Draft of ISPC Task Force Report

Summary and recommendations

The original concept of the Task Force (TF) came from the report of the Mid-term Review (MTR) CGIAR which recommended:

‘The responsibilities of the Independent Science and Partnership Council (ISPC) should be elevated to empower it to be proactive in terms of providing strategic guidance, foresight analyses, and assessing and reporting on quality of research results across the system.’

Action to achieve was to be defined by a TF, drawing on the experience of major research organizations. This was endorsed at the 12th meeting of the Fund Council (FC), which added prioritization as a function which should be undertaken by the ISPC. The 13th meeting of the FC took the decision that the FC should be replaced by a System Council (SC), which would have responsibility for the CGIAR ‘System’ and not just the ‘Fund’. (From hereon, the CGIAR is referred to as the ‘System’.) The TF found it difficult to identify key actions in the vacuum of not knowing the detailed remits of the proposed System Office and System Council. Their recommendations are, as a consequence, caveated.

Analysis of the main issues: The main conclusion of the TF is that attention to science quality and strategic thinking at the System level have suffered from the disconnectedness between the different System entities created as part of the Reform process, coupled with the number of Boards, panels, committees etc which are involved in science quality and developing strategies at different levels. There is no clear mechanism for engagement between these bodies or co-ordination of their work and the ISPC is therefore not currently recognised as the dominant source of advice to the FC.

Principles endorsed:

- The TF endorsed the principle of ‘independence’ of the ISPC, but considered that this should be interpreted as independence from decision making and not independence from the System.
- The TF also recognised that the current governance of the System had high transaction costs and endorsed the need for simplification.
- The TF endorsed the current approach of the ISPC (SPIA) to develop more rigorous methods for measuring impact across a wider range of System activities.
- The TF endorsed the inclusion of ‘partnership’ in the remit of the ISPC and considered it should be a key player in taking an overview of strategies for effective partnerships along the research for development (R4D) continuum.
- Recognizing that in some cases ISPC advice has not been actioned, the TF endorsed the MTR recommendation that the ISPC should be empowered to be proactive not just in the provision of advice but also in assessing the response by the System and reporting to the FC (in future the SC). This should include engaging in dialogue with
the donors on strategic issues, such as the positioning of the CRPs on the R4D continuum.

**Vision for the future ISPC:** The TF expects the ISPC to provide intellectual leadership in giving scientific direction to the CGIAR at the System level, in terms of: scientific foresight and prioritization, assessment and delivery of science quality, strategic approaches to partnership with respect to both science quality and delivery of impact and the development of a rigorous impact culture across the System.

To raise its influence through raising its profile, the ISPC needs to adopt a more proactive communication strategy, involving communication professionals. This has some resource implications.

The following are the **recommendations** of how this might best be achieved:

**Foresight and Prioritization:** The ISPC should be tasked with conducting scientific foresight exercises for the System. These should draw on multiple approaches such as economic modelling and analysis of comparative advantage. These exercise should be integrated into a prioritization framework, which also takes account of science quality, to be used by the SC in taking decisions on allocation of resources. Major reviews on foresight/strategic planning would be timed to inform revisions of the Strategy and Results Framework and future calls for program proposals, but the overarching framework would also identify strategic questions of specific relevance to the System, for which an analysis is lacking and which could be filled by the ISPC undertaking or commissioning analyses on specific topics in the time between major SRF revisions. To ensure ‘buy-in’ from across the System and recognizing that work on foresight and prioritization will also be happening within Centers and CRPs, the ISPC should lead the development of a System-wide Foresight and Prioritization network to draw on all relevant information and avoid duplication of effort. Recommendations on prioritization and principles for future strategy development should, however, come from the ISPC to the SC to ensure an objective assessment, without bias from individual Centers, CRPs or donors. The ISPC should also lead discussions on strategic science issues at FC/SC meetings.

**Science quality: leadership and capacity, management and ex-ante assessment:** The ISPC remit should be expanded beyond its current focus on ex-ante assessment of science quality within CRPs. It should have a remit to ensure that management of science quality is consistent across the System. This will require: a) agreement between System bodies with a remit for science quality on criteria and methods of assessment; b) oversight of mechanisms to ensure that all significant programs (however funded) have been subject to external peer review; c) closer working with IEA on assessment of science quality in the evaluations; d) a responsibility to report to the FC/SC at each meeting on what has/has not been actioned with respect to science quality, with recommendations on what needs to be done. Implementation of this expanded remit will require closer engagement not only with the IEA and SO but also with science committees of Center Boards and Independent Steering Committees of CRPs. As part of this new approach, the IEA, ISPC and CO/SO should develop a framework for
closer working between these entities in relation to the identification of key science issues to be addressed in evaluations. The TF also suggested that the ISPC should continue to challenge relevant capacity within the System within scientific domains and the capacity in terms of cross-disciplinary working through regular reviews.

**Science quality – program monitoring and evaluation:** The TF recommends that the current division of responsibilities between the CO and the IEA for program monitoring and program evaluation should be maintained. However, there needs to be increased coherence, linkages and coordination between the different System entities with respect to identifying and implementing actions required to ensure consistently high quality of science across the CGIAR. The ISPC should be tasked with ensuring effective dialogue and exchange of information on science quality and future science direction and drawing on all relevant information to make annual reports to the CGIAR System Council, recommending actions to address science quality issues identified through any of these processes. This should start with the ISPC taking the lead in engaging the 3 entities to agree a formal framework for addressing issues of science quality across the CGIAR. The success of this approach will be assessed relative to the remits of each entity in the evaluations of the individual entities (IEA, ISPC and CO/SO) starting in late 2016 and relative to the performance of the System as a whole in the evaluation of the System which is now being proposed to take place in 2018. The IEA be charged with conducting the review of non-lead Centers contributing to the CGIAR portfolio at roughly quinquennial intervals, involving the ISPC in the planning of such Center reviews and in discussion of the science quality assessments following the reports’ findings.

**Partnerships:** Partnerships are an important part of the delivery mechanism of both science quality and impact. The TF recommend that the ISPC expand its role on partnerships to develop a strategic vision on partnerships along the whole R4D continuum. This will require close engagement with GFAR and the SO as well as Centers and CRPs. This could draw on the experience of the EC as described in Box 1. As part of this, ways of strengthening a culture of impact awareness across the System should be explored. The ISPC should therefore convene a network on partnerships for impact with representation from across the System (including GFAR, IEA and the SO) to share knowledge on partnerships both from the literature and as it emerges from monitoring of partnerships within the System. There should be exchange of ideas on an annual basis with the network on foresight and prioritization.

**Impact:** The TF recognises the importance to donors of the independent recording and enhancement of the capacity to create outcomes and development impacts from the work of the CGIAR. This includes the strengthening of appropriate data collection, program-for-impact design and partnerships. The ISPC is already active in this area through the Standing Panel on Impact Assessment (SPIA) which is part of the ISPC. The TF notes that it is necessary to plan sufficient funds for impact assessment both at the Center/CRP level and for ISPC (SPIA). Currently specific donor funds have been provided (outwith the main ISPC budget) for work on strengthening impact of agricultural research in the CGIAR (SIAC) and the potential for maintaining this higher level of funding should be explored. There is the
possibility of collaboration on the impacts of agricultural research in some cases as there is a current initiative (IMPRESA) to look at the impacts of European agricultural research on key characteristics of agricultural systems, such as farm level productivity, environmental consequences and the efficiency of agri-food supply chains with FAO and IFPRI. There was no additional specific recommendation on impact.

**Additional resources required**

These recommendations would substantially increase the work load of the ISPC. An additional Council member and an increase in the budget of USD 263k were agreed by the FC for 2015, on top of an agreed budget in the Work Plan and Budget of USD 3.648 million but the Council member has yet to be appointed and the actual additional cost to the CGIAR Fund is only USD 97k due to adjustments relating to FY 2014. The actual expenditure by the ISPC for 2014 and the projected expenditure for 2015 are in the order of USD 3.2 million since funds were managed prudently. The recommendations above would require a further increase of USD 1.345 million on an annual basis but this would increase would not be fully required until 2017. The increase is approximately 50:50 between staff costs and the costs of activities such as commissioning studies and convening meetings. The increased outputs would be delivered by closer working of joint Council/Secretariat teams leading the work on the specified issues. Full details of the budget are given in section 6 of the report.

**Expected benefits to the System**

The expected benefits to the System would be stronger scientific leadership, which makes greater use of the skills and experience across the System through better co-ordination on key issues. The ISPC would continue to be a body independent of decision-making, providing advice to the Fund Council (and subsequently the System Council), including evidence-based tools for resource allocation, an enhanced understanding of partnerships, regular assessments of progress on improving science quality across the System and identifying new scientific opportunities.
Background to the Report and modus operandi of the Task Force

The Mid-term Review Panel (MTR) of the CGIAR reform process (Beddington et al 2014). Final Report from the Mid-Term Review Panel of the CGIAR Reform) recommended in 2014 that “the responsibilities of the Independent Science and Partnership Council (ISPC) should be elevated to empower it to be proactive in terms of providing strategic guidance, foresight analysis and assessing and reporting on quality of research results across the system”. In a section entitled ‘Optimizing knowledge impact’ they noted: ‘It is critically important to ensure that high-quality research review and advice is consistently provided by qualified researchers.’ They went on to recommend that ‘A detailed proposal for the new functions of the ISPC or its replacement should be prepared immediately by a task force established by the Fund Council.’

This Task Force was therefore instituted at the request of the CGIAR Fund Council to consider how the empowerment and strengthening of the ISPC recommended by the MTR might be carried out. (Terms of Reference for the Task Force and its membership, as recommended by the MTR are given in Annex 1.) In addition, the funders (at FC 12 Bogor) also asked the ISPC to contribute to prioritisation of wide-ranging possibilities for agricultural research described in the new Strategy and Results Framework (SRF) of the CGIAR, a point reinforced by Governance Options team (ref). Simultaneously with the work of the Task Force (TF), a Transition Team has been preparing a Transition Plan on the implementation of the decisions taken at FC13 to create a new CGIAR Systems Office (SO) to replace the current Consortium Office (CO) and Fund Office (FO). The actual responsibilities of this new Office are still in formulation and the recommendations of this Task Force will be discussed with the Transition Team before being finalized and presented to the Fund Council. The ISPC (like the Technical Advisory Council, TAC, and the Science Council, SC, before it) provides advice to the CGIAR on the relevance and science quality of its programs. The TAC (1971-2003) provided studies on emerging areas or approaches to science and was directive in priority setting (at the level of percentages of financial resources for given areas). The Science Council (2003-2009) gained a coherent overview of CGIAR programs by commenting on Centers’ strategies, and reviewing Centers at roughly 5 year intervals, and the Centers’ rolling Medium Term Plans annually. In one instance it was called upon to provide a set of scientific priorities for the system (published in 2006, but which were not taken up directly). In the transformation of the CGIAR, the roles of strategy development for the system and the proposed choices and prioritisation of programs (Consortium), and the evaluation of programs (Independent Evaluation Arrangement, IEA) were shared amongst the new entities in the CGIAR. The ISPC strove to keep its independent standing and became more of a commentator on the proposals and products of others for the benefit of decision-making by the Fund Council on strategic direction and programs than a strategic adviser. Its remit to date has largely focused on the role of the CRPs in the System, since it was advising the Fund Council. The decision at FC13 to create a System Council is interpreted as meaning

1 Discussed in Background document I provided to the Task Force in May 2015.
that this Council will have a remit across the whole System and consequently, the ISPC will be expected to advise on wider System issues.

In responding to the suggestions of the CGIAR’s Mid-Term Review and the FC12 and 13 decisions for a strengthening of the role of the ISPC, the ISPC TF has considered, but not dwelt on, this history preferring to explore the requirements of the CGIAR across a range of related functions, drawing on their extensive experience gained through senior positions in national and international research organizations. Three virtual meetings were held, focusing first on identifying relevant information on how other organizations approach accessing independent science advice, secondly on identifying gaps in that knowledge relevant to our Terms of Reference and the thirdly to discuss the emerging recommendations. In between each skype call the Executive Director of the ISPC produced sequential drafts of the report. The draft produced subsequent to the third meeting of the TF was shared with the ISPC (Council members and Secretariat) for comments on the feasibility of implementing the proposed recommendations.

The report follows the format of summarizing the wider roles, responsibilities and culture across the CGIAR System post the 2009 Reform, followed by a section highlighting key evidence reviewed by the TF and an analysis of key issues associated with the current structure. Section 4 outlines TF views on how changes to the ISPC might address these issues, with a final section providing recommendations on the proposed changes, under the headings (foresight and prioritization, science quality, evaluation and impact) set out in the Terms of Reference.

2. Roles, responsibilities and culture post the 2009 Reform

The key principle of the CGIAR Reform process as proposed in 2008 was ‘the essential requirement to enact the customer (funders) and contractor (implementers) principle, based on performance contracts’. (The Change Steering Team (2008). A Revitalized CGIAR – a New Way Forward. Presented to the 2008 CGIAR AGM, December 2008.) This led to a separation of the main decision-making bodies into implementers (Consortium) and funders (Fund), with separate governance and management of the Consortium (Board and Office), from the Fund (Council and Office). The ISPC and the newly formulated Independent Evaluation Arrangement (IEA) were created as independent advisory bodies. The main roles of the Consortium (which are relevant to scientific issues i.e. not funding or advocacy), IEA and ISPC are listed in Table 1.

The ISPC was also tasked to: ‘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’.

Further, whilst the ISPC advises the Fund Council, “the Consortium may seek advice from ISPC in areas that do not create a conflict of interest for either party.”
The ISPC was created (in 2010) as a small Council (6 members plus Chair), supported by a secretariat based in FAO and including 6 professional posts plus an Executive Director. The Council was also given commissioning and convening powers to access other expert input through budgetary support of Council’s activities (proposal reviews, studies, workshops) described in its annual Work Plan which is endorsed by the FC. This provided the Council with overall perspectives on the work of the CGIAR with further insights from a few more profound studies in particular areas. Maintaining an independent status essentially led to the Council confining itself to providing strategic-level advice on written proposals or through production of white papers and briefs (e.g. on the basis of its strategic studies and impact assessments carried out by SPIA). The 2015 budget for the ISPC approved in November 2014 was USD 3.648 million (ISPC WorkPlan and budget for 2015), with an additional USD 263k agreed by the FC to cover potential costs of the Task Force and increased input by the Chair. Actual expenditure in 2014 was USD 3.261 million and due to the TF being managed as a virtual entity, together with other savings mean that projected expenditure for 2015 will be slightly lower than in 2014. This amount supports the honorarium costs of the part time (60%) ISPC Chair, Council members, SPIA Chair and SPIA associate members, the full-time staffing (usually 11 people) of the Secretariat at the FAO, and technical activity costs (More detail is given in Table 5 in section 6). The ISPC contributes 0.5 million to the total of impact assessment activities conducted under the Strengthening Impact Assessment in the CGIAR program (SIAC), which runs through 2016, and has a total budget of approximately USD 11 million over three years. The remainder of the ISPC budget is used to commission consultants to undertake specific studies/provide expert reviews.

Direct contact with Centers was much reduced (relative to the Science Council), due to the loss of responsibilities for Center Mid-Term Plans (which SC members used to review) and external reviews (EPMRs which were co-ordinated by the Secretariat) and the creation of the Consortium to represent the System as a whole. ISPC did try to retain some contact through holding at least one of its biennial meetings at a Center and issuing open invitations to CGIAR colleagues to attend those meetings. Commentaries on written program proposals were presented as advice with little formal interaction with the proposers or means to follow through on programmatic concerns – this being the role of the Consortium Office. The majority of scientists in the system thus have limited interaction with the ISPC, which has become disconnected from the day-to-day work at the program level. The TF highlighted this disconnect and suggested that the ISPC create a better balance between independence and ability to broker dialogue on science and science quality as part of its advisory function in the future.
<table>
<thead>
<tr>
<th>Roles</th>
<th>Consortium</th>
<th>IEA</th>
<th>ISPC</th>
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<tbody>
<tr>
<td>Strategy</td>
<td>Work with Research Centers which are members of the CGIAR Consortium, donors, and partners to develop the CGIAR Strategy and Results Framework (SRF) for the Funders Forum to approve</td>
<td>Provides advice to the Fund Council on the evolution of the SRF. Commissions studies on key topics relevant to strategy development within the CGIAR</td>
<td>Provide CGIAR members with timely, objective and credible information on the impacts at the system level of past CGIAR investments and outputs in terms of the CGIAR SLOs, to provide support to and complement the Centers in their ex post impact assessment activities, and to provide feedback to CGIAR priority setting and create synergies by developing links to ex ante assessment and overall planning, monitoring and evaluation functions in the CGIAR (mandate of SPIA)</td>
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<tr>
<td>Prioritization</td>
<td>Allocates funds from the CGIAR Fund to CRPs according to Fund Council decisions and is accountable financially and operationally for how the funds are used</td>
<td>Implement independent external evaluation at the System of the individual CRPs, cross-cutting themes, institutions and of the System as a whole. Facilitates the CGIAR Evaluation Community of Practice</td>
<td>Provide advice to the FC (on request) on proposals requesting funding for common services</td>
</tr>
<tr>
<td>Monitoring and evaluation</td>
<td>Monitor the performance of the Research Centers which are members of the CGIAR Consortium and take action if necessary</td>
<td></td>
<td>Provides advice to the FC (on request) on proposals requesting funding for common services</td>
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<tr>
<td>Strengthen coherence across the System</td>
<td>Develop, manage, and operate common services for Research Centers which are members of the CGIAR Consortium</td>
<td></td>
<td>Provides advice to the FC (on request) on proposals requesting funding for common services</td>
</tr>
<tr>
<td>Management</td>
<td>Work with Research Centers which are members of the CGIAR Consortium to develop and manage CGIAR Research Programs</td>
<td></td>
<td>Assesses proposals for CRPs and provides advice to the FC</td>
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<tr>
<td>Partnerships</td>
<td></td>
<td></td>
<td>Mobilizes science and enhances strategic partnerships through international dialogue on critical emerging issues and through cultivating partnerships between the CGIAR and collaborators worldwide.</td>
</tr>
<tr>
<td>4 pillars of current ISPC</td>
<td>What are intended outcomes</td>
<td>Who will deliver those outcomes</td>
<td>Who are the intermediaries</td>
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<tr>
<td>Strategy and trends</td>
<td>CGIAR research that is recognized globally as asking cutting-edge and relevant (to the SLOs of the CGIAR) research questions</td>
<td>CRPs, Centers and wider agricultural research community</td>
<td>The papers have been published in the academic literature and on the ISPC website</td>
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<tr>
<td>Mobilizing science</td>
<td>New partnerships between CGIAR scientists and those in other relevant sectors which enhance the quality and relevance of CGIAR outcomes</td>
<td>CRPs, Centers and wider agricultural research community</td>
<td>The Steering Committees and attendees at the Science Fora and follow-up workshops</td>
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<tr>
<td>Independent program review</td>
<td>Enhanced science quality and relevance of CRP research</td>
<td>CRPs</td>
<td>Fund Council and Consortium</td>
</tr>
<tr>
<td>Impact assessment</td>
<td>Greater confidence of the donors in the CGIAR system and more evidence-based decision-making</td>
<td>CRPs and Centers</td>
<td>Impact assessment community of practice, IEA</td>
</tr>
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3. Evidence reviewed by the TF

The Terms of Reference asked for consideration of the evidence of ISPC performance to date and from examples of best practice in other bodies in relation to both ‘science’ and ‘partnerships’. These are presented separately below.

3 (i) Science

Brief review of ISPC: One of the major roles of the ISPC since its creation has been the provision of independent ex ante assessments of the CRP research proposals submitted. There is a broad consensus on the current ISPC, however, that it has been difficult to assess the quality of science in the CRP review process, due to the nature of the application forms and the size of the programs. Assessing the strategic intent, theory of change, relevance and even the quality of the institutional partners involved in the proposed program, are all much easier tasks than assessing the quality of the science and capabilities of the current researchers. The proposals contained relatively sparse details of the science (e.g. methodologies and experimental design) leading to a stronger emphasis on assessment of relevance than of the quality of the science to be undertaken. The primary audience for such advice has been the Fund Council, who have, however, been generally positive about the advice provided by the ISPC. Once endorsed by the FC, the commentaries have been passed on by the Consortium Office to CRP leadership and only on a limited number of occasions (at the request of CRP leaders) has there been the chance to discuss the nature of the advice between ISPC and the proposers. During its assessment of the extension proposals, the ISPC had the opportunity to review how many of the original recommendations made by the ISPC had been acted on by the relevant CRPs. In a number of cases this was disappointing.

The other parts of the ISPC’s mandated areas of activity: studies of strategy and trends, mobilizing science and impact assessment also contribute to the relevance and to some extent the quality of science of the system. For example, the ISPC-commissioned studies on conservation agriculture, urbanisation and farm size, biotechnology and metrics have been well received, although it is too early as yet to judge their impact on CGIAR research. The Science Fora on the agriculture-environment nexus (2011) and the targeting agriculture research towards nutrition and health outcomes (2013) also received positive feedback and generated papers in peer-reviewed journals, as well as recommendations on strategic direction for addressing the relevant System Level Outcomes.

The creation of an impact assessment community of practice by ISPC (SPIA), together with studies on methodologies for assessing ex-post impact and the cross cutting reviews of social science and natural resources management also have the potential to enhance both science quality and relevance within the CGIAR system.

In the CGIAR reform, independent evaluations of CGIAR research programs (and the evaluation of the System as a whole) became the responsibility of the Independent Evaluation Arrangement (IEA). Evaluations commissioned and organised by the IEA and conducted by independent teams of experts include science quality alongside other evaluation criteria (relevance, efficiency, effectiveness, impact and sustainability). These evaluations cover all research conducted by Centers that is mapped to and reported within a CRP irrespective of funding source. The focus of the ISPC on ex ante assessment and strategic advice, but with less engagement in the evaluation and monitoring side of program progress has added to the
distancing of the ISPC from the Centers. Further, a major part of the responsibility for science quality remains with Centers and the ISPC’s interaction has been much more with the CRPs, despite trying to keep up contacts by holding meeting at Center venues. It is only since August 2014, that the ISPC Chair initially and later the Executive Director in one instance and the Chair of SPIA in another have been invited to participate in meetings attended by Center DGs.

In the Reform process, it was foreseen that the Strategy and Results Framework (SRF) (which is the responsibility of the Consortium) would provide strategic direction. The ISPC provided advice on the process, by developing two white papers to provide structural guidance around outcomes both for the SRF and subsequent program development. These were *Strengthening Strategy and Results Framework through Prioritization*, published in 2012, that proposed the concept of IDOs to the system; and *CGIAR System-Level Outcomes, their impact pathways and inter-linkages*, in 2013. The concept of the former came from within the ISPC, while the latter was developed at the request of the Fund Council who were seeking further clarity towards the prioritization of the programmatic agenda.

*Evidence provided by members:* Members of the TF reported from experience that a major research institution would have an integrated “Central or Corporate” entity that would perform many of these cross-cutting functions and would certainly act on the integrated analysis. Independent advice and assessment would be generated via independent advisory or review processes commissioned by the corporate entity but analysed and followed in a transparent, independent fashion. Where the advisory bodies have concerns, they can ask for monitoring reports at more frequent intervals. The TF noted that in the CGIAR, management was more complex, with executive managers at both the Center and System level.

Foresight is the collection of trend and performance data to understand the important factors affecting programs and opportunities for embarking on accelerated or different pathways to the delivery of outcomes. Strategic frameworks are considered to be necessary at least at two levels/scales - the level of global challenges, and the level of (new) research activities. The development of strategic frameworks is also a critical element of the process of scientific inquiry, helping to identify what is most important, and why, and what is interesting but perhaps of less significance to the overall objective of the research endeavour. Strategic frameworks contribute to choosing science questions that are “fit for purpose”. Periodic foresight exercises are used by many organisations as a basis for strategic thinking and to serve as a framework for prioritization. Strategic Foresight (including political dimensions) is usually initiated by the Board of an organisation while Scientific Foresight is led by an independent science advisory body. The European Commission commissions Foresight exercises every 4-5 years, using external experts, while for large programs, funding bodies may use a panel of experts to identify priorities. Most research organizations represented on the TF include a stage of consulting with stakeholders when setting priorities and also use a mix of methods e.g. not just quantitative modelling, but also qualitative approaches. The feedback loop from program evaluations back into prioritization was also mentioned, as was the need to update specific topics where changes were particularly dynamic, within the 4-5 year cycle.

Discussion on assessment of science quality highlighted external peer review, but also the value of site visits when assessing large programs and as part of evaluations. Reference was
made to the UK system of 5-yearly assessments of the publications of individual scientists in Universities, with the recent addition of assessing delivery of societal impact.

The TF endorsed the principle of independence which underlies the ISPC and agreed it should play a more prominent role in setting strategic direction for the System, but found it difficult to be specific in the absence of clarity on the roles of the System Council and System Office.

The draft Transition Plan (29 July version) gives the following expectations of the output of the TF report:

‘to prepare proposals to empower the ISPC to play a stronger role in the system with a view to strengthening the capacity of the system to pursue research that is highly strategic, likely to yield significant impact, increases knowledge and maintains the quality of science conducted throughout the system’

And notes the following role for the SO:

‘The CGIAR System Office should be a strong office with delegated authority to manage the system. The duties, roles and responsibilities of the system office will generally include: supporting the CGIAR System Council, overseeing the development of system strategies and policies, monitoring and reporting on program implementation, and promoting collaboration and coordination across the system, including through the development and facilitation of shared system services, administrative efficiency, learning and performance assessment.’

In addition, in the version of 5 August, the following principle of good governance was added:

16f provide for complementary, distinct roles of scientific program monitoring and analysis and independent scientific review to promote feedback and evolution of the system

The TF interprets this addition as implying that the SO would have a science capacity to provide ‘scientific program monitoring and analysis roles’ with the ISPC conducting the independent scientific review. To date the ISPC has not had a role in following up on the implementation of this recommendation until the next set of proposals are submitted for assessment. The TF suggests that the ISPC should include assessing the response by the System to its recommendations which require significant action and reporting regularly to the FC (in future the SC) on the adequacy of the response.

3 (ii) Partnerships

The remit given to the ISPC (see Annex I) beyond improving the productivity and quality of science included to “catalyze the partnering of CGIAR science with other institutions of international agricultural research ...” “...to oversee the partnership arrangements in proposals submitted”, and to “convene high-level scientific dialogues [to] inform the scientific deliberations among CGIAR scientists and their research partners and help catalyze partnerships of the CGIAR with other global science communities.”

In the light of the GFAR/CGIAR-convened GCARD stakeholder events the ISPC originally interpreted its remit by focussing on convening biennial Science Fora in which the chosen
topics allow reaching out to science and other communities relevant to the achievement of CGIAR SLOs. During 2015, however, a report has been prepared by the ISPC secretariat, which attempts to provide clear practical guidance on partnership policy and practice, to ensure - in the words of the MTR - the “formation and incentivization of the appropriate partnerships”, becomes a key tool in helping the CGIAR meet its goals and responsibilities in the international AR4D space.

The ISPC has also reviewed partnership strategies of CRPs during proposal assessment, as far as the prescribed level of detail permits. While it is generally accepted that the CGIAR as a research organisation is charged with generating international public goods, the donor emphasis on the pathways between research outputs and development outcomes means that the CGIAR needs to partner with National Agricultural Research and Extension services (NARES) and with national and international development agencies to deliver the development impact of the research. There has not been unanimity amongst donors, however, on what this means in terms of expectations of funding flowing through the CRPs to non-CGIAR partners.

_Evidence provided by TF members:_ Discussions highlighted the concept that the way the call for proposals is shaped against priorities, can enhance the possibility of forming outcome-oriented partnerships. Box 1 describes the European Commission multi-actor approach to partnerships, where funds are available to all partners, not just researchers.

**Box 1 Experience of EC – quotation from Hans-Joerg Lutzeyer EC Research and Innovation Directorate**

_The multi-actor approach aims at more demand-driven innovation through the genuine and sufficient involvement of various actors (end-users such as farmers/farmers' groups, fishers/fisher's groups, advisors, enterprises, etc.) all along the project - from participation in the planning of work and experiments, through to execution, dissemination of results and a possible demonstration phase. The adequate choice of key actors with complementary types of knowledge (scientific and practical) should be reflected in the consortium and in the description of the project concept, and result in a broad uptake of project results. The multi-actor approach is more than a strong dissemination requirement or than what a broad stakeholders' board can deliver. It should generate innovative solutions that are more likely to be applied thanks to cross-fertilisation of ideas between actors, co-creation and generation of co-ownership for eventual results._

It was also noted, however, that making partnerships an explicit part of programs can make attribution of impact more complex.

The TF also discussed the increasing importance of partnering with the private sector. Parts of the private sector have moved into core areas of CGIAR research in recent years and this needs to be considered in terms of CGIAR comparative advantage. _The TF believes that the ISPC should be a key player in taking an overview of strategies for effective partnerships along the research for development continuum._ This could draw on the experience of the EC as described in Box 1.

4. _An assessment of the current System structure_
The budget for the CGIAR is approximately only 3% of the total funds spent on agricultural research for development (AR4D) globally, a big change from when the CGIAR was created. Since the creation of the CGIAR in 1971 with its initial focus on crop and animal breeding, other significant players have increased their funding for agricultural research for development (AR4D). Parts of the CGIAR, and the System collectively, continue to play a role in contributing to global goals (the SDGs) and shaping the global effort. Given the strengthening of some NARS and increased involvement of the private sector, the CGIAR needs to regularly review its position in the global research system and to align its effort (and funding) with global research players. It needs to partner with appropriate entities (increasingly with SMEs, industry, NGOs and development agencies) to enhance the transfer of knowledge along the research for development continuum.

Leadership: Currently, the CGIAR corporate/strategic leadership appears fragmented and complex from outside the system. Scientific quality issues are influenced by many activities ranging from the setting of strategy to the choice of methodologies and quality of analyses, through access to the breadth of scientific capabilities, partnership strategy and performance to impacts and impact assessment and varying degrees of responsibility for these functions are currently spread across the following entities:

- ISPC (SPIA included)
- IEA
- 15 CRP leadership teams
- Independent Science advisory panels for each CRP
- 15 Center leadership teams
- Center Boards of Trustees (including their Committees)
- Consortium (Board and Office)
- A host of supporting institutions or individuals commissioned by the bodies above.

There are multiple foci of leadership, which has led to the lack of an effective mechanism to ensure that action is taken on recommendations from the ISPC or on allocation of resources according to performance. Like the CGIAR, CSIRO created multi-disciplinary research programs to address the complex challenges of the 21st century, resulting in a similar dual form of governance. Creation of the cross-cutting programs were viewed as a success, but the dual layers of governance were seen as a hindrance. CSIRO has recently moved to a single form of governance on the program (Flagship) axis (see Box 2).

Box 2 Experience of CSIRO – quotation from Brian Keating to show their rationale for evolution to a model appropriate for the challenges of the 21st century

Prior to 2000, all the power sat with CSIRO Divisions and the Chiefs of such Divisions. There was a Chief Executive and Board and a corporate administration office but all the action was in the Divisions and staff generally felt they joined a Division of CSIRO more than joining CSIRO as a national entity itself. These Divisions competed furiously in the marketplace and (with some notable exceptions generally in the smaller regional labs) worked in disciplinary and divisional silos. In effect, this can be described as 40 separate small businesses (they were about 200-300 people strong) operating under a franchise called CSIRO. Each Division had its own buildings, sites, HR and finance teams, communications etc. They each had their own independent scientific advisory mechanisms and strategic planning mechanisms. The “corporate” entity tried to put in place an overarching strategic framework and investment prioritization framework (attractiveness and feasibility matrix) but the traction was minimal.

By around 2000, it became clear that this sort of franchised CSIRO was not well positioned to offer a unique broad based scientific approach to large complex national or global challenges. We needed to drive towards a more “joined up” capability with fewer internal boundaries and a greater focus on the desired impacts. The mantra was “one CSIRO”. The Flagships became that strategy and they also drove a reworking of the “support services” (such as finance, HR, property, communications etc) towards a consistent shared service model across the organisation. Over the last 12 years, structures have evolved in CSIRO but the principle of a
The inclusion of a performance management based framework in the next round of CRPs and the simplification of the governance infrastructure should help, but is not the complete answer. Most research organizations dispersing this level of funding would have scientists on their Council, this is not going to be the case for the new System Council. It may be expected that the ISPC will fill this gap, but if so it needs to be given the authority to ensure that its recommendations are acted on, by the implementer at the System level, the SO, while remaining independent from the System.

Donors: In current times when government departments and agencies which fund research for development are (in some cases) replacing their internal expertise on agricultural research matters for developing countries with generalists, there has been an increasing tendency for funders to rely on the advice of the ISPC with respect to program proposals and other aspects of science. The current system functions in this manner for the CRPs, but currently less than one third of the funds to the System flow through Window 1. While CRP proposals and their appraisal by the ISPC formally include research funded through all sources of funding, the nature and objectives of individual projects and programmes within CRPs funded through Window 3 and bilaterally are frequently not subjected to external (to the relevant Center) peer review. Many of these projects have small budgets, for which hence external peer review would not be cost-efficient, but there are a number of large projects which could benefit from external peer review and some donors have already expressed interest in broadening the ISPC’s remit for ex-ante assessment beyond the CRPs.

The TF recognises the importance of the ISPC retaining its independence separated from management functions, but considers that its position within the CGIAR structure (as a bridge between the funders and the implementers) means that it is best placed to ensure that action has been taken on SC approved recommendations and to recommend sanctions if delivery falls short.

5. Vision for the future

The CRPs are viewed by many as being one of the main positive outcomes of the 2009 Reform process (Beddington et al. 2014). Final Report from the Mid-Term Review Panel of the CGIAR Reform) and a number of the Evaluations of the CRPs have been very positive. The concept of Centers working together to address Grand Challenges has been welcomed and has potential to enhance progress towards delivery of the SLOs. Yet ISPC and CO commentaries on some of the Extension proposals and Evaluations of the first round of CRPs have identified where some CRPs have moved too far down the R4D continuum, i.e. beyond research towards development. Donors have also expressed concerns about an uneven quality of science across the System. This has contributed to decreased funding into Windows 1 and 2.

The lack of action by some CRPs on the ‘must-have’ points (which were conditions of funding being granted) provided by the ISPC and Fund Council as evidenced in the Extension proposals, suggests that some sanctions are required. One reason given is that many scientists in the CGIAR are unaware of the ISPC. The TF believes that this is partly due to the disconnectedness referred to earlier and thus they advise the need for greater consultation of Centers, including DDGs-Science and/or members of the CRP Independent Science Panels, particularly in discussions of new directions. This greater interaction needs to be achieved without compromising the independence of the ISPC, which can still be maintained by appropriate use of recognised experts external to the CGIAR. The TF considers ISPC’s role should be to collate evidence from across the System, analyse it to identify issues (strategy,
prioritisation, science quality and likelihood of impact) and make recommendations to the System Council on action to be taken.

The TF considers that the ISPC needs to take the lead in providing clearer direction, through consultation with the donors amongst others, on what is the most appropriate position for CGIAR scientists along that continuum. This is likely to require an in-depth analysis of the current comparative advantage of the CGIAR, including an analysis of the appropriate (relative to delivery of the SRF) skills-base.

5. (i) The future ISPC - overview

From the foregoing, the TF expects the ISPC to provide intellectual leadership in giving scientific direction to the CGIAR at the system level. In future it should have a clear role in leading Scientific Foresight and Prioritization, although this should involve engagement with scientific leadership in the CGIAR and with donors, but with the ISPC tasked with providing an objective overview. In terms of enhancing science quality, the ISPC should have a role in co-ordinating all sources of evidence (e.g. IEA evaluations, reviews available at CRP and Center level and the ISPC’s own assessment of proposals), and looking at all research conducted by Centers that is mapped and reported within CRPs irrespective of funding source, to identify issues and recommend actions to address any failings (the SC to agree a plan of action and the SO to implement it). In terms of partnerships, the ISPC should again draw on all sources of evidence both from within the CGIAR (including GFAR, Centers, CRPs and evaluation reports) and externally to identify areas of good practice for the smooth operation of the research to development continuum as an analysis of the CGIAR’s comparative advantage in specific science areas, relative to the evolution of major partners such as the private sector and NARS. The ISPC (through SPIA) will measure system-level impacts and provide a guide to best practice in impact assessment for CGIAR programs, with the wider ISPC also building on its findings on partnerships to advise on the strengthening of a culture of impact across the System. The new pillars for the ISPC together with the proposed communities of engagement are outlined in Table 3. This will be developed by the end of 2015 into a Theory of Change for the ISPC as the basis of a communication strategy, continuing to provide its outputs both as scientific publications and as advice to donors for decision-making.

Table 3 Revised pillars, sources of evidence and intermediaries for the ISPC

<table>
<thead>
<tr>
<th>Revised pillars</th>
<th>What are intended outcomes</th>
<th>Who will deliver those outcomes</th>
<th>Who are the intermediaries</th>
<th>Where does evidence/input (to ISPC) come from</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foresight and prioritization</td>
<td>CGIAR research that is recognized globally as cutting-edge and relevant (to the SLOs of the CGIAR) research questions as</td>
<td>CRPs, Centers and wider agricultural research community</td>
<td>Decisions on future direction will be taken by the System Council so the Foresight will be reported to them Decisions on prioritization will be implemented</td>
<td>Since Foresight and prioritization are going on both globally and within the System, all this information needs to be taken into consideration and ISPC Council and secretariat need to have relevant expertise and to be able to call on additional external</td>
</tr>
</tbody>
</table>
### Science quality

| CGIAR research programs and Centers recognized as delivering high quality science | CRPs, Centers and partners | The ISPC should be tasked with following up with the SO on the implementation of SC approved science quality measures and reporting to the SC if not satisfied. | There are a large number of bodies across the System which are involved in giving advice on science quality. The ISPC is the main body giving ex ante advice on proposals and should also have responsibility for collating all the advice and analysis to provide a synthesis of the lessons learnt to the SC for funding decisions and to the SO for implementation. |

### Partnerships

| Enhanced delivery of science into the SLOs | CRPs, Centers and partners | The ISPC should be in a position to provide direction to GFAR and the IEA on the effectiveness of their roles as part of the overall System functioning on partnerships | Other parts of the System also have responsibilities on partnerships – the ISPC should be seen as the coordinating body looking at the whole continuum from science partnerships to delivery of outcomes. Both Council and secretariat need to have relevant skills and to be able to draw on academic experts in how to make R4D partnerships work. |

### Impact assessment

| Greater confidence of the donors in the CGIAR system and more evidence-based decision-making | CRPs and Centers | Impact assessment community of practice, IEA | Studies commissioned by ISPC (SPIA) and the analysis from the Partnerships and Prioritization areas of work |

### 5.(ii) What this means for the System as a whole:

Table 4 illustrates the new roles of the ISPC, alongside those of the IEA and SO.

In the TF’s view, the ISPC should set the clarity of expectation, providing mechanisms for gathering foresight data and convening scientific foresight, making a CGIAR-relevant synthesis and indicating priorities for investment. The ISPC should aim to integrate and synthesize available evidence to inform strategic direction for the system, with decision-making the preserve of the FC/SC and responsibility for management remaining with the
CO/SO. CRP evaluations commissioned by IEA focus on program performance. The IEA will discuss the results of evaluation of CRPs with the ISPC, who will integrate this evidence with other sources of evidence to identify actions to address issues and convey this global analysis to the FC/SC.

The FC/SC is the decision-making part of the System and the ISPC (through its Chair and Executive Director) is an active observer, participating in discussions and on occasions facilitating workshops at bi-annual meetings. The TF suggests that in order to help forge a common agenda for the CGIAR the ISPC should aim to lead discussions on strategic science issues at the FC/SC meetings. The ISPC has the unique role of being a bridge between the funders and the doers and is connected to the international scientific community. The guidance provided in terms of scientific direction would help both funders and the CGIAR.
Table 4: Responsibilities for science-related functions in the CGIAR

<table>
<thead>
<tr>
<th>ISPC</th>
<th>System Office</th>
<th>IEA</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Scientific Foresight</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(i) Set process according to System Council requirements/ schedule; (ii) Manage, using necessary internal and external data, partnerships and studies; (iii) synthesize advice for the System Council; (iv) Provide knowledge from case study or system-wide assessment of prior outcomes and impacts.</td>
<td>Provide relevant data inputs from CRP or system-level work (e.g. geospatial, other), knowledge of new science and regional developments and learning from CRP progress monitoring.</td>
<td>Provide learning from periodic CRP and non-lead Center evaluations.</td>
</tr>
<tr>
<td><strong>Prioritization</strong></td>
<td></td>
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<tr>
<td>(i) Coinciding with major strategic foresight exercises, provide update on priority setting of the portfolio to the System Council; (ii) At roughly 2yr intervals select emerging area/areas of new science and provide scientific assessment of its value to the CGIAR, including capacity and skills needs to operate, with guidance on relative priority for funding versus the existing portfolio; (iii) Evidence from prior IA into foresight; (iv) Anticipating appropriate methods for assessment of impacts from new areas of science and their development-related outcomes and impacts.</td>
<td>Providing feed-back on progress and adaptive management of CRPs. Identifying and co-convening assessments of areas of new science and opportunities.</td>
<td></td>
</tr>
<tr>
<td><strong>Science quality</strong></td>
<td></td>
<td></td>
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<tr>
<td>(i) through the operation of independent program review and other science proposals; (ii) through receiving and distilling learning from CRP evaluations; (iii) through convening or brokering science discussions with outside experts and internal science groups (mobilizing science); (iv) Through conducting high quality, system-level IA and enhancing IA capacity of CRPs.</td>
<td>Review of CRP progress and implementation plans and provision of system-level science support and guidelines (e.g. for data, IP, genebanks, site efficiencies.)</td>
<td>Science quality is included in evaluations, among other evaluation criteria.</td>
</tr>
<tr>
<td><strong>Monitoring and evaluation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Receiving and discussing CRP evaluation reports to maximize lessons learned and with opportunities to review and discuss implementation plans with Lead Centers.</td>
<td>Leads on management and reporting of CRP and system-level monitoring and reporting.</td>
<td>Conducts periodic CRP evaluations and evaluation of the system.</td>
</tr>
<tr>
<td><strong>Impact assessment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(i) enhanced linkages between ex post and ex ante IA for foresight purposes; (ii) Provides quality control for CRP impact assessments</td>
<td>Uses and reports on CRP level impact assessments as part of overall CRP evaluation.</td>
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</tbody>
</table>
6. Recommendations

6.1 Foresight and prioritization

The TF distinguishes two top levels of foresight: a first level of strategic foresight (including political dimensions) which would normally be designed and implemented by the ‘management’ of an organization. Given the different visions between donors and the existence of many foresight exercises in this area undertaken by others, it may not be appropriate for this type of foresight to be undertaken by the System (that is a question for the SC not the TF), but the System Council will at least need to provide an outline of their expectations (e.g. the Results Framework in the current SRF) on a regular basis to fit with the cycle of SRF revisions. The ISPC could repeat the facilitatory role it took in this process in 2015. A second level of foresight is scientific foresight which should be led by the ISPC. This should take account of scientific advances, of the skill base of the System, of the conclusions of analyses commissioned by the ISPC and of foresight work being undertaken within the System (e.g. at the research program level).

(i) Strategic foresight at the global challenge level\(^2\): If the SC decide to commission a Strategic foresight exercise, then it should begin with sketching the state of the world with a 20-30 year horizon. A strategic framework could be directed towards a big global challenge – in CGIAR terms, say, at the System Level Outcomes (SLOs). The intent is to examine major drivers (e.g. population and food demand, climate, resource scarcity) and to construct scenarios of how the future world could be altered by such drivers, so that the key areas for research and research-related pathways towards alleviation of major threats are identified. There is a plethora of extant data and studies (UN agencies, IFIs/donor agencies, foresight projects of different kinds, think tanks – as well as CGIAR programs and their collaborators\(^4\)) to provide acceptable background data. However, questions would be framed through the CGIAR’s concepts of the beneficiaries it is trying to address, and its intent to provide international public goods from international agricultural research. It should include substantial stakeholder interaction and engaging experts in the derivation of the research.

An alternative to the SC designing a separate foresight exercise would be for the ISPC to critique what is presented by others, in the context of the Results Framework which will be updated by the SC.

(ii) Scientific Foresight to inform prioritization across the System and within programs: Generally, this is thought of in terms of how emerging trends or specific technologies (e.g. bioinformatics, precision agriculture, etc.) could both affect the future and provide opportunity to enhance or alter existing avenues for research and implementation. It is not, however, something that can be done in an isolated unit divorced from the research teams –

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\(^2\) The TF has not adopted a definition of this function, but a simple framing could be: "Foresight: A systematic, participatory and multi-disciplinary approach to explore mid- to long-term futures and drivers of change." : [http://www.fao.org/docs/eims/upload/315951/Glossary\%20of\%20Terms.pdf](http://www.fao.org/docs/eims/upload/315951/Glossary%20of%20Terms.pdf)

\(^3\) Equivalent to Strategic Planning

\(^4\) See Annex: the literature consulted is just a sampling of what is available. There is currently a CGIAR mechanism for identifying potentially useful literature through update briefs from the Consortium Office in association with CIRAD.
while individual “systems thinking” scientists or a specialised unit (strategic foresight) may be able to stimulate the effort, the analyses and ways of thinking about the research targets and approaches need to be systemically embedded into the culture and operations of the research teams. At one extreme, this can be as simple as the formulation of a research hypothesis to be tested, which is key to scientific relevance and quality. Scientific foresight will be conducted at the program level, led by the researchers and at the portfolio level by the ISPC. The role of the ISPC with respect to scientific direction at the program level should be restricted to critiquing what is proposed by the researchers, in light of the strategic framing at the portfolio level. Such critique requires good knowledge of a program's research activities, progress, what has worked and what has not. This can lead to identification of challenges and bottlenecks experienced in programs as well as potential new approaches or collaborative partnerships to address those challenges. The two levels of Foresight should be led separately (by the Centers/CRPs and the ISPC) but the ISPC should convene a System-wide network of CGIAR researchers, the IEA and the SO to ensure the exchange of relevant information.

The ISPC has produced documents in the past on priority setting and trade-offs etc. but these refrained from providing a blueprint for doing this at the level of the portfolio. Funders are requesting however, more guidance from the ISPC in setting system priorities. Providing a framework for decision-making might be as important as prescribing percentage resource allocation since inevitably CRPs are supported by unconstrained Window 1 and 2 funding and by more constrained W3 and bilateral project funding. There is thus the need for the ISPC to develop a framework on prioritization against which all significant funding opportunities can be easily assessed.

A component of prioritization is striking the balance of research across the portfolio and within CRPs: programs will be developed in the context of the SRF, but there is no single scenario for deciding on balance of approach. An “attractiveness/feasibility” framework could also be used to set priorities across a very broad set of research areas. Clarity would come from understanding the niche of CGIAR in the R&D spectrum for any particular piece of work and that there was a need to balance discovery and delivery FPs according to context. End user and market prospective should be used to guide what is expected from research, but understanding donor requirements is important and the ISPC should propose and lead discussions on strategic issues (such as CGIAR positioning along the R4D continuum and the amount of ‘high risk high reward’ research which might strengthen the pipeline of research) at appropriate SC meetings.

The ISPC should ensure it has expertise on foresight and prioritization both within the Council and the Secretariat.

**Recommendation 1:** The ISPC should be tasked with conducting scientific foresight exercises for the System. These should draw on multiple approaches such as economic modelling and analysis of comparative advantage. These exercise should be integrated into a prioritization framework, which also takes account of science quality, to be used by the SC in taking decisions on allocation of resources. Major reviews on foresight/strategic planning would be timed to inform revisions of the Strategy and Results Framework and

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5 Most agencies initiate the process through expert panels and Delphi processes. Because of the difficulty in doing this impartially, CSIRO report that they are currently exploring a more comprehensive and quantitative strategic investment framework for portfolio prioritization and performance tracking.
future calls for program proposals, but the overarching framework would also identify strategic questions of specific relevance to the System, for which an analysis is lacking and which could be filled by the ISPC undertaking or commissioning analyses on specific topics in the time between major SRF revisions. To ensure ‘buy-in’ from across the System and recognizing that work on foresight and prioritization will also be happening within Centers and CRPs, the ISPC should lead the development of a System-wide Foresight and Prioritization network to draw on all relevant information and avoid duplication of effort. Recommendations on prioritization and principles for future strategy development should, however, come from the ISPC to the SC to ensure an objective assessment, without bias from individual Centers, CRPs or donors. The ISPC should also lead discussions on strategic science issues at FC/SC meetings.

The implications for the CGIAR System:

While it is recommended that the ISPC take the lead at the System level in terms of scientific foresight and prioritization, this should draw on activities being undertaken within Centers and CRPs and also on expertise from outside the CGIAR. Both processes need to be concluded in time to inform the next major update of the SRF and the next call for CRP proposals. Since the 2 processes may take 3 to 5 years, it is suggested that planning for this process begin as soon as possible, taking account of the current constraints on the System of preparing and reviewing the full proposals during 2016. IFPRI is currently leading on a within-System prioritization process and the ISPC is exploring how to feed expert opinion into a System-wide process of prioritization. The FC should advise on the timing of implementation, relative to the creation of the new System Council.

It is possible to prioritize a portfolio in the abstract (trends, opportunities, comparative advantage) but an effective prioritization framework must take account of what it is feasible to do. It is a governing body decision how much “risky” research will be taken on and this would usually come from partitioning the budget between short and long term targets. The ISPC might provide advice on this partitioning by major research area - as a one size or set percentage of “risky” (or long time to payoff) research – is probably not useful generically across the board. Risks from high-risk projects could be minimized by taking into account the gap that exists between what would be required to succeed and the current human and institutional capacities of a program.

Implications for the ISPC:

The ISPC will develop its work with a 4-5 year strategic horizon, to commission scientific studies to fill gaps identified by the ‘Foresight and Prioritization’ group and to explore the potential of scientific advances (e.g. Big Data, new technologies). The role of the ISPC would be to provide leadership and direction in the collation and synthesis of evidence, leading to the provision of advice to the FC/SC for decision-making.

Membership, staffing and resources:

ISPC Council membership and Secretariat should be enhanced with expertise in foresight and prioritization. The timing of recruitment to the Secretariat is likely to be the latter half of 2016.

6.2 Science Quality: science leadership and capacity, science management and ex-ante assessment
(i). Science leadership and capacity: For an organization such as the CGIAR, the concept of science quality applies to all levels of research effort, e.g. research design, methods, programmatic development, management, monitoring and evaluation of program implementation, interactions with partners, data management and the reporting of results, and the assessments of research outputs and development outcomes and impacts, and the learning and modification of approaches and behaviours which come from these activities. The budget and duration of the CRPs, however, mean that very few details on the science which will be undertaken can be given, compared to proposals submitted, for example, to the EC and national science funding bodies. In the current assessment of pre-proposals, therefore, one of the criteria for assessment of science quality is the track record of the research leaders. In 2014 the Consortium Office conducted a CGIAR-wide review of publications and publication quality as a comparability measure with academic and other large organizations. Assessment of peer reviewed publications by individuals is a process used in the UK university system on a 5 year cycle, to inform the allocation of ‘unrestricted’ funding between universities. Such assessments are costly but proven\textsuperscript{6} to increase the quality of science delivered. Review of the quality of publications is one of the criteria in the IEA evaluations, but those evaluations are of programs rather than of individual scientists. In the past, the ISPC conducted reviews of Social Science and Natural Resource Management capacity, but the general perception (from emerging evaluation reports) is that these areas are still weak. Further reviews (e.g. of nutrition skills) could be appropriate, but there needs to be buy-in from across the System that the results will be acted upon. This raises 3 issues: i) there are a number of panels and committees across the System which have responsibility for science quality and there is a need for agreement on the criteria for assessing science quality; ii) there is a need to identify areas of skills gaps across the System to inform the processes of prioritization and strategic planning; iii) there could be benefits of conducting System-wide review to ‘bench-mark’ CGIAR scientists with their peers in major research organizations. The TF considers the first 2 fall within the remit of the ISPC and are expanded on in the recommendation below, while the third should be the responsibility of the SO in collaboration with Centers.

(ii). Science management: the ISPC is separate from the management of the System and responsibility for evaluating management rests with the IEA. That said, the TF has identified the need for greater coherence between the CO/SO, the IEA and the governance and management at Center level to make optimal use of all evidence on the performance of the System. The ISPC should have a convening role in collating evidence from all sources on science management, analysing it and providing recommendations to the FC/SC for implementation through the CO/SO.

‘Management’ (Center and CRP) should have a clear responsibility for finding the appropriate balance (to maintain science quality) to be struck within each CRP, between “discovery”? and “delivery” components, with the role of the ISPC being to provide a ‘challenge function’ during proposal assessment and when considering the evaluation reports.

\textsuperscript{6} Moed (2008) Scientometrics 74, 153-161

\textsuperscript{7} The TF notes that the word “discovery” has been borrowed from the genomics field, but that there is no commonly agreed definition of these terms as currently used for CGIAR research programs.
iii. Proposal assessment: Given the size and duration of the CRPs, it is easier at the proposal level to judge likely science relevance than science quality although this can be augmented by review of hypotheses, as well as the track record of the scientific teams, their scientific advice, their infrastructure, partners and relevant management capacity. The TF is strongly supportive of including site visits and team interactions during proposal assessment to gain a more realistic view of capacity and feasibility (than apparent only from written proposals), noting however, that this will add to the scope and costs of proposal review compared with prior practice. The current call for CRP proposals is a 2-stage process with pre- and then full proposals being submitted. It is already agreed that there will be ‘face-to-face’ feedback after the decisions on the pre-proposals. That feedback could include recommendations on site visits for specific CRPs where concerns were identified.

Recommendation 2: The ISPC remit should be expanded beyond its current focus on ex-ante assessment of science quality within CRPs. It should have a remit to ensure that management of science quality is consistent across the System. This will require: a) agreement between System bodies with a remit for science quality on criteria and methods of assessment; b) oversight of mechanisms to ensure that all significant programs (however funded) have been subject to external peer review; c) closer working with IEA on assessment of science quality in the evaluations; d) a responsibility to report to the FC/SC at each meeting on what has/has not been actioned with respect to science quality, with recommendations on what needs to be done. Implementation of this expanded remit will require closer engagement not only with the IEA and SO but also with science committees of Center Boards and Independent Steering Committees of CRPs. As part of this new approach, the IEA, ISPC and CO/SO should develop a framework for closer working between these entities in relation to the identification of key science issues to be addressed in evaluations. The TF also suggested that the ISPC should continue to challenge relevant capacity within the System within scientific domains and the capacity in terms of cross-disciplinary working through regular reviews.

The implications for the CGIAR System: In 2015 less than half of the funding from the Trust Fund is through Window 1. The majority is under the direction of donors. One of the aims of the Reform process was to cut down on the thousands of very small projects with associated high transaction costs. There are still thousands of small projects but there are also some significant projects (in terms of scale) from donors that are not subject to ex-ante external peer review. Discussions should take place to identify how many of these are not externally peer-reviewed and whether a cost-effective mechanism should be put in place to ensure they are.

Responsibility for managing science quality remains with the Centers and their Boards have responsibility for ensuring that high standards are maintained. Yet evidence (from donors and evaluation reports) suggests that the quality of science across the CGIAR is variable. Having a consensus on criteria for science quality could be a step forward. Given the 2 levels of governance (Center and System level), to ensure buy-in, it would be appropriate for collective discussion on identifying actions which need to be taken, before the ISPC presents recommendations to the FC/SC.

Regarding reviews of skills across the System, agreement would have to be reached with Center Boards on a rolling schedule of scientific domains for review and Centers would have to be given the opportunity to state how they would respond to any recommendations. Such response could be co-ordinated through the SO. Expectations should be stated by the SC and
the ISPC would report on progress to the SC, with implementation being co-ordinated by the SO.

6.3 Science quality – Program monitoring and evaluation

Since 2012, the IEA has had responsibility for evaluations at the research program level (expected to be at roughly - 5 year intervals). These are conducted by independent evaluation teams that have both evaluation and science expertise. The evaluation use triangulation of multiple sources of evidence, including peer assessment, for deriving at findings and conclusions. Quality of science is a core criterion in research program evaluations and it is assessed from a number of perspectives taking the specificity of different research areas (such as breeding) into account. Major instruments and approaches are review of publications and other outputs and research processes, assessment of researcher quality and perceptions of the quality of science management and advisory panels. As per the Evaluation Policy, more emphasis than in the past has been put on learning from evaluations, in addition to accountability. These would feed into the cross-System group to agree on criteria for assessing science quality referred to in the previous section.

Review and evaluation of major components of the portfolio in a more horizontal fashion than by evaluating single programs is also important. The IEA has a mandate to evaluate cross-cutting areas of importance to the majority of Centers/CRPs, such as capacity development or other topics. This has been under-investigated in the current CRP-focussed stage of development of the System. The ISPC’s strategic reviews contribute to accumulating information about science quality issues across the System and sharing and coordination with evaluations is important.

Centers themselves undertake to a variable extent reviews of their research (Center Commissioned External Reviews). Although most of Center research is evaluated as part of research program evaluations, the Centers as institutions are not currently evaluated. As Centers lead, or contribute key building blocks to CGIAR research programs, they would also seem to be a unit of science expertise and quality that should be externally assessed.

There is a complementarity that needs to be further developed between IEA evaluation and ISPC advice (e.g. where the IEA consults with the ISPC on research aspects for evaluations, for example on science quality issues and the ISPC provides its perceptions on proposals through ex ante review and leads discussion on completed evaluations). Actual learning through evaluations, not only by the research programs but by the System as a whole, is essential to build a results-based culture. Currently evaluations are not appropriately considered by the Fund Council and it is unclear to what extent the FC has seen them as a vehicle for learning. However, the completion point of any evaluation should be to evaluate what was learnt and the ISPC can play an important role in this. There is a need to link these streams together for instance by including Leaders of evaluation teams in strategic discussions to enhance that learning and to help influence future directions. There is a role, therefore, for more formal interaction between the ISPC and the IEA on science quality and, for instance, on strategic cross-CRP considerations before it starts. A practical arrangement following an evaluation would be that the ISPC would receive the evaluation together with the management response on future actions. A formal space in the ISPC calendar should be introduced for such interactions and discussions. In this way the ISPC is not involved in the
commissioning and management of evaluations, but will better understand the recommendations of the evaluation, the program context and the likely consequences of the implementation plan to address the recommendations. A monitoring plan is then based on the level of concern: if the ISPC is comfortable with the evaluation and the response, a standard interval for program reporting (to be decided) and evaluation is followed. If concerns are raised either by the evaluation or the management plan (in whole or in part) the ISPC should monitor the program more closely i.e. ask to hear from the program either more frequently or until an issue was resolved. Science quality could be one such concern. The program together with the management body for implementation should be tasked, but progress on the main identified weak points could be kept under review by the ISPC by asking for milestone reporting.

The CO is responsible for monitoring of the CRPs and commenting on their Annual Reports and this should continue with the SO. ISPC should receive from the CO/SO all relevant info (including Annual Reports) to enable it to make and Annual Report to the SC on science quality issues.

The Consortium is currently formally responsible for making proposals to the FC for allocating additional budget or for dealing with the effects of budget shortfalls in W1/W2 funds to CRPs. In future the ISPC should provide the SC with a prioritization framework (referred to in the first recommendation) which needs to take account of evaluation reports. The ISPC has not to date had the remit for providing advice on budget allocation, although there have been suggestions that this should change at the time when proposals are being reviewed.

Recommendation 3: The TF recommends that the current division of responsibilities between the CO and the IEA for program monitoring and program evaluation should be maintained. However, there needs to be increased coherence, linkages and coordination between the different System entities with respect to identifying and implementing actions required to ensure consistently high quality of science across the CGIAR. The ISPC should be tasked with ensuring effective dialogue and exchange of information on science quality and future science direction and drawing on all relevant information to make annual reports to the CGIAR System Council, recommending actions to address science quality issues identified through any of these processes. This should start with the ISPC taking the lead in engaging the 3 entities to agree a formal framework for addressing issues of science quality across the CGIAR. The success of this approach will be assessed relative to the remits of each entity in the evaluations of the individual entities (IEA, ISPC and CO/SO) starting in late 2016 and relative to the performance of the System as a whole in the evaluation of the System which is now being proposed to take place in 2018. The IEA be charged with conducting the review of non-lead Centers contributing to the CGIAR portfolio at roughly quinquennial intervals, involving the ISPC in the planning of such Center reviews and in discussion of the science quality assessments following the reports’ findings.

The implications for the CGIAR System: The TF discussed various options including whether to maintain the position of the IEA separately from the ISPC. The TF did not conclude on the latter especially in view of the position agreed at the last FC meeting and re-stated in the Transition Plan (dated 29 July) to maintain IEA as an independent unit. The TF
recommendation for closer working between the different identities to act on evaluation reports would therefore benefit from the development of a formal framework on the exchange of information at the start and end of evaluations. Interaction has taken place on an ad hoc basis but would benefit from appropriate transparency.

Implications of science quality recommendations for the ISPC: The proposed role is again one of providing intellectual leadership and co-ordination across the System. This would be taken forward by a sub-set of Council and Secretariat members working together. In addition, more formal interactions between the ISPC and the IEA being seen as a priority for development by the new Executive Director once appointed.

Membership, staffing and resources:

No additional staff resource would require to be recruited but the sourcing of professional input on Communications would free up scientific staff currently deployed part-time to cover that skill gap.

6.4 Partnerships

GFAR has a remit within the CGIAR System to ‘mobilize all stakeholders involved in agricultural research and innovation systems for development, while the ISPC has interpreted its remit as ‘mobilizing science’ partnerships. No System entity has thus had responsibility for oversight of partnerships along the whole of the R4D continuum. The ISPC should not encroach on GFAR’s remit, but does have an important role to play in understanding the processes by which partnerships with stakeholders can link research to impact.

Recommendation 4: Partnerships are an important part of the delivery mechanism of both science quality and impact. The TF recommend that the ISPC expand its role on partnerships to develop a strategic vision on partnerships along the whole R4D continuum. This will require close engagement with GFAR and the SO as well as Centers and CRPs. This could draw on the experience of the EC as described in Box 1. As part of this, ways of strengthening a culture of impact awareness across the System should be explored. The ISPC should therefore convene a network on partnerships for impact with representation from across the System (including GFAR, IEA and the SO) to share knowledge on partnerships both from the literature and as it emerges from monitoring of partnerships within the System. There should be exchange of ideas on an annual basis with the network on foresight and prioritization.

Implications for the CGIAR System

An extended remit for the ISPC on partnerships would need to engage more closely with other parts of the System including GFAR, the SO and those responsible for partnerships in CRPs. A co-ordinating network for the exchange of lessons learnt to be convened by the ISPC is proposed.

Implications for the ISPC:

The proposed role is again one of providing scientific leadership and co-ordination across the System. This would a sub-set of Council and Secretariat colleagues working together to deliver.
Membership staffing and resources:

The Secretariat has recently recruited a member of staff at a senior level with experience in partnerships – there is a need to recruit a more junior staff member to provide part-time support to this activity.

6.5 Impact

Positive development outcomes from agricultural research can take many years to be measurable but many government agencies or departments require evidence of past impact to justify continued funding. Impact assessment should be carried out, therefore, as a continuous function, both to determine the level of success of previous research pathways, and glean lessons about adoption, feasibility and the influence of changing contexts which can be fed into new foresight exercises. More specific “what if?” analyses (ex ante impact assessments) can also be considered as part of foresight (see section 5.1). Impact assessment is likely to be more honest and useful if it is approached in the context of continuous learning and improvement – rather than a one-off “pass or fail” test.

The ISPC’s Standing Panel on Impact Assessment (SPIA) has shown important leadership in ex post impact assessment, conducting IAs, but the strength has previously been in impact of crop breeding (with more rigorous methods for validating impact currently being tested); other “systems improvement and policy” domains are under investigation, particularly through the new donor support for the Strengthening Impact Assessment in the CGIAR (SIAC program) but have not yet been as comprehensively addressed. Programs are expected to fund program outcome/impact assessments from program funds. However, the design, collection and storage of IA-relevant data is still underfunded in the CGIAR as a whole.

A community of practice is being built in IA but progress across some of the new fields to be evaluated is relatively slow, dependent on prior Center data (not always properly collected or stored). As part of ensuring that more rigorous methods for assessing impact are used across the System, ISPC (SPIA) will initiate a quality control process for impact assessment studies that might be used by a CGIAR Research program for validating evidence of impact when the program is later evaluated. The lessons learned from more rigorous IAs will also feed back into the work on prioritization.

As discussed in the earlier section on partnerships, there is also a view that the ISPC should provide intellectual leadership in taking an overview of strategies for effective partnerships along the research for development continuum. Through its current study on partnerships the ISPC hopes to to provide clear practical guidance on partnership policy and practice, thus encouraging the appropriate research linkages and the partnerships with other players contributing to the innovation context of development. Success in this respect should enhance the ‘impact culture’ across the System.

Recommendation 4: The TF recognises the importance to donors of the independent recording and enhancement of the capacity to create outcomes and development impacts from the work of the CGIAR. This includes the strengthening of appropriate data collection, program-for-impact design and partnerships.

The implications for the CGIAR System

Impact assessment needs to be designed into the research projects and programs at the outset – particularly for research that goes beyond the use of a single technology. However, noting
that the SPIA \textit{ex post} analysis at the System level and the CRP impact design and monitoring are on different time frames, and that to some extent an impact culture is missing at the CRP level, then incentives may be a way to ensure that impact assessment is addressed more carefully by the CRPs. Incentives may be financial but also other sorts of recognition. This would necessitate periodic review for targets met and on which incentives might be based.

\textit{Implications for the ISPC}

The approach within SPIA to strengthen the rigour of IA and to broaden its reach across the System research portfolio should be continued if the funding is extended. Current funding has been provided by a sub-group of donors and a plan for continuation with full staffing and unified resources needs to be developed and discussed.

\textit{Membership, staffing and resources}

The TF notes: It is necessary to plan sufficient funds for impact assessment. There is the possibility of collaboration on the impacts of agricultural research in some cases as there is a current initiative to look at the impacts of European agriculture with FAO and IFPRI.

\textbf{7 Resource and funding implications}

The Council currently has 6 members plus the Chair. The majority of Council members are in full-time employment, with ‘up to’ 30 days expected for Council contributions (in reality member inputs have averaged 15 days in the first half of this year, but with a wide range of days claimed from < 10 to > 20). Council terms are for 2 years, with renewal by mutual agreement. One additional member will be appointed next year. Continuity is provided by the staff employed full-time in the Secretariat, where there are 6 professional posts plus an Executive Director (currently under recruitment).

Strengthening both Council and Secretariat expertise in foresight and prioritization will be important, as will ensuring that those appointed to Council do indeed allocate 30 days of time to Council business.

In the era of the Science Council, Standing Panels were created to address the specific parts of the remit of the Council, such as Mobilizing Science and Strategy. The ISPC did not continue this practice (except for SPIA), however, as it was not successful in all areas. Council and Secretariat response to the recommendations is to propose that for each ‘pillar’ (see below) a senior staff member from the Secretariat and a Council member would take the lead in implementing the relevant recommendation, supported by a junior staff member from the Secretariat and a second Council member. These would complement continuing work of ISPC (SPIA) and on the Science Forum.

These sub-Groups would convene with representatives from across the System as appropriate to facilitate the collation of all existing evidence and to engage in dialogue on what works and doesn’t work at the implementation level, then the analysis and synthesis would be done by the ISPC (drawing on independent experts as necessary) to maintain independence. Recommendations would be made to the FC/SC for approval or not and if approved, implementation would be undertaken by the SO and other relevant actors. The ISPC would have the right to ask for regular updates on progress on the key actions and would be expected to report back to the SC on that progress.
The approximate costs for implementing the recommendations are given in Table 4.

Table 5 Current costs (USD thousand) per pillar plus proposed additional costs (Note: the totals at the level of rows do not equate to the sum of current and additional costs due to reallocation of the time of existing staff)

<table>
<thead>
<tr>
<th></th>
<th>Current resource – staff</th>
<th>Current resource - activities</th>
<th>Additional staff resource</th>
<th>Additional activities resource</th>
<th>Proposed new total staff</th>
<th>Proposed new total activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foresight and Prioritization</td>
<td>172</td>
<td>90</td>
<td>400</td>
<td>300</td>
<td>341</td>
<td>390</td>
</tr>
<tr>
<td>Science Quality and relevance</td>
<td>370</td>
<td>80</td>
<td>100</td>
<td>600</td>
<td>180</td>
<td></td>
</tr>
<tr>
<td>Partnerships</td>
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<td>170</td>
<td>83</td>
<td>150</td>
<td>252</td>
<td>320</td>
</tr>
<tr>
<td>Impact Assessment</td>
<td>484</td>
<td>505</td>
<td>Continuation of SIAC</td>
<td>Continuation of SIAC</td>
<td>484</td>
<td>505</td>
</tr>
<tr>
<td>Communication</td>
<td>29</td>
<td>82</td>
<td>50</td>
<td>82</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Chair and 6 Council members</td>
<td>415</td>
<td>80</td>
<td>0</td>
<td>495</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exec Director + Admin support</td>
<td>546</td>
<td>50</td>
<td>50</td>
<td>596</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating costs</td>
<td>245</td>
<td>50</td>
<td></td>
<td>295</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grand total</td>
<td>3245</td>
<td>1345</td>
<td></td>
<td>4590</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

These costs would be phased in between now and January 2017, with between 30 and 50% of the additional costs expected next year, depending on the speed of recruitment.

Expected benefits to the System

The expected benefits to the System of the new way of working proposed for the ISPC (and hence of the proposed additional costs) would be stronger scientific leadership, which makes greater use of the skills and experience across the System through better co-ordination on key issues. The ISPC would continue to be a body independent of decision-making, providing advice to the Fund Council (and subsequently the System Council), including evidence-based tools for resource allocation, an enhanced understanding of partnerships, regular assessments of progress on improving science quality across the System and identifying new scientific opportunities.

Acknowledgements

The Chair of the TF is very grateful to all the members of the TF who gave their time and experience in contributing to the discussions and sending documents and also to the TF Secretary Peter Gardiner who played a key role in the early days of the TF.
Annex 1

Establishing the Task Force on ‘Strengthening the ISPC’

The Mid-Term Review Panel of the CGIAR Reform Process included the following as one of its 9 recommendations:

‘The responsibilities of the Independent Science and Partnership Council (ISPC) should be elevated to empower it to be proactive in terms of providing strategic guidance, foresight analyses, and assessing and reporting on quality of research results across the system.’

The following Terms of Reference are proposed:

1. Scope out (based on a brief review of good practice) how expert advisory bodies add value in other research funding organisations, both in terms of science and partnership.

2. Summarise what has worked well and what has not worked well in the work of the ISPC (relative to its remit as specified during the Reform process) from January 2011 to date (using work done by the MTR panel and others).

3. Comparing the outcomes of the first 2 ToRs, identify where there are gaps

4. Consider those gaps relative to earlier ‘incarnations’ of science advisory bodies in the CGIAR and identify which parts of roles and remits worked better.

5. Starting from the new SRF and the report of the Governance Options Review team, develop recommendations on how the remit and governance of a ‘more empowered’ ISPC should be specified, particularly, strengthening ISPC capacity in:
   (a) priority setting;
   (b) contributing to the development of the SRF (strategy and results framework) and CRPs (CGIAR research programs);
   (c) undertaking foresight studies and impact assessment; and,
   (d) assessing and reporting on research results and the quality of science, particularly in relation to IEA (the Independent Evaluation Arrangement).

6. Prepare a report by end August 2015.

How we will work

The bulk of the research and analysis will be conducted by staff in the ISPC Secretariat, with input from 2 Council members and consultation will be held with a Task Force of international experts, including representatives from across the CGIAR. It is anticipated that their work will all be conducted virtually, with a maximum of 3 skype meetings.

The composition of the Task Force is:

Brian Keating (CSIRO), Hans-Joerg Lutzeyer (EC), Nora Lapitan (USAID), Yusuf Abubakar (FC), Marion Guillou (CB), Wayne Powell (CO), Sirkka Immonen (IEA), Rodney Cook (Board Chair Representative), Vish Nene (Center Representative); Peter Gardiner (Secretary), Maggie Gill (Chair).