undertaken in 2011 to assess the influence that CGIAR policy research has had in key areas of international dialogue, e.g., REDD, getting agriculture back on the agenda, managing global food security, water scarcity. Robust methods of measuring influence based on citations and key informant interviews will be employed to document this influence [Planning will begin in 2011 with an expenditure of 50,000 required in 2012].

#### **3.4.6 Impact assessment of CGIAR research and research-related investments in collection, conservation, characterization and use of germplasm**

There remain serious gaps in assessing impacts of particular, traditional activities within the CGIAR portfolio. One such area is ‘germplasm collection, conservation, characterization and evaluation’ (GCCCE), an area of investment that, while initially small, now represents anywhere between 10-15% of the total CGIAR budget. To-date, there have been few assessments of its impact. The aim of this study is to compile the documentable evidence of the impacts of GCCCE related activities on CGIAR goals. In addition to quantifying in physical terms, the amount of germplasm collected, conserved, characterized and evaluated by CGIAR Centers, the study

would focus on estimating the value of the stored material using concepts like existence values, inter-generational equity and the like, as well as their contemporary value as sources of genetic material for breeding and biotechnology. A scoping study conducted in 2010 is under review to determine whether there is value in undertaking a more comprehensive analysis (and case studies) in 2011. [*Total cost: 82,000; of which 60,000 in 2011*].

### **3.4.7 Impact Assessment: Communication and Networking**

Following a major overhaul of the CGIAR impact website (<http://impact.cgiar.org>) in 2010, the focus in 2011 will be to keep the site maintained and updated with news and publications, ensuring timely, useful information and creating links to similar units to enhance visibility. SPIA members will also continue to create links to and interact with the IA and evaluation professional community (e.g. through conference participation). Two to five new Impact Briefs are scheduled for publication in 2011, based primarily on studies by CGIAR Centers [*35,000 in 2011*].

### **3.4.8 International Conference on Impact Assessment**

SPIA last organized an international conference on the impacts of agricultural R&D in 2002. That conference, co-organized with CIMMYT, brought together over 150 people including representatives from CGIAR Centers, NARS organizations, public and private universities, NGOs, the media and staff from various donor, bank and foundation groups, all of whom had significant input into the deliberations. In addition to highlighting experiences and case studies of impact measurement, the conference resulted in publications of papers in special issues of three internationally refereed journals. Impact assessment of agricultural R&D has made dramatic progress since 2002<sup>6</sup>, with new studies in previously under-addressed research areas (NRM, policy) and approaches addressing more difficult-to-measure impact areas (environment). Thus, in partnership with a CGIAR Center (and possibly an ARI) SPIA intends to organize a major international conference, to engage the wider outside community of those interested in *ex-post* IA and to take stock of the challenges ahead. The initial expectation is that the conference will focus on advances in new methods and approaches for measuring the economic, social and environmental impacts (*ex post*) of agricultural research. Selected external speakers and collaborators from other projects would be encouraged to participate. [*Planning will begin in late 2011 with an expected budget of 100,000 in 2012*].

## **IV. BUDGET**

The budget for the ISPC provides for three general functions: support for the ISPC Chair and Members to conduct the ISPC's formal meetings and provide representation to CGIAR and other fora, the cost of the ISPC's technical operations and the support costs of the full-time Secretariat.

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<sup>6</sup> Since the 2002 conference, SPIA has periodically organized and provided limited financial support for joint meetings of the Center Impact Assessment Focal Points (IAFPs) and SPIA, and these too have been perceived to be highly beneficial in sharing impact assessment experiences across the Centers and in addressing some challenging IA related topics. In addition, SPIA has occasionally brought together selected IAFPs and other experts for presentations and sessions at international conferences (e.g., China in 2009, the Czech Republic in 2010) where epIA work of CGIAR has been presented, shared and discussed with others involved in research, evaluation and assessment.

In 2010, the interim ISPC was planned to operate with a Chair and six Members<sup>7</sup> Additionally, there are three continuing Panel members who contribute to specific aspects of the Council's work (two associated specifically with SPIA, the other now appointed as Panel Member at Large), one less than in 2009. Ad hoc calls on SC Members' time have been increasing in recent years and these, and the need to keep abreast of international opportunities for mobilizing science under the new mandate, lead to a slight increase in projected ISPC running costs.

The ISPC Work plan for 2010 encompassed continuing, transitional and new activities (and was developed on a biennial basis, 2010/2011, in light of the longer term execution of the ISPC mandate). Whilst the total activity budget was the same as presented earlier, variations came in three areas: up to USD 200,000 was budgeted for the assessment of 15 MPs (compared with the 7 proposals expected earlier over two years). Science foresight and mobilization of science in relation to the change process were prioritized, and the increase in Program Evaluation was accommodated by taking some activities (e.g. an evaluation of stakeholder perceptions into core functions and by trimming or delaying the start of some activities in foresight and mobilizing science). A previous activity on incentives for scientific mobility and partnerships was withdrawn. A renewed focus on impact assessment activities was maintained.

In 2011, the technical activity costs provide new funds to launch Science Forum 2011. However, the bulk of the requested increase in 2011 is for SPIA (increasing from USD 335,000 in 2010 to 510,000 in 2011) to conduct a wider suite of activities, and to conduct these with greater independence from the Centers. Indeed 3 new activities that will start or begin planning in 2011 (for a comprehensive study of the CGIAR's work in legume research, a global conference on impact assessment, and an assessment of the CGIAR's impacts on the global policy dialogue) and these are listed to give an idea of the multi-year scope of activities that will need to be supported in the future (i.e. in the 2012-13 biennium) although three of these will not be budgeted activities in 2011 (asterisks in Table 2). SPIA is also managing a study to update knowledge of the impacts of genetic enhancement research in the CGIAR, including impacts in Africa. A major external grant to Bioversity International on behalf of the collaborating Centers of the CGIAR is supporting this study. Funds awarded to SPIA meet the management and analytical assessment for this study which is not reflected in the current SPIA budget - although the outcomes of the study will be analyzed and presented by SPIA as part of its work. In the past, many of the SC's studies required substantial calls on data and staff time from Centers. Conversely, the reduction in the traditional M&E activities conducted by the former Science Council are not immediately reflected in budgetary savings since the major costs (of EPMRs etc) were born by the Centers or Programs under review. For instance, the external review of the SSA-CP currently under way and expected to be completed in 2010 is expected to cost USD 140,000, which is provided by the program and did not appear against the ISPC's Program Evaluation activities in 2010.

The Secretariat was understaffed in 2010 due to non-replacement of professional positions (Director for 7 months and one P3 position). The ISPC also moved to a slightly smaller support staff in the secretariat in 2010. The professional posts are expected to be filled in late 2010/11. Final precision of the ISPC activities, adjustment of ISPC membership, particularly to encompass skills relevant to the new ISPC mandate (such as, as a hypothetical example, in public-private science partnerships and organizational analysis) may be paralleled by corresponding

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<sup>7</sup> However, due to death and resignations, the interim ISPC in 2010 was maintained as a Chair and four members (including the Chair of SPIA) awaiting the reformulation of membership from January 2011.

adjustments in the ISPC Secretariat in the future. Any future changes following the election of new Membership will be made at the discretion of the incoming Chair.

Table 1. Proposed budget for the ISPC in 2011 (compared with 2010 and the SC budget of 2009)

Contributions	2009	2010	2011
FAO*	1,286	1,358	1,358
WORLD BANK	786	786	
CGIAR FUND	1,500	1,428	2,492
Total	3,572	3,572	3,850
Expenditures			
COUNCIL			
Honoraria (Chair and Office)	317	317	317
Honoraria (Council & Panel Members)	250	260	263
Travel & Per Diem (Chair, Council & Panel Members)	225	225	225
Sub-Total ISPC Honoraria, Travel and Per Diem	792	802	805
[P& S Portfolio] Strategy and Trends	100	125	125
[MS Portfolio] Mobilizing Linkages/Partnerships	200	100	180
[SPME] Independent Program Review	100	182	100
[SPIA] Standing Panel Impact Assessment	143	335	510
Sub-Total ISPC Technical Activities	543	742	915
Sub-Total Council	1,335	1,544	1,720
SECRETARIAT			
Professional and Administrative Staff salaries	1,887	1,775	1,875
Travel & Per Diem	120	100	100
Consultants & Research Assistants	115	63	65
Misc. Operating Expenses	115	90	90
Sub-Total Secretariat	2,237	2,028	2,130
TOTAL COUNCIL & SECRETARIAT	3,572	3,572	3,850
DIFFERENCE (CONTRIBUTIONS - EXPENDITURES)	0	0	0
<p>Notes:            Figures for 2009 reported as per previous Science Council Work plan &amp; budget [square brackets indicate the title of activities under the former structure].            * Shows FAO funding already declared for ISPC [at USD 2,717 for the biennium 2010-2011] although in 2011 FAO earmarked funds are expected to be contributed through the CGIAR Fund.            The requested CGIAR Fund support is the balance of the total for 2011 minus the funds already committed by the FAO.            This table does not include external funds (Bill and Melinda Gates Foundation).</p>			

**Table 2. Breakdown of Proposed Technical Activities for the ISPC in 2011**

Areas of responsibility	Function/activity	Title	\$'000 2011 <sup>s</sup>
Strategy and Trends	study	3.1.1 Achieving impacts at scale from NRM research	80
	study	3.1.2 Prospective study contributing to MP/SRF updating	45
		<b>Foresight and strategy Total</b>	<b>125</b>
Mobilizing Linkages/ Partnerships	study	3.2.1 Review of scientific networks and consortia	50
	core function/ meeting	3.2.2 Workshop on scientific and technical challenges	0*
	core function/ meeting	3.2.3 Science Forum 2011	130
		<b>Mobilizing Linkages/ partnerships Total</b>	<b>180</b>
Independent Program Review	core function	3.3.1 Ex Ante review of Mega-programs	100
		<b>Independent Program Review Total</b>	<b>100</b>
Impact assessment	study	3.4.1 Measuring Environmental Impacts	40
	study	3.4.2 Measuring Social impacts	150
	study	3.4.3 Crop Genetic Improvement impact update study (DIVA) – steering cmt. meetings & related tasks	20
	study	3.4.4 Impact of legume research in the CGIAR	205
	study	3.4.5 CGIAR influence on global policy dialogue	0**
	study	3.4.6 Impact assessment of CGIAR investments in collection, conservation, characterization and use of germplasm	60
	core function	3.4.7 IA Communication and networking	35
	core function/ meeting	3.4.8 International Conference on Impact Assessment	0***
		<b>Impact Assessment Total</b>	<b>510</b>
		<b>Sub-Total ISPC Technical activities</b>	<b>915</b>
<p>Notes:            Several activities run over two years, e.g. the continuing review process for MegaPrograms; only 2011 budgeted figures for these activities are shown            * Item 3.2.2 was not carried out in 2010 and will be funded from carry over of USD30,000            The Science Forum is expected to be co-funded            ** Item 3.4.5 will begin planning in 2011 with the budget for the study appearing in 2012            *** Item 3.4.8 will begin planning in late 2011 with the budget for the meeting appearing in 2012</p>			

<sup>s</sup> Estimates based on projected activities (proportion of costs per activity only shown for 2011. In some cases total activity costs are greater, spread over two or more years).

## ANNEX I

### **Independent Science and Partnership Council Roles and Responsibilities**

The Independent Science and Partnership Council (ISPC) will be a standing panel of world-class scientific experts. The Council's overarching purpose is to provide independent advice and expertise to the funders of the CGIAR through services to the Fund Council and the Funders Forum. It will also serve as an intellectual bridge between the funders and the Consortium of CGIAR Centers.

The ISPC plays a vital role for the CGIAR to strengthen science, to improve productivity and quality of science, to catalyze the partnering of CGIAR science with other institutions of international agricultural research and to support the important role of the CGIAR as honest broker in various global debates. In providing its advice, the ISPC will ensure alignment of programs with the Strategy and Results Framework. As part of a learning organization, the ISPC will capitalize on previous evaluations and seek to provide its learning to evaluations being done by the peer review process and eventual ex-post evaluation.

ISPC's specific tasks will be:

1. Commission and oversee evaluations of the scientific quality, relevance, partnership arrangements and likely development effectiveness of the investment proposals submitted by the Consortium to the Fund Council and make recommendations concerning their investment worthiness.
2. In undertaking the role described in 1 above, the ISPC will also provide feedback and guidance to the Consortium on any areas of concern regarding the quality of the proposed research and partnership arrangements contained in submitted investment proposals and on any deficiencies in the ex ante impact assessments provided by the Consortium in support of them.
3. Provide the Fund Council and the Funders Forum with foresight advice on trends and emerging issues, as well as potential strategies of addressing them related to the CGIAR Strategy and Results Framework. In undertaking this role the ISPC will act as commissioner and coordinator of any required foresight studies, drawing on expertise within the Consortium and beyond, as appropriate, to undertake them.
4. To complement the GCARD process, in consultation and partnership with the Consortium and GFAR, convene periodic high-level scientific dialogues on high priority issues that will inform the scientific deliberations among CGIAR scientists and their research partners and help catalyze partnerships of the CGIAR with other global science communities.
5. Improve strategic investment decisions and help increase the rigor and the reach of impact assessment studies within the CGIAR by commissioning, in partnership with the Consortium, ex-post impact assessment of the development effectiveness of CGIAR investments.

The evaluation of the Mega Programs and system review will be undertaken by an independent evaluation arrangement, which will in turn avail itself of the lessons learnt from the ISPC's work.

6. Provide the Fund Council with independent advice on other matters upon request.