Workplan & Budget 2013
for the CGIAR’s Independent Science and Partnership Council

Executive Summary

The ISPC presents its 2013 Work Plan and Budget for the consideration of the Fund Council.

In the past two years, the ISPC has been instrumental to the CGIAR reform process in provision of reviews of the initial CGIAR Research Programs (CRPs) and in provision of advice for the Consortium Action Plan for revision of the CGIAR’s Strategy and Results Framework (SRF). We have continued planning for a new Science Forum in 2013 whilst publishing summary and specific scientific outcomes of the 2011 Science Forum. The 2011 Science Forum outcomes on sustainability science also contributed to the Report and recommendations of an ISPC-led stripe review of Natural Resources Management Research in the CGIAR which will be shared at GCARD 2012 and in other donor fora. All of these documents are available on the ISPC website (http://www.sciencecouncil.cgiar.org/). The ISPC’s standing Panel on Impact Assessment (SPIA) has remained responsive to donor requests to assist in enhancement of impact assessment at the system level and a new initiative is reported.

In 2013, highlights of the ISPC WorkPlan will include an emphasis on strategy elements to support the Consortium development of a new SRF and required system-level elements to enhance development of the CRP portfolio framework (such as strategic and efficiency approaches to the handling of biotechnology and definitional work on indicators, metrics and data also to be pursued with the new Independent Evaluation Arrangement). Work in program review is expected to reel back to a level that allows engagement with the Consortium and response to requests of the Fund Council, and to conduct specific study of the research /development interface for the delivery of intermediate development outcomes and the SLOs. The ISPC will lead and coordinate the holding of the CGIAR 2013 Science Forum which will focus on mobilizing scientific communities and linkages around the subject of Nutrition and health outcomes: targets for agricultural research. The event will be co-hosted with the German
ministry BMZ in Bonn, September 2013, and is designed to underpin Consortium efforts in addressing the System level objective of improved human nutrition. SPIA activities in determination of system-level impacts will continue and are augmented in a new potential, multi-donor funded arrangement to strengthen impact assessment in the CGIAR system. A new SPIA Chair was appointed. The Fund Office, Consortium Office and Board and the IEA Director have become regular observers/contributors to the biannual meetings of the ISPC.

In 2013, the regular turnover of ISPC Membership will begin with replacement of one Member. SPIA will adopt a flexible means of gaining expert support for the initiation of a new three-year phase to enhance impact assessment, and the Secretariat will be fully staffed to support ISPC roles in strategy and scientific quality, mobilizing science and impact assessments of the CGIAR. 2013 will be the first full year of operation of the IEA, which will also be hosted at FAO, and the two independent offices (the ISPC Secretariat and the IEA) will examine and strive towards cost effective management.

Total budget requested for support of the ISPC and its workplan in 2013 is USD3,754,000 of which USD2,430,000 is requested from the CGIAR Fund.

Introduction

The principle purpose of the Independent Science and Partnership Council (ISPC) is to provide independent advice and expertise to the CGIAR’s Fund Council and Funder’s Forum and to serve as an intellectual bridge between the Funders and the Consortium of Centers.

The Reform of the CGIAR is advancing both programmatically and in terms of structure. The ISPC has been instrumental in the review of the initial portfolio of CGIAR Research Programs (CRPs) and in the provision of advice for the Consortium Action Plan for the revision of the CGIAR’s Strategy and Results Framework (SRF). The ISPC continues to study future trends likely to affect CGIAR planning with specific relevance to the CGIAR’s ability to deliver on the target System Level Outcomes (SLOs) as well as acting as an honest broker for more immediate strategic issues in science. It exercises its role in the Mobilization of science through convening the Science Forum, bringing scientific communities external to the CGIAR to discuss and form potential partnerships in areas of new interest and emerging science to support work towards the SLOs. The Council conducts system-level, ex post impact assessment of the research investment in particular areas through its Standing Panel on Impact Assessment (SPIA). The ISPC/SPIA is responding to the Funder’s call for increased capacity and scope for Impact Assessment across the CGIAR as a whole and this is reported in this workplan.
It is generally understood that the first round of CRP proposals focus at a strategic, rather than operational level, whereby existing multi-Center research portfolios are clustered together to achieve impact on the SLOs. They represent a shift away from Center-focused research to global initiatives and will require strategic development and evolution based on a new research-for-development emphasis. While this is generally apparent, it applies in particular to the CRP1 series focused on systems research for regional impact. The ISPC stands ready to assist the Fund Council and Consortium as they lead these adjustments.

The ISPC therefore continues to interpret its major role as identifying strategic issues central to the development of a future SRF and the prioritization of CGIAR activities. It will analyze and provide advice on the most effective implementation of activities in a global context, encouraging the necessary partners, data collection and the development of methods and metrics to help the Consortium orient and prioritize the SRF and CRP activities. This will require forward-looking strategic studies, as well as examination of issues that arise as the programs are implemented over the next four years, and strategies and activities are aligned beyond the current aggregate approach. The ISPC’s focus will be on the longer-term relevance and science quality of the portfolio and to keep abreast of what new science perspectives are available from global partners. This Work Plan for 2013 therefore identifies both longer term and more immediate issues in which the independent stance of the ISPC makes it appropriate for the Council to play a key convening or synthetic role. The intention is to use the ISPC’s experience to align the mobilization of external partner inputs with these studies and the CGIAR portfolio more generally.

**Mode of Action**

The ISPC is a Council comprised of a Chair and five members with the Chair of SPIA as an *ex officio* member who nevertheless contributes integrally to the discussions and decisions of the Council. The Council meets twice a year in face to face meetings and conducts the majority of its work virtually. The current Chair and full membership of the ISPC was elected to start in January 2011 and 2013 sees the first year of a rotation plan of the membership. A new Chair of SPIA took up duties in mid-2012. SPIA intends to move from the model in which it was supported by two additional Panel members appointed for renewable two year terms to a small group of Associate members under flexible arrangements according to studies being undertaken. Other ISPC activities are conducted by the Council acting as a whole, augmented by the commissioning of external expertise as required (e.g. as expert lead consultants, for panels, or program or document review).

The work of the Council is supported and managed by a full time Secretariat hosted at the FAO in Rome. The Secretariat is responsible for implementing the WorkPlan by managing studies, review teams and Council meetings and conducting analysis and contributing to ISPC reports.
under the guidance of the Council. In 2012, the approved structure of the Secretariat was a Director (D1), three senior professionals (P5), three mid-level professionals (a P4 and 2 P3-level professionals) and three support staff. The report of the activities and outputs of the ISPC in 2012 is provided in Annex 1, and will be more fully described in the score-card report in March 2013.

The Independent Evaluation Arrangement is coming into being as an independent entity (also co-hosted in FAO as is the ISPC Secretariat) and there will be a need in 2013 to work out interactive and cost effective modus operandi for both CGIAR system units.

Work Plan

The ISPC interprets its mission to the CGIAR through four major avenues of work: Strategy and trends, Mobilizing science, Independent Program review and Impact assessment. These are described below in terms of the 2013 Workplan. Maintaining its independent stance and within its remit of providing advice on science quality, the ISPC tries to remain responsive to other requests from the Fund Council and to the needs of the Consortium and other units of the CGIAR as they arise and as resources permit.

Strategy and Trends

The intent for the ISPC is to provide advice and assistance to the Consortium (and the CGIAR at large) in the planning of the SRF including brokering studies of the future context for research, to provide advice on scientific matters that are critical to the systematic development of a portfolio of research programs, and to identify aspects of science where additional scientific input may be required (either from the view of new technologies or approach, partnerships or in efficiencies of operation given advances in world science). See Box

Box 1: ISPC’s attitude to foresight.

The ISPC has considered where its comparative advantage in foresight analysis sits in relation to the many other foresight initiatives within the international agricultural research community. The Consortium has principal responsibility for the development of the CGIAR’s SRF. It therefore needs a mechanism whereby it can call upon resources (from continuing institutional programs, global projects, CRP and Center data etc.) periodically and to commission syntheses for its own use. Moreover, CRP2 has a specific research thrust in foresight analysis that would support Consortium-level strategic planning and prioritization.

The global foresight hub proposed and nurtured by GFAR has the potential to be a community of practice amongst a number of institutes and programs conducting an array of foresight studies. It would
be an important source of information to turn to for scenario-building and for cross checking amongst stakeholder perspectives. It provides the opportunity for NARS to access global data and best practice methods for their own use. The CGIAR can be party to such a group and can share information as a global public good.

Other donor initiatives in foresight have organized priority setting assessments (e.g. to validate their investment in the CGIAR in the same way that they require objective means to monitor programs and increase the capacity and frequency of impact assessments). These foresight initiatives should themselves be seen as contributory information (as with the global foresight hub). A number of foresight studies have also been performed by national agricultural research institutions (e.g. CIRAD, ICAR with the goal of positioning and prioritizing their own research agenda most effectively.

The ISPC sees its comparative advantage and responsibility in foresight as to contribute to the best available perspectives and data being incorporated into CGIAR priority setting, and to help distil a research agenda from the possible entry points for agricultural research for development. Its current efforts are to assist the Consortium in its revision of a new strategy and priorities for research (the SRF and room for review of CRP fit). This involves study and review and the maintenance of an independent and multidisciplinary stance to subject matter rather than modeling. It may be called on to evaluate these several foresight outputs and, for instance, to provide balancing studies if methods or sector analyses predominate which cannot deal adequately with areas of activity (e.g. forestry) included in the CGIAR portfolio. The goal is to help assure the Fund Council that the methods, approaches and individual components contributing to foresight (trends and future scenarios) used by the CGIAR are subject to quality control and/or tested against alternative perspectives. It can advise the FC and Consortium where long term data might be required that would be developed by Consortium-commissioned work, perhaps with other agencies.

In 2012, the ISPC provided the Consortium with a white paper on needed aspects of priority setting to help underpin the action plan for SRF renewal. The ISPC has also provided feedback to the Consortium on this continuing process. A study on farm size and the influence of urbanization on demand for food will be developed as these two elements form critical aspects of the context for the development of the new SRF. The ISPC will have brokered a CGIAR and expert meeting on the scientific issues underpinning the relevance and opportunities for conservation agriculture to support CGIAR SLOs, and to help forge a more unified view of this important area of NRM research in the CGIAR.

In 2013, the ISPC will conclude and publish the summaries and scientific papers from these studies. In consultation with the Consortium and the IEA, the ISPC proposes two new studies that respond to the independent role and science quality review role of the CGIAR supporting future program development.
(i) **A strategic study of biotechnology in the CGIAR: returns to investment, issues and best practice**

Most CGIAR Centers have in the past two decades built biotechnology capacity and gradually increased investment in biotechnology as part of the activities related to plant breeding, genetic resources and animal and fish research, including policy. Biotechnology has been seen as holding tremendous potential for speeding up breeding and targeting specific traits, addressing problems in crop and animal research that have been previously intractable and aiding research and discovery on the more fundamental areas of genetics, cell biology and metabolism. In research prioritization and reporting, however, biotechnology has been considered as a set of tools rather than a defined component of the portfolio. Subsequently the CGIAR has not had discussions on the focus and most effective approaches and organization of the research (including bioinformatics, centralization, capacity building and policy), level of investment or expected outputs and outcomes from this research component. Instead, individual Centers have embraced biotechnology according to their mission and targets, and as influenced by funding opportunities and partnerships. The need to integrate activities across Centers for better synergy provides justification for this ISPC effort in 2013.

At the same time, looking at the global scene, there have been multiple and rapid discoveries on gene functions and genomics in organisms including agriculturally important species and model organisms. The CGIAR Centers have kept abreast of these developments and occasionally been among leaders in their application (e.g. on rice genomics). Several technologies have become routine, for instance use of double haploids and genetic markers for many crops. All Centers dealing with commodities engage in genetic engineering either as a research tool or for developing products.

Biotechnology is an area where, to a large extent, supply of research outputs determines the strategically most promising investments. It is also an area where costs are relatively high (although falling for many analytical procedures) and research risks can be very high regarding finding solutions and the time required for impact. At the same time, biotech research results only indirectly enter the main impact pathways of research towards outcomes in the CGIAR, and therefore it is not in the radar in the main priority setting. Finally, possibly due to contrasting positions among donors and some advocacy groups on use of transgenic crop cultivars, the CGIAR community has refrained from discussing biotechnology and decisions on investment have been made at bilateral levels. Although the CGIAR reform calls for a more transparent

---

1 Biotechnology here is used to cover a broad range of research and research applications including tissue culture, DNA fingerprinting, marker identification and marker assisted selection (MAS), gene sequencing, genetic engineering, diagnostics and pathogen detection, vaccine production and genomics in general. In addition, biotechnology related activities include capacity building, bioinformatics and policy.
strategic debate, there has not been a strategic review of biotechnology in the system for ten years.

The ISPC considers that the CGIAR System would benefit from a strategic study that would have three main objectives:

i) to assess the biotechnology research pipeline in the CGIAR exploring to what extent and in what time frame the research is resulting in improved technologies or improved efficiencies in research with specific attention to achieving potential impact on the SLOs and learning from successes and failures;

ii) to analyze how CGIAR programs (CRPs) should position themselves strategically in relation to internal and external partnerships to achieve maximum synergy and efficiency in biotechnology research;

iii) to provide scenarios regarding near- and mid-term developments in biotechnology research, research application and constraints to adoption that will influence the investment choices in the CGIAR. Issues of particular importance include: proprietary control of technologies, capacity and resources in the CGIAR’s partner and beneficiary countries including development of regulatory frameworks, and the political landscape that influences the choice of research pathways.

The Consortium Board Chair has welcomed the intention of a strategic study on this topic, including seeking efficiencies in system operation. The study will be conducted in close consultation with Centers and CRPs.

An expert panel will be commissioned to execute the study and the ISPC will convene a workshop to discuss contentious issues (both scientific and policy) and the most effective investment options for the system. Donor engagement in discussing the findings and follow-up would be important due to the current perspectives on the transgenic issues. The objectives would be guidance to the Consortium and Fund Council on funding, focus and strategies to gain maximum synergy from the CRPs and partnerships to benefit breeding and germplasm conservation and research. [Study cost and workshop USD90,000].

(ii) Indicators, metrics and data management

The requirement for system level analysis and agreement on these subjects arose out of the ISPC’s review of the CRPs, and concerns about how progress would be made and measured towards intermediate development outcomes and the overall CGIAR impacts to achieve the SLOs. It was a subject for a special discussion at the CGIAR Science Forum in Beijing and the needs for indicator and common metrics were central to the Consortium CEO’s first open letter.
“towards a performance management system” and will be directly relevant to the workings of the IEA in CRP level monitoring and evaluation.

There are a number of international institutes collecting indicator data but at different spatial and temporal granularities and for different purposes. The advent of CGIAR benchmark sites and SLOs measured in terms of human welfare means that useful indicator systems for the CGIAR must bridge a number of different requirements from local environmental changes and social measures. There are many scaling issues linking site to program and SLOs. Cost effective measures linked to local capacities for measurement will have to be developed.

The ISPC intends to join with the Consortium science leadership and the IEA in planning workshops with other international agencies and existing programs and then in consideration of specific needs for CGIAR benchmark sites to help the consortium distill an objective set of indicators with globally relevant metrics and the conditions for annotating and using comparative data. The ISPC has allotted USD75,000 for convening two workshops and a written report.

**Mobilizing Science**

Preparing for the Science Forum 2013 “Nutrition and health outcomes:targets for agricultural research”

The Science Forum series was initiated by the ISPC under its remit of Mobilizing Science, as a means to reach out to scientists and scientific communities largely external to the CGIAR but who have potentially important contributions to make to the CGIAR research portfolio and its system level objectives of improving food security, human nutrition and health, alleviation of poverty and environmental sustainability. The first Science Forum was held in 2009 at the Wageningen University in the Netherlands on the subject “Science for Development: Mobilizing Global Linkages”. Outcomes and papers were collected into a special volume of the journal *Crop Science* published in 2010.

The second event was held in cooperation with the Chinese Academy of Agricultural Sciences (CAAS) in Beijing in 2011 on: “The Agriculture-Environment Nexus”. This topic brought together scientists from ecological/environmental disciplines and those from agricultural sciences, representing China, the global community, and the CGIAR. The outcomes of these deliberations, as with other Science Forum outputs can be found on the ISPC website at: [http://www.sciencecouncil.cgiar.org/](http://www.sciencecouncil.cgiar.org/). In addition, selected papers from Science Forum 2011 are currently under review for publication in an international journal. Many of the key issues that arose in the discussions have helped to inform a review of natural resources management research (NRMR) in the CGIAR, which has recently been published by the ISPC. The ISPC will also discuss these recommendations at the forthcoming GCARD in Uruguay and in other fora during the current year. The ISPC hopes the advice will help the CGIAR build and improve its
research portfolio through relevant partnerships and effective prioritization on natural resource management research issues for which the CGIAR has comparative advantage and which are most likely to have impact on the system level objectives.

Thus for 2013, and in response to the adoption by the reformed CGIAR of a specific system level objective on improvement of nutrition and human health, and with suggestions from the Consortium and Centers, the ISPC has selected the topic: “Nutrition and health outcomes: targets for agricultural research”. The Science Forum 2013 will be co-hosted by the Federal Ministry for Economic Cooperation and Development (BMZ) Germany and will be held from the 23rd to 25th of September 2013 at the Gustav-Stresemann Institute in Bonn. This venue will provide an opportunity for CGIAR scientists from across the Centers to explore the nexus of agriculture/health/nutrition with outside experts in these fields to better understand pathways to impact that link agriculture with improved human nutrition and welfare.

The ISPC will form a Steering Committee which will first meet in late 2012 (met from the 2012 budget). As previously, the intent is to focus on the development of a principally scientific exchange to examine opportunities and constraints, including in methodologies, conceptual models and impact pathways, for different agricultural research interventions to have effects on human nutrition. The ISPC contribution to the Science Forum is budgeted at USD150,000 with a further USD30,000 for a follow up workshop on key findings and the dissemination of the outputs of the Forum. [Total USD 180,000] As in the past, we expect supplementary support from the hosting institution.

The ISPC expects to publish the outcomes of the Science Forum 2013 in early 2014 and to explore additional means of convening partnerships studies relevant to the CGIAR’s R4D portfolio as part of its continuing work in mobilizing science.

Independent Program Review

Following substantial efforts in 2011 and 2012, the ISPC expects that the program proposal review element of its work will reduce in 2013, subject to requests from the FC. However, work in 2012 has shown that as long as ISPC and Secretariat staff time can be budgeted, analytical assessment activities in support of Consortium needs can be accomplished with “internal” resources when advice and suggestions are required, and with minimum additional support for convening workshops within the CGIAR when required.

Two such areas of analysis and advice that have arisen from the ISPC’s review of the CRP portfolio of proposals are:
(i) **Defining outcomes**: Mapping impact pathways and the intermediate outcomes that will finally contribute to the achievement of the SLOs has been a concern in the review of the first round of CRP proposals conducted by the ISPC. These considerations have been described in the white paper on CGIAR system priorities developed for the Consortium in 2012. Discussion with CRP leaders at the ISPC’s meeting in Addis Ababa has confirmed that many groups within the CGIAR would benefit from more substantial and systematic analysis of outcome mapping. The development of common understanding will enhance capacity to develop concrete CRP workplans which will start to define objectives (including intermediate development outcomes, IDOs) and impact pathways more clearly. Such clarity would also underpin the work on the definition of metrics and indicators (see above). [The ISPC has allotted USD 20,000 for convening discussion workshops on these topics].

(ii) **Mapping the anticipated impacts of research activities across a distributed portfolio**: In the development of the cross CRP analysis, and the choice of seed systems and value chains as topics of system importance for review in that study, the ISPC was aware that there are many such candidate themes that require analysis. The intent is to determine whether effort (distributed across CRPs) will result in impacts that are greater than the sum of the parts or whether the linkages between commodity research programs and system level programs including that commodity are adequately framed. Livestock are one such commodity which represents a cross-cutting theme appearing in several CRPs. The question to be posed in this instance is: “How the elements on livestock and forages in individual CRPs add up to address the major issues associated with livestock production and consumption in the developing world?”. This study will follow on from the analysis already conducted using Secretariat staff time and commissioning external reviewers. [USD 20,000 is budgeted for this purpose].

**Impact Assessment**

At the Seattle meeting of the Fund Council (March 2012) donors expressed the concern that as international investments in the CGIAR approach USD1 billion per year, funders need to see clear evidence of the CGIAR’s overall impact. With the CGIAR reform, there is a requirement to extend impact analyses to include more complex outcome measures (such as poverty reduction) and an array of non-economic measures (such as environmental indicators and policy influence). To achieve this, there should be greater resident capacity within the system to measure different sorts of program impacts, and this would be enhanced by greater interaction with the global community of practitioners and adoption of cutting-edge methodologies. These efforts require a major expansion of the evidence base, including data collection across the full range of CGIAR research types.

In consultation with key donors, the Consortium Office and CGIAR Center impact assessment focal points (IAFPs), the Standing Panel on Impact Assessment (SPIA) has therefore helped
develop a project entitled Strengthening Impact Assessment in the CGIAR (SIAC). The SIAC proposal was submitted formally by the Consortium CEO in September 2012 to the Bill and Melinda Gates Foundation for consideration for funding. It is structured as the first stage, 2013-2015, of a multi-donor fund approach to the improvement of impact assessment capacity and reporting in the CGIAR.

The proposal addresses four major objectives: 1) developing and testing new methods for collecting data on the diffusion of improved agricultural technologies, practices, and policies, 2) updating databases and institutionalizing the collection of this diffusion data, 3) deepening the understanding of the nature and extent of impacts derived from CGIAR agricultural research, and 4) building a community of practice for ex post impact assessment within the CGIAR and the broader development community. The project constitutes a major step forward in expanding the portfolio of impact studies in the CGIAR.

It is anticipated that the SPIA (Chair and Secretary) will serve as members on the Program Steering Committee (with the Consortium CEO and IEA Director represented as observers). The project proposal includes a major sub-grant to Michigan State University to lead and implement all activities under Objectives 1 and 2, and SPIA will take responsibility for the analytical, synthesis and management requirements of Objectives 3 and 4.

The total budget for the multi-donor project is estimated at USD 12.1 million over the three-year period 2013-15. At the time of writing, USD 5.0 million has been requested from the BMGF. DfID is strongly committed to supporting this effort but has not yet pledged a definite amount. IFAD has registered its willingness to support this project work with a minimum of USD 500,000 per year (USD 1.5 million over three years). Core support from the ISPC/SPIA budget is USD 400,000 per year (USD 1.2 million over the three years). In addition, a significant amount of collateral in-kind support is provided by SPIA members themselves and ISPC Secretariat staff (budgeted within other ISPC line items for Council and Secretariat support).

The overall request for the SPIA portion of the ISPC budget in 2013 is USD 500,000 made up of USD100,000 to complete and publish studies continuing from 2012 or before, and USD 400,000 as the SPIA contribution to the (first year) SIAC objectives 3 and 4.

---

2 The activities of SPIA seek to contribute to the CGIAR’s overall impact in several ways: (a) supplying donors and other stakeholders of the CGIAR with up-to-date evidence of the efficacy of investing in international agricultural research; (b) providing strategic feedback to help steer system-level priorities; and (c) building capacity within the System to undertake regular impact studies for monitoring how well implementation of the new research portfolio aligns with System-Level Objectives.
A. Completion of current studies

The study of the Dissemination and Impact of Improved Varieties in Africa (DIIVA) which has been conducted over the last 3 years will have a final workshop in November 2012 and the final report will be available in 2013. Other studies under way that will finish in 2013 requiring analysis, synthesis and publication are the Poverty impact study, the Stripe impact study of legume research, and a study of early adoption of NERICA varieties in Sierra Leone. [For the completion of these studies and the publication of policy briefs and reports SPIA has budgeted USD100,000 in 2013.] Future SPIA work is described and budgeted as below.

B. New activities in relation to SIAC objectives 3 and 4

(This section follows the numbering of the objectives as described in the Consortium/SPIA proposal and further detail on activities is provided in that proposal):

Objective 3: Assess the full range of impacts from CGIAR research. This will focus on impact assessment of CGIAR research products after large-scale diffusion has taken place. While measuring economic impacts will continue to be important here, more attention will be given to non-monetary impacts, such as environmental, food security, and gender, both positive and negative. Qualitative but rigorous assessments of CGIAR influence on the global agenda or on international agreements will also be undertaken.

Activity 3.1: Long-term large-scale studies.
Long-term, large scale studies of ex post impact have comprised the major part of SPIA’s recent portfolio, including assessment of impacts of agricultural research on poverty, food security and nutrition. Activities to be undertaken include the following: A review of evidence to date on the large scale impacts of CGIAR research to (a) identify major gaps (by type of research/commodity/practice/policy and geographical areas) in impact assessment of CGIAR activities; and (b) highlight other projects that offer particular scope for substantial value-added from continued funding. Proposals solicited to address the areas of deficiency identified by this gap analysis. Priority will be given to partnerships with non-CGIAR institutions for impact assessment Special funding to facilitate System-wide effort to develop and maintain a database of experimental and on-farm trial data on yield results from varietal testing.

While long-term large-scale impact assessment studies will continue to be the mainstay of SPIA’s activities, there is a clear rationale for also building a portfolio of micro impact assessments conducted at early stages of adoption that focus on precise identification of causal
effects of the technology on welfare outcomes. As part of this Objective, SPIA will support the expanded use of randomized controlled trials (RCTs) and quasi-experimental approaches (e.g., randomized roll-outs) in CGIAR impact studies.

Activity 3.3: Ex post IAs of under-evaluated areas.
A major focus of this Objective will be to significantly advance the level and quality of impact assessment activity in hitherto under-evaluated areas of CGIAR research. These include research on policy, livestock management, natural resource management, irrigation management, agro-forestry, and in-situ conservation of biodiversity.

Activity 3.4: Pre- and post-doctoral research fellowships.
The SIAC proposal will institute a program that would bring top-quality young researchers, and particularly women, trained in academic groups that are at the frontier of modern impact assessment research, into the system to focus on impact assessment. The integration of a cadre of pre-screened, high-quality researchers into specific projects under Objective 3 would provide a substantial complement to the efforts of collaborating Center scientists. The main activities to be undertaken as part of this sub-Objective are as follows:

• CRPs/Centers and NARS invited to submit proposals and bid on two-year post doctoral positions each year;
• Mechanisms will be developed to facilitate active dialogue between CRPs/Centers and Universities for identifying promising post-doc candidates.

Activity 3.5: Synthesize results at the system level through a post-2000 meta-analysis of all recent credible CGIAR impact studies.
In order to provide an overall benefit-cost analysis and, to the extent possible, aggregate impacts on poverty, nutrition and sustainability, SPIA will assemble available well-documented high benefit CGIAR ex post IA studies since 2000 across major areas of research – crop germplasm improvement, policy-oriented and NRM – using transparent and rigorous criteria for selecting studies to be included. These will form the basis for estimating the economic rate of return to research and, to the extent possible, aggregating impacts on poverty and malnutrition via general equilibrium modeling. This would provide a much sought after update of the earlier SPIA-commissioned Raitzer (2003) analysis that aggregated the value of the System’s impacts based on a well defined peer review and assessment of all known CGIAR ex post impact assessments up to that time.

Objective 4: Supporting the development of communities of practice for ex post impact assessment within the CGIAR and between the CGIAR and the development community:
This Objective will target a number of specific activities to support the building of a community of practice in impact assessment, amongst Centers/CRPs and NARS:
Activity 4.1: Small grants allocated on request to support IA within the CGIAR:
Impact assessment will be housed within the CRPs and, to some extent, may continue to be conducted by Centers for a number of reasons. Methods and data may be applicable to several CRPs, such as the commodity CRPs. Small grants will be offered with a simple and fast approval process, in order to promote inter-CRP/Center communication and opportunities for the completion of needed studies.

Activity 4.2: Training courses offered for CGIAR and NARSs scientists in specific IA methods.
SPIA will organize one one-week training course per year, focusing on a specific range of technical / methodological issues relevant to CGIAR and NARS scientists – particularly women. The program of specific topics would be lined up at least one year ahead, to allow us to identify the academic partners or aid agencies (ACIAR has much experience in training NARS scientists in IA and M&E more generally) to work with. The goal would be to host the training at different advanced research institutes.

Activity 4.3: Biennial CGIAR conference on ex post impact assessment results and methods.
A full conference on impact assessment for agricultural research, with an established and predictable calendar. We would expect a 50:50 ratio of internal to external participants to ensure the right mix of relevance and rigor. There would be between 50 and 75 participants, and the conferences would be rotated around the CGIAR Centers. SPIA would invite the Centers to propose how they would host the conference and the CG center hosting would be responsible for local logistics.

Activity 4.4: Published quality ratings of impact assessments carried out by the CRPs/Centers.
We propose an annual process of peer-review of a maximum of two studies per Center per year. The findings from the peer-review process would then be published on the impact assessment website (http://impact.cgiar.org) with quality ratings, linked to the full study by the Centers. Initially, the process of quality-rating through peer-review will take place each year in the final quarter, with results published in December.

Activity 4.5: Facilitate interactions with regional research organizations on ex post IA and provide support services to Regional Research Organizations (RROs) and NARES.
SPIA is occasionally asked to provide advice to RROs and NARESSs on impact assessment. This is a role that is likely to continue and possibly grow under the CRP structure as new partners/institutions are brought in to work with the CGIAR (e.g. Tegemeo, African universities).

Activity 4.6: Maintain and significantly enhance the CGIAR impact website.
The CGIAR impact assessment site (see 4.4) is a major resource for donors and researchers alike. Increased functionality of the site could enhance its utility and the project will continue to build up the Impact Newsletter, publish Impact Briefs as PDFs on the website, quality ratings of
assessments, and for example to announce calls for papers under Objective 3 of this proposed program and provide external links to sources of expertise.

*Activity 4.7: Support capacity development within the Consortium to facilitate and aggregate ex post impact assessment.*

While the CGIAR Fund will remain as the primary audience for impact assessment information, the relationship with the Consortium will be developed to help promote impact assessment activities. Activities will include helping the Consortium identify success stories for further development, or development of protocols and formats for data collection so that data from different sources (economic, biophysical) are credible and available for impact evaluations. Finally, it is essential that the CGIAR Centers begin to systematically collect and maintain the results of experimental and on-farm trial data (for varietal testing for example) and to the extent feasible, recover previous year’s trial results databases. This provides a basis for estimating treatment effects per unit of adoption in the absence of more rigorous RCT type data.

**Communication**

The ISPC staff have principally technical, analytical and managerial roles in support of Council studies. With the appointment of a new P3 professional in 2012 with part time responsibility for communications, the ISPC expects to execute its overall communication strategy more effectively - for instance, publishing a Chairman’s letter on issues; to be able to provide and to solicit more information in relation to its studies and intermediate outcomes (evidenced by the positive response to the intermediate updates provided during the NRM stripe review for example); and greater capacity to examine needs of partners as studies and workshops are designed through the greater use of electronic alerts and e-conferencing.

**Staffing**

The ISPC Chair and Council have been fully engaged in 2012. A new SPIA Chair was elected who took over in July 2012, and the turnover of one Member’s position is anticipated 2012/13. Further, regular turnover of membership is expected in subsequent years.

In 2012, the approved structure of the Secretariat was a Director (D1), three senior professionals (P5), three mid-level professionals (a P4 and 2 P3-level professionals) and three support staff. The same complement is expected to continue in 2013. Two of the vacant professional posts (one P5 and one P3) were only filled late in 2012. Additionally with the filling of the P4 position by internal promotion, one P3 position (dedicated to impact assessment work) remains to be filled in 2013. This has resulted in some attendant savings on salary costs in 2012.
Budget

The ISPC budget is provided by contributions from the CGIAR Fund and the FAO. The ISPC will receive elements of support from the co-hosts of its Science Forum (BMZ in 2013). Some activities of SPIA are enhanced by grant funds held by others, which support studies and reports on the impacts of CGIAR research\(^3\). In these cases SPIA is awarded funding for scientific management, analysis, some writing, and project management costs whilst Centers and partners are supported for further adoption research, data collection etc. A move to formalize multi-donor support for future enhancement of impact assessment in the CGIAR is a further development of this model, to which ISPC funds would contribute USD400,000 plus support for SPIA Member and Secretariat support through line items (for Council and Secretariat at large) supported in this ISPC budget request.

Expenditures in 2012 are largely on track with savings brought about by the late entry into service of two professional staff positions. The only significant under-spent line item has been in development of the CGIAR priority setting white paper (Strategies and Trends), when the demands of the Consortium schedule for the SRF Action Plan, required that the study was conducted on a compressed time frame, largely using ISPC resources (staff time) rather than external consultations with other experts as planned. The budget requested for the ISPC and its workplan in 2013 in USD 3,754,000. FAO has undertaken to provide USD 1,324,000 (as part of its biennial allotment 2012/13 to the ISPC), and thus the request to the CGIAR Fund for 2013 is USD 2,430,000.

\(^3\)SPIA has catalyzed the development and implementation plans for two major impact studies funded from external sources: the DIIVA study attracted a grant to the CGIAR of USD 2.98 million for the period 2010 to 2012. Of the approximately USD 1 million per year provided to the CGIAR, SPIA received USD 20 to 40 thousand for the organization of workshops. Similarly, the SIAC proposal envisages funds of up to USD 12.1 million being attracted to impact assessment in the CGIAR between 2013 and 2015. The initial SIAC grant request is for approximately USD 5 million from BMGF matched by an anticipated USD 7.1 million from other funders in the first instance. SPIA funds of USD 400,000 and staff time are considered as contributory funding from the ISPC within this total for 2013.
<table>
<thead>
<tr>
<th>Activity</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(USD '000)</td>
<td>(USD '000)</td>
</tr>
<tr>
<td><strong>STRATEGY AND TRENDS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. A strategic study of biotechnology in CGIAR</td>
<td>90</td>
<td></td>
</tr>
<tr>
<td>2. Indicators, metrics and data</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td>Sub-total</td>
<td>205*</td>
<td>165</td>
</tr>
<tr>
<td><strong>INDEPENDENT PROGRAM REVIEW</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Defining outcomes</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>6. Livestock as a cross cutting theme in the CRP portfolio</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td>Sub-total</td>
<td>75</td>
<td>40</td>
</tr>
<tr>
<td><strong>MOBILIZING SCIENCE AND STRATEGIC PARTNERSHIP</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Science Forum 2013§</td>
<td></td>
<td>150</td>
</tr>
<tr>
<td>8. Follow up workshop for 2013</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Sub-total</td>
<td>30</td>
<td>180</td>
</tr>
<tr>
<td><strong>INDEPENDENT IMPACT ASSESSMENT</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Poverty Impact Study</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>9. Stripe impact review of Legume research in the CGIAR</td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>10. Donor survey on impact assessment demand and utilisation</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>11. Communication and outreach (SPIA)</td>
<td></td>
<td>20</td>
</tr>
<tr>
<td>13. Assess the full range of impacts from CGIAR research</td>
<td></td>
<td>300</td>
</tr>
<tr>
<td><strong>14. Supporting the development of communities of practice for ex post impact assessment within the CGIAR (new objective 4</strong>)**</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------------------------</td>
<td>-----</td>
<td></td>
</tr>
<tr>
<td>Sub-total</td>
<td>525</td>
<td>500</td>
</tr>
<tr>
<td>TOTAL Activities</td>
<td>835</td>
<td>885</td>
</tr>
</tbody>
</table>

* Publication of current studies will be funded from 2012 allocation even when occurring in early 2012.

**Costs reflected in SIAC proposal 2013-2015

§ The ISPC will invite co-financing for the Science Forum
## ISPC Budget Table 2

in US$000

<table>
<thead>
<tr>
<th>EXPENSE ITEMS</th>
<th>2011 Actual</th>
<th>2012 Budget</th>
<th>2012 Actual</th>
<th>2013 Budget</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Council:</strong> (incl. activities and Council meetings)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Honoraria Chair and Office</td>
<td>317</td>
<td>323</td>
<td></td>
<td>330</td>
</tr>
<tr>
<td>Honoraria (Council and Panel Members)</td>
<td>270</td>
<td>265</td>
<td></td>
<td>270</td>
</tr>
<tr>
<td><strong>Sub-Total</strong></td>
<td>587</td>
<td>588</td>
<td></td>
<td>600</td>
</tr>
<tr>
<td><strong>Technical Activities</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Independent Program Review</td>
<td>171</td>
<td>75</td>
<td></td>
<td>40</td>
</tr>
<tr>
<td>Impact Assessment</td>
<td>388</td>
<td>525</td>
<td></td>
<td>500</td>
</tr>
<tr>
<td>Strategy and Trends</td>
<td>28</td>
<td>205</td>
<td></td>
<td>165</td>
</tr>
<tr>
<td>Mobilizing Linkages/partnerships</td>
<td>118</td>
<td>30</td>
<td></td>
<td>180</td>
</tr>
<tr>
<td><strong>Sub-Total</strong></td>
<td>705</td>
<td>835</td>
<td></td>
<td>885</td>
</tr>
<tr>
<td><strong>Personnel Costs (Secretariat/Office)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional Staff</td>
<td>1,149</td>
<td>1,552</td>
<td></td>
<td>1,547</td>
</tr>
<tr>
<td>Administrative Support</td>
<td>374</td>
<td>326</td>
<td></td>
<td>272</td>
</tr>
<tr>
<td>Long term Consultant</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Short term Consultant</td>
<td>114</td>
<td>95</td>
<td></td>
<td>75</td>
</tr>
<tr>
<td><strong>Sub-Total</strong></td>
<td>1,637</td>
<td>1,973</td>
<td></td>
<td>1,894</td>
</tr>
<tr>
<td><strong>Number of staff (Full Time Equivalent)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional Staff*</td>
<td>5.00</td>
<td>7.00</td>
<td></td>
<td>7.00</td>
</tr>
<tr>
<td>Administrative Support</td>
<td>4.00</td>
<td>3.00</td>
<td></td>
<td>3.00</td>
</tr>
<tr>
<td>Number of Long Term Consultant*</td>
<td>1.00</td>
<td>1 (66 days)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total FTE</strong></td>
<td>10.00</td>
<td>10.3</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td><strong>Travel</strong> 1/</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Travel and Per diem (Chair, Council/Board and Panel Members)</td>
<td>195</td>
<td>225</td>
<td></td>
<td>225</td>
</tr>
<tr>
<td>Travel &amp; Per Diem (Office/Secretariat)</td>
<td>93</td>
<td>100</td>
<td></td>
<td>100</td>
</tr>
<tr>
<td><strong>Sub-Total</strong></td>
<td>288</td>
<td>325.00</td>
<td></td>
<td>325.00</td>
</tr>
</tbody>
</table>

1/ Operating Expenses
<table>
<thead>
<tr>
<th>ISPC miscellaneous operating expenses</th>
<th>37</th>
<th>50</th>
<th>50</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overhead Charges</strong> ¹/</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IT Charges</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rent</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Legal Services</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contractual Services</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supplies and Miscellaneous</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Sub-Total</strong></td>
<td>37</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td><strong>Carry Forward from previous year</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>3,254</td>
<td>3,771</td>
<td>3,754</td>
</tr>
<tr>
<td><strong>FINANCING</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>From the CGIAR Fund</td>
<td><strong>2,421</strong></td>
<td>2,430</td>
<td></td>
</tr>
<tr>
<td>From FAO</td>
<td>1,419</td>
<td>1,350</td>
<td>1,324</td>
</tr>
</tbody>
</table>

* Endorsed staff figures given. Actual 2012 Professional staff total was completed late in 2012, with one remaining P3 to be filled in 2013

** Funds received from the CGIAR Fund in 2011, were utilised to backpay expenses for that year.
Annex 1: Summary of activities in 2012

<table>
<thead>
<tr>
<th>Activity</th>
<th>[This recounts progress as of October 2012 with a full final report expected as part of the ISPC scorecard in February 2013.]</th>
</tr>
</thead>
<tbody>
<tr>
<td>STRATEGY AND TRENDS</td>
<td></td>
</tr>
<tr>
<td>2. Prioritization of CGIAR activities</td>
<td>ISPC White Paper on “Strengthening Strategy and Results Framework through prioritization” provided to Consortium in June 2012 and incorporated into Consortium’s Plan of Action for a revised SRF.</td>
</tr>
<tr>
<td>3. Seeking efficiencies in the portfolio approach.</td>
<td>ISPC has convened a study of Conservation Agriculture in the CGIAR with meeting to be held at the University of Nebraska USA in October 2012. Report will follow in early 2013.</td>
</tr>
<tr>
<td>4. Stripe study of natural resources management in the CGIAR</td>
<td>Completed. ISPC Green cover “Stripe Review of Natural resources management research in the CGIAR” published September 2012 and available at</td>
</tr>
<tr>
<td>INDEPENDENT PROGRAM REVIEW</td>
<td></td>
</tr>
<tr>
<td>---------------------------</td>
<td>--</td>
</tr>
<tr>
<td>5. Completion of the CRP proposal review process</td>
<td>Commentaries on a further 8 reviews of CRP proposals or the Must haves for proposals undergoing re-review were conducted in 2012 (to-date).</td>
</tr>
<tr>
<td>6. Guidance review of the CRP portfolio</td>
<td>A cross CRP-study of the CRP portfolio has been convened by the ISPC with special attention to Theories of change and impact pathway analysis, seed systems and the value-chain approach as cross cutting themes. The draft reports have been made available to the Consortium, and a synthesis paper will be produced for the Fund Council and CGIAR at large before the end of 2013.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MOBILIZING SCIENCE AND STRATEGIC PARTNERSHIP</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7. Science Forum</td>
<td></td>
</tr>
<tr>
<td>i) Publishing the 2011 outputs</td>
<td>A Summary of the Science Forum 2011, Beijing, China and an ISPC Brief on the outcomes have been published on the ISPC website in early 2012. Key scientific papers from the</td>
</tr>
<tr>
<td>ii) Other means of sharing the outputs – Workshop</td>
<td>For these are in review for publication in a relevant scientific journal.</td>
</tr>
<tr>
<td>iii) Science Forum 2013 §</td>
<td>The outcomes have been incorporated also into the NRM Stripe review and will be presented at the GCARD 2012 and to a meeting of European funders to the CGIAR in October.</td>
</tr>
<tr>
<td>iv) Follow up workshop for 2013</td>
<td>Planning has been advanced for Science Forum 2013, with subject matter agreed with the Consortium and Centers and a co-hosting arrangement, dates and venue agreed with BMZ Germany. A Steering Committee will be convened and a first meeting held before the end of 2012.</td>
</tr>
<tr>
<td>8. Poverty Impact Study</td>
<td>This will be planned by the Steering Committee in order to access the human nutrition and health science communities in early 2013.</td>
</tr>
<tr>
<td>INDEPENDENT IMPACT ASSESSMENT</td>
<td>Mid-term workshop to review four case studies of CGIAR poverty impacts held at the London International Development Center, 8-9 May 2012.</td>
</tr>
<tr>
<td></td>
<td>Status: Final draft reports due in March, 2013; finalized</td>
</tr>
<tr>
<td>Project Title</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>9. Diffusion and Impact of Improved Varieties in Africa Study§</td>
<td>Paper presented at the ASTI-FARA conference in Ghana, December 2011, “Agricultural R&amp;D: Investing in Africa’s future” on initial results of the diffusion of improved varieties in Africa. Third technical and financial report, summarizing progress over the past year, submitted to BMGF in September 2012. Results from Objectives 1, 2 and 3 presented and discussed at the Final Workshop held at Bioversity 8-10 November 2012. Status: Objectives 1, 2, and 3 reports will be finalized early in 2013; Objective 4 (new component to analyse economic rates of returns) added in March 2012, final report expected May 2013.</td>
</tr>
<tr>
<td>10. Stripe impact review of Legume research in the CGIAR</td>
<td>Report of a study that field tested a varietal identification protocol for pigeonpea in Tanzania completed in October 2012. Varietal identification protocol for cowpea designed and added as a supplement to the LSMS-ISA survey for Nigeria.</td>
</tr>
<tr>
<td>Status: Some delay/postponement (cowpea study in Nigeria due to conflict), but major adoption studies of chickpea varietal use in two states of India (with ICRISAT and with ICAR) and chickpea in Turkey initiated and expected to be completed by first half of 2013, along with final report of the main study.</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td></td>
</tr>
</tbody>
</table>
| **12. IAAE Meeting Special Session on Impact Assessment** | Pre-conference workshop on “Innovations in impact assessment of agricultural research: Theory and practice” attended by more than 60 people held at the Int’l Association of Agricultural Economists meeting in Foz do Iguacu, Brazil, 18th August 2012.  
  
SPIA-Impact Assessment Focal Point (IAFP) meeting (CGIAR Centers, SPIA members, donors, other stakeholders) held on 17 August 2012 in Brazil. |
<p>| <strong>13. Stripe impact review</strong> | Included in the SIAC proposal to commence in 2013. |
| <strong>14. Donor survey on impact assessment demand and</strong> | Included in the SIAC proposal to commence in |</p>
<table>
<thead>
<tr>
<th>utilisation</th>
<th>2013.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>15. Communication and outreach (SPIA)</strong></td>
<td>Status: Major initiative advanced for strengthening support for impact assessment in the CGIAR; proposal for 3-year workplan and budget developed, discussed and reviewed with CGIAR IAFPs, key donors (BMGF, DfID, IFAD, EU, USAID, ACIAR, etc) and Consortium Office; specific project components submitted to BMGF for funding in September 2012, and support from DfID and others expected in late 2012/early 2013.</td>
</tr>
<tr>
<td></td>
<td>Publications:</td>
</tr>
<tr>
<td></td>
<td>Impact Briefs:</td>
</tr>
<tr>
<td></td>
<td>Impact Brief #37 Environmental impacts of agricultural research: an overview.</td>
</tr>
<tr>
<td></td>
<td>Impact Brief #38 Environmental impacts of agricultural research: concepts and tools to strengthen the evidence base.</td>
</tr>
<tr>
<td></td>
<td>Impact Brief #39 Ex-post environmental impact assessment: lessons from four CGIAR case studies.</td>
</tr>
<tr>
<td></td>
<td>Impact Brief #40 Does crop improvement reduce agricultural expansion?</td>
</tr>
<tr>
<td></td>
<td>Journal articles in 2012:</td>
</tr>
<tr>
<td>Other</td>
<td>Genetic Collection, Conservation, Characterization and Evaluation (GCCCE) impact study:</td>
</tr>
<tr>
<td>-------</td>
<td>--------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>Final (green cover report) summarizing conceptual issues and presentation of 2 commissioned case studies completed by November 2012.</td>
</tr>
</tbody>
</table>


Stevenson et al. “Agricultural technology, global land use and deforestation: a review and new estimates of the impact of crop research”. (Forthcoming in PNAS).