

10th Meeting of the Independent Science & Partnership Council

15 – 17 September 2014

**Ceremonial Hall (Festsalen), University of Copenhagen, Frue Plads 4, 1168
Copenhagen K. Denmark**

END OF MEETING REPORT (ISPC Secretariat, September 2014)

Agenda item 1. Opening of the ISPC Meeting

The ISPC Chair, Maggie Gill, welcomed participants to the meeting particularly thanking those observers who had ‘followed’ the meeting from the originally planned venue in Ghana. She thanked the University of Copenhagen and the CCAFS Coordinating Unit for excellent collaboration in the development of the meeting in such as splendid venue in a short time. She acknowledged the many friends of the ISPC who had also tried to assist when the original meeting plans had to be altered. She opened the meeting and invited Professor Christensen to address the meeting.

Professor Svend Christensen, Professor and Head, Dept. Plant and Environmental Sciences, University of Copenhagen welcomed participants to the Ceremonial Hall on behalf of the University. He noted that the paintings adorning the walls commemorated events such as the inauguration of the University of Copenhagen in 1479 amongst others. In modern times, the University of Copenhagen had become the largest in Scandinavia with around 38,000 students and 50 departments and research centres. It was highest ranked for publication and teaching and had particular strengths in health sciences. The University had interest in collaborating in capacity building in developing countries and it was very pleased to host the CCAFS Director and Coordination Unit in collaboration with CIAT (noting that he had visited CIAT recently). Through the department of Plant and Environment Sciences he believed there were opportunities to link the university with the work of the CGIAR research Centers more closely, through joint Ph.D. projects or dual degrees. He expressed his best wishes to participants for a fruitful meeting and for their stay in Copenhagen.

Agenda item 2. CCAFS – The CGIAR Program on Climate Change, Agriculture and Food Security

Bruce Campbell (CRP Director, CCAFS) presented an overview of the context for future CGIAR work in a warmer world with a more extreme climate, and the role for CGIAR and CCAFS. CCAFS research provides evidence that yield losses (due to climate change) already occur. In the fisheries sector, anticipated yield loss is up to 40% in the tropics, and an increase between 30% and 70% in high latitudes – potentially leading to a redistribution of resources.

Private sector actors (e.g. the re-insurance company, Munich Re) are highly concerned about climate change. While there are concerns about productivity impacts in the agricultural sector, GHG emissions from the sector are significant, particularly in developing countries. One needs to examine if the sector should continue to be excused from mitigation commitments because of food security concerns: the CCAFS view is that the sector should attempt to mitigate outputs and they have proposed a target of 21% reduction in emissions intensity (this is different from absolute emissions reduction, emissions intensity refers to emissions per unit of economic output). A comprehensive approach advocated by CCAFS is climate-smart agriculture (CSA) that combines food security, mitigation, and adaptation components. CCAFS is the knowledge partner for the Global Alliance on CSA while IFAD is an investment partner, and the World Bank acts on enabling environment. Despite CGIAR's real concerns for agriculture, he pointed out that in the zero draft of the new SRF the term 'climate change' does not appear.

CCAFS is organized around four flagships: climate smart technologies, practices, and portfolios; climate information services and climate-informed safety nets; low emissions development; and policies and institutions for climate-resilient food systems. Examples of projects under the FPs include banana-intercropping, weather data modelling for agricultural insurers, and development of protocols for measuring GHG emissions in smallholder systems. The goal is not to implement projects but understand what partners need and to support them. Finally, he spoke about systems research and the need for integrative thinking, having a clear vision for scaling up and engaging with partners everywhere, and managing complexity effectively.

In the discussion that followed, an ISPC Council Member asked if CCAFS has process or organizational indicators that will enable them to reflect on difficulties and success of the boundary work – not just vision and indicators for the impact stage. *Campbell* noted that CCAFS had two outcome indicators per flagship, and a few process indicators as well. Another Council Member enquired if CCAFS was looking at near-term data, not just long-term forecasts on relationship between yield loss, and issues like pests and heat stress. She also observed that inter-cropping is the norm in Africa, but that does not protect inter-cropping farmers from current climate change effects. *Campbell* stated that there are many unknowns in the climate change world – pests and diseases are difficult to predict, and in other contexts, South Asia for instance, salinity is a bigger concern. He agreed that CSA wasn't a new approach – a sustainable agriculture agenda and the CSA agenda are very similar.

The SPIA Chair asked what CCAFS was doing to monitor the adoption and diffusion of practices at the farm level. He emphasized that putting baselines in place appears to be a priority if CCAFS intends to change farm practices. Campbell responded that, at the science level, they have baselines in place in all sites, but take the *ex post* Impact Assessment approach to tracking changes. Others asked how CCAFS engaged with other CRPs, whilst commenting on strategic site selection given the number of sites CCAFS appears to be working in is huge. Campbell stated that while one could always engage with more CRPs,

CCAFS selects strategically. One obvious partner is Forests, Trees, and Agroforestry (FTA), and in the future, Livestock and Fish (L&F) will be included because of emissions intensity of that sector. In terms of the systems CRPs, there is a possibility of engaging more – however Burkina Faso presents an existing site where collaborative work already happens. On the management side, he noted that part of the prerogative of a CRP leader should be to hire and fire staff. CRP Management's message to researchers is the same as that from ISPC to CCAFS – pick sites and prioritize. Within regions, they do some prioritization with Centers and partners.

On the issue of who to target, a Council Member noted that large scale agriculture might be more “climate smart” than smallholders – CSA might work better if agriculture moved towards modern agriculture systems? Campbell agreed that this is a difficult question to respond to, besides being politically sensitive – it is highly contextual for mitigation and, in the case of adaptation, difficult to say where the focus should be. The Council Member suggested that it would be important for CRPs to have a shared understanding of who to target for CSA.

An observer asked what the specific outputs of the Global Alliance for Climate Smart Agriculture would be. He also raised a question on efficient country management; for example Mali is not a typical country with high intensity of other CRP activities: how was it chosen by CCAFS? Campbell remarked that the Global Alliance would only be announced later this September, and the work would begin with the formation of the Secretariat. In Mali, they are working with Africa Climate Smart Alliance and have identified 10 countries overall for CCAFS to focus on.

The Head of the IEA noted that the IEA evaluation of FTA confirmed that the division of labor between CCAFS and FTA seemed logical. While FTA relies on a landscape approach, where are the other opportunities for CCAFS to link with other programs on the climate change aspect of their research. A CRP observer noted that as most bilateral donors have moved out of Asia, he wondered who was supporting the work in India. Campbell responded that all the scaling up funding comes from the Indian government, over and above the small investment from CCAFS. On what constitutes a CSA practice – for instance, the opportunities for farmers to increase productivity as well as reduce emissions, Campbell mentioned that India was doing such trade-off analysis and choice experiments with farmers.

Agenda item 3. Reports of CGIAR System Units

(i) **ISPC:** *Maggie Gill*, Chair of the ISPC, opened the session and provided an update on the current activities of the ISPC. She was pleased to announce the two new ISPC members – *Thomas Tomich*, Professor of Sustainable Food Systems at the University of California, Davis, and *Segenet Kelemu*, Director General of ICIPE who were attending an ISPC open meeting for the first time, after attending the ISPC closed meeting held in Rome in June to assess CRP Extension proposals. *Gill* announced the launching of the new ISPC website www.ispc.cgiar.org, and briefly touched on a number of completed and on-going activities of

the ISPC, as many of these would be elaborated on during the course of this meeting. The Strategy and Trends activities focused on finalizing the reports of the two strategic studies on Biotechnology and Metrics. *Gill* announced that the biotechnology report was completed and will be soon published together with the ISPC commentary. The Metrics report is also completed and the ISPC synthesis and commentary will be discussed later in this meeting (Agenda item 8). The Independent Program Review activities had focused on the evaluation of the 15 CRP Extension proposals. This had involved external evaluation and a face to face meeting of the ISPC in Rome (June 2014). The ISPC also contributed feedback and input in the development the new SRF. These activities will be discussed in more depth in the Independent Program Review Session (Agenda item 10). The key Mobilising Science activities included the publication of the Science Forum-13 Brief, the follow-up workshop and planned publication of a set of scientific papers arising from SF 2013 in the Food Security journal. Planning was underway for SF15. These activities will be reported in detail later in the meeting (Agenda item 5).The Impact Assessment activities included several SPIA workshops – included the workshop on poverty (Agenda item 4), and various activities related to SIAC implementation, which will be discussed in the session on impact assessment (Agenda item 7).

In discussion, possible topics for SF-15 were discussed; in response to a question by a CRP Leader on the process for deciding on the focus of next Science Forum, *Gill* informed the participants that most of the feedback received to an open Chair's letter on the topic is in favour of poverty but defining a more specific thematic focus, and building on SPIA's recent workshop on poverty (Agenda item 4). *Atta-Krah* also suggested that the "systems approach" could also be considered by the ISPC as a possible theme either within the next Science Forum or separately.

(ii) **Consortium:** *Wayne Powell*, Chief Scientific Officer of the Consortium Office, presented an update from the Consortium focusing on several scientific issues and new reflections on science quality in the CGIAR. He emphasized that the expectations of science and research have changed dramatically, due to the recent explosion in our scientific understanding and the new opportunity to connect scientific excellence with impact by focussing on the Grand Challenges. As examples, he referred to the recent ISPC study on Biotechnology, cited the progress in genome editing, synthetic biology and integrative approaches, and systems approach to Big Data. *Powell* noted a growing chasm between the vast quantities of information from research and the amount that is successfully transformed into actionable knowledge, and highlighted the need for Fast Data techniques to process and transform raw information, to allow quick learning. He also noted that Big Analytics is needed to turn information into knowledge using a combination of existing and new approaches; finding hidden trends and unconsidered ideas.

Powell highlighted the importance of publication and its impact for informing future strategies. He described the results of an Elsevier research output and collaboration study (2014), showing a total of 7929 CGIAR publications in agricultural and biological sciences, 2378 publications in environmental sciences, and 1358 publications in social sciences. He

also displayed results of a benchmarking of CGIAR publication outputs compared to various other international institutions and ARIs. Discussing the current CGIAR research portfolio, he reported a CRP spending from inception to the end 2013 of USD 1.7 billion (see Portfolio Report).

Powell discussed the key drivers for a future CGIAR portfolio, recognizing that excellent and high impact research is resource-demanding requiring strategic allocation of resources to create critical mass, research concentration and capacity. He highlighted the importance to identify synergistic CRPs that are aligned to high level strategic goals (SLOs); ensure that all CRPs have strong intellectual leadership and institutional commitment, urgently address tractable research questions that include work with known and predictable applications as well as innovation that accommodates serendipity and responds to emerging questions and needs. He stated that each CRP should produce a research and business plan that describes how W1 & W2 funding will be allocated to address significant objectives with global reach, and, in addition, how bilateral funding (and others) will be used to achieve ‘uplift objectives’. He expressed the need to incentivise the development of shared facilities e.g. SI and global High Throughput Genotyping Platforms for global public goods.

Referring to the new CGIAR SRF theory of change diagram, *Powell* discussed strategy principles including research and science focussed around grand challenges to foster interdisciplinary/integrative approaches; scientific excellence and relevance; a balanced portfolio supported by modern systems and processes to ensure impact of research; a strong and contemporary partnership model; clarity on the business/finance model to increase attractiveness of W1 & W2 funding; criteria for assessment of new CRPs and measurement and acknowledgement of success; capacity & infrastructure (big data and informatics, next generation of researchers); leadership and management capacity and commitment; research environment and incentivisation for shared facilities. He felt that this aligned with the objectives of the Mid Term Review of the CGIAR reform, which aim at bolder, ambitious research programs, by focusing on innovation, partnerships, and governance.

In discussion, *Doug Gollin* (SPIA Chair), commented on the use of publication metrics for evaluating research performance in the CGIAR compared to academia; he asked about tradeoffs in research focus and what a new CGIAR scientist would have to do less of. *Powell* responded that the expectation of investors included both scientific excellence and impact. He also mentioned the opportunity for capacity building in the system, and hiring more students to enhance the quality of science. *Tom Tomich* (ISPC) expressed satisfaction with the importance given to the next generation of CGIAR scientists, and to science quality, especially in systems research. *Gill* reported that most donors present in the recent meeting on SRF held in Washington DC are supportive of the strategic focus on capacity building. *Marcio de Miranda Santos* (ISPC) noted that capacity building and capacity to innovate should be given more importance in the current strategy, the CGIAR should put more value on the outputs arising from scientific publication than the publication itself. *Maarten van Ginkel* (ICARDA) commented on the next generation of scientists and noted that the number of applicants to scientist positions in the CGIAR is decreasing, as the system is becoming less

attractive to young scientists. *Andrew Wardell* (CIFOR) commented again on the question of trade-offs between scientific quality vs. visibility and impact. *Powell* responded to the previous comments by suggesting a strategy for building best partnerships and catalysing the R&D processes, rather than trying to do it all ourselves.

(iii) **Fund Office:** *Samy Gaiji*, representing the Fund Office, presented an update on CGIAR progress in three areas: the CGIAR Fund, Strategy & Results Framework and CRP extension proposals. *Gaiji* illustrated Fund flows noting that 2014 looks relatively stable compared to 2013, and projections look better. The Window 1 & 2 disbursement rate to CRPs has in general improved, partly due to many donors having committed to multi-year contributions (e.g. from Australia, Belgium, the Bill & Melinda Gates Foundation, Denmark, Luxembourg, Netherlands, Sweden, Switzerland and United Kingdom), enabling the FO to release funds earlier to CRPs. The latest round of SRF development involves two parallel and interacting streams of effort: The Results Framework led by donors and articulated through a comprehensive Theory of Change and key intervention areas, and secondly, a strategy for addressing the priority areas to be articulated by the Doers (CO and CRPs). This involves considerable iteration between the two streams. Six working groups had been established and contributed to the overall effort: one each for: the Vision and Mission; Priorities; SLO1; SLO2; SLO3; and Crosscutting (Gender, Capacity Development, Climate Change). A diagram showing the relationship between the three SLOs, 11 IDOs and numerous sub-IDOs was presented and is currently being finalized. Within the context of the ToC articulated so far, donors have been able to define their priorities vis-à-vis target beneficiaries and geographic foci, relative importance of different SLOs, importance of partnerships, etc. Through the Strategy, donors in turn expect research proposals to establish the relevance and effective contribution to SLOs and IDOs, provide accountability with clear targets, ensure high science quality/significance of the expected research outputs, and a coherent strategy for ‘crosscutting’ themes, among others. With respect to CRP extensions, *Gaiji* sketched out the timeframe for their submission and consideration by the FC. In closing, *Gaiji* highlighted the importance of the ISPC reviews and the appreciation of them by the FC. The independent reviews of the ISPC are essential in the decision-making process. He further noted the importance of the ISPC’s participation and commitment in various processes/meetings, e.g. SRF Planning Workshop.

In the discussion, a question was raised about ultimate responsibility for development of the SRF. While the FC can and should support the process, some felt it should not be leading this process (for example: the Working Groups) – should this not be the responsibility of the CO? And shouldn’t the Doers be setting the priorities? *Gaiji* explained that it was logical to expect that donors should articulate their investment and associated impact priorities through a comprehensive Theory of Change. *Gaiji* also insisted that the aim of donors in contributing to the SRF development process was to support the articulation of a comprehensive Strategy by the Consortium, which responded to donor priorities. *Gaiji* noted the excellent collaboration with the Consortium, the ISPC and the SRF Reference Group (e.g. at the SRF Planning Workshop held in August). How the programmatic research work is to be done, is the responsibility of CO and programs. The Chair of the ISPC, who has been involved in this

process, and the CSO of the Consortium, felt it was a positive development having donors interacting more with the research providers transparently and articulating their funding and impact priorities.

IEA: Rachel Bedouin, Head of the Independent Evaluation Arrangement, gave an update on IEA activities. IEA's strategic objective is to ensure that the evaluation function is a key and effective instrument of accountability and learning, fully contributing to the shaping and vision of the future CGIAR. With respect to the status of reviews and evaluations, three reviews and management responses have been completed (FTA, GCP, Governance), four are on-going (PIM, AAS, Wheat, Maize), and five are in the planning/preparation stages (CCAFS, GRiSP, L&F, RTB, WLE). As requested by the FC, IEA is also providing structured support on quality assurance self-managed reviews of five CRPs (Dryland Cereals, Dryland Systems, GLs, A4NH, HT). All reviews are expected to be completed by early 2016. IEA estimates, for a given CRP evaluation, that it takes about 15 months from planning to management response. CRP evaluations are broad in scope covering relevance, quality of science, effectiveness, impacts, sustainability, and efficiency. These evaluations are both summative (i.e., examining results of past research which is continuing in the CRP) and formative (i.e., examining programmatic approach in enhancing relevance and efficiency of CRP, and, the likelihood of effectiveness to contribute to SRF vision, SLOs and outcomes). A key element of IEA's activity is building an Evaluation community of practice (ECoP) aimed at strengthening the culture of evaluation across CGIAR through a variety of means, including annual workshops for CRP ECoP focal points. Bedouin closed by noting four key challenges: (i) the evaluand: a moving target; (ii) discrepancy between the legal commitments (responsibility and accountability) and the reality - what is a "CRP"? (iii) uneven M&E capacity and systems across CGIAR; and, (iv) no clear accountability and learning framework at CRP and system levels.

The discussion focused on several clarifications, including whether the CRP evaluations would be completed prior to the second call for CRPs. Bedouin indicated that the goal was to have 10 CRPs evaluated by early 2016, but whether that would be in time for the second call she wasn't sure. The ISPC Chair confirmed that we are still awaiting clarity on the timeline for the second call for CRP proposals. To some extent this depends on SRF developments about which we will know more in six weeks. An observer noted that we should not underestimate either the complete length of time required to conduct a CRP evaluation – 18 months – or the significant amount of time required of CRP staff – which he considered enormous. This comes at a cost to other activities, including research. He felt that it was not obvious that donors are utilizing or learning from the evaluation. Bedouin responded that there is serious interest, at least in the Evaluation community, in utilizing evaluations for decision making. A final point was made with respect to cross-institute learning possibilities (e.g., with World Bank or IFAD) and whether it is possible to shorten evaluations to 12 months – and if so, at what cost? Bedouin indicated that IEA was not willing to compromise on rigor, and that the timeframe she outlined took into account critically important activities such as triangulation, on-line surveys, working with scientists, etc. and these are not easily compressible.

(v) Development of the CGIAR's Strategy and Results Framework (SRF): A Discussion

Marcio de Miranda Santos expressed his hope that the Strategy (for the medium- to long-term), and accompanying Results Framework documents, will concentrate on articulating the future scientific challenges that will determine the niche for the CGIAR. In particular, which are the highest priority international public goods (IPGs) and where does the CGIAR best fill gaps that would not be filled by other players? This record only picks out the elements of the debate:

Relevance: We must ensure that our research has the potential to be transformative and solve real problems. *Atta-Krah* expressed his view that smallholders are the target group that the CGIAR are, and should be, helping. Perhaps the CGIAR has been too comfortable “declaring victory” through incremental bits of research, but insufficient attention to what it means as a whole. Powell noted that the CGIAR has a traditional strength in genetic diversity and product capability. Producing research ‘products’ means that an organization is harnessing innovation through a mechanism that can spread to large scales. So, in his view, the question that the Strategy and Results Framework has to answer is how the CGIAR should position for public goods appropriately, in a modern, contemporary sense.

Tomich argued that there is a healthy sense of mission within the CGIAR. However, there is a difference between necessary and sufficient conditions for achieving change, and the balance in the current formulation of the CGIAR, may focus insufficiently on the necessary conditions. This brings us back to the balance between *ex-ante* and *ex-post* impact assessments – what direction should *ex-ante* impact assessment now take? We need to be able to sort out where the CGIAR is tackling truly global issues and where it isn’t.

Grand Challenges: Jeff Sayer noted that some countries will develop radically, others will not, some will fail and have difficult problems. The world is getting more complex and it is becoming harder to predict what is going to happen. Perhaps we need to accept that and just get on with generating innovations? This is the approach of embracing the complexity, uncertain as to where innovations will ultimately be adopted and have impacts. Gill responded that donors think that there is a need for moving beyond this view of the core business of the CGIAR and the SPIA Chair felt that the private sector would be critical of the argument that we have technologies but they are just not adopted - the technologies might just not be as good as we think they are. Wardell argued that the world is facing three fundamental issues and some wicked problems: the nexus of food / water / energy security; climate change; and imperfect and deeply embedded governance systems. So how can the CGIAR help improve the rights of smallholders in that context? Andrew Noble agreed that global challenges are about resources. The CGIAR needs to address them not only generating the right technology but we need to play a role in bringing about behavioral change for better governance.

This raised the question of country choice: does the argument mean that the CGIAR will not try and achieve development outcomes through research in countries with poor governance? *Wardell* responded by saying simply that a more nuanced approach is needed. *De Miranda*

Santos interpreted this discussion as meaning that biophysical research needs to be embedded within social science research, including understanding how agricultural systems are changing over time. In parallel, the CGIAR will need to keep providing a scientific basis for impact to happen. *Gill* noted that the private sector look at behavior to understand the uptake of technologies largely using socio-economists on the assumption that farmers are trying to farm profitably. Does behavioural research go beyond that into the realm of psychologists? *James Stevenson* noted that successful private sector companies invest a lot of effort and money in understanding who their customers are, and typically have an abundance of data (i.e. sales) regarding which of their products is the most popular. In the CGIAR, we see a lack of genuine curiosity about adoption – there simply has not been enough attention paid to which technologies are being used and by whom. There is no institutionalization within the CGIAR Centers of a systematic, regular process to routinely collect and analyze adoption data, and to then learn from it.

Private sector: *Shoba Sivasankar* expressed her view of the CGIAR from her prior experience working in the private sector. She perceives that the primary strengths of the CGIAR are the commodity CRPs which are inherently germplasm-based. A secondary strength is the wide global network that no other organization has. However, she expressed her view that after the first Green Revolution, the CGIAR has not been able to make the kinds of breakthroughs that many have expected of it. In that time, the private sector has made significant forward steps and delivered technologies that the farmers have used and are using, but that these private sector seed companies are not going to target the smallholders as such a strategy is unlikely to be profitable for them. Possible topics for collaboration between the CGIAR and the private sector are in seed multiplication and seed certification. Research has helped to move certain crops from being predominately open-pollinated varieties to hybrids, and there are markets that are mostly for hybrids for crops that the private sector has not been interested in investing in. So, central to the strategy would seem to be public-private-partnerships. What is the right balance of generating public goods vs protecting intellectual property? What is the private sector going to get from such an arrangement that will keep them interested?

Balance between production and resilience: The Chair raised the question of resilience and the environmental outcomes that the CGIAR sets for itself. The CRPs could say that their primary focus is on increasing productivity but that this has to be done in such a way that limits the trade-offs with negative environmental outcomes. How could such a perspective be operationalized? *Tomich* responded by arguing that there are integrative assessments (production and economics) being carried out under the rubric of sustainable agriculture that the CGIAR can learn from. *Noel Ellis* agreed that the CRP on grain legumes is primarily about productivity, but that there are also secondary consequences related to nutrition, sustainability and income.

Balance between research and development: *Rodney Cooke* made the point that the CGIAR is currently trying to find the right balance between maintaining a high level of quality of science and keeping a role in translating this research into outcomes and impacts. There

should not be a trade-off. CGIAR should not do development projects, as some of the Centers have done in the past. The CGIAR's responsibility is to deliver research outcomes and they need to identify partnerships that subsequently deliver on this. Noting the CCAFS strategic focus on 500 million smallholders farmers, that does in fact represent 2 billion people (through family members of these smallholders), and is responsible for about 80% of food production in SSA and SA. Planning mechanisms to reach these numbers of people is more feasible than the CGIAR reaching them directly. Some observers thought that research on development processes was legitimate. *Kola Masha* asked who facilitates the links in the impact pathway, linking research to end-users? There can be research about the ways of delivering / achieving impact but who is best-placed to facilitate these links? *Segenet Kelemu* noted that the Alliance for the Green Revolution in Africa (AGRA) looks favorably on what the CGIAR has done, particularly on generating the maize products needed for the African context. The CGIAR has to choose its partners strategically to make a difference in changing lives. *Ingrid Oborn* agreed that there are local actors whose role should be respected so as not to crowd out national level resources. *Richard Thomas* (Drylands Systems CRP) suggested that what we now need is a matrix of options by context, and asserted that major breakthroughs will come from the unification of different disciplines and perspectives.

Donor perspectives: *Vern Long* explained why the SRF is so important to the donor community. The donors want something that will shape the vision and goals of the CGIAR, that all parties can agree to, and that outlines common directions. USAID think about sub-IDOs and IDOs (this is where research is being generated), and from IDOs to SLOs where the development funding goes. This schema starts with the outputs from research and takes them to higher scales. Indicators are needed for outcomes from research to impact. The example of the Pan-Africa Bean Research Alliance (PABRA) shows what can happen when research is taken to scale. The CGIAR doesn't need to do the scaling up themselves but can play a role in providing technical advice on which specific interventions should be scaled up.

Jurgen Anthofer explained that many donors have different budget lines for research and for development, so the danger is that development programs are often not connected with the research programs. The EC funding from development funds are given on a strategic basis, because the EC perceives research as an integral part of the impact pathway and therefore essential in generating development outcomes. Most donors understand that CGIAR Centers are not delivering such outcomes themselves but this is expected to happen through non-research partners. However, having a three-year horizon for impact is not a realistic expectation. That said, the donors have to be able to justify their investments. If the grantee has delivered intermediate results, and these are promising and worthwhile, then it is clear the donor should continue funding.

Noble noted that the donors are asking for data about the numbers of people reached. The CGIAR needs to know how these people make decisions about technology use and other behaviors. Wardell noted that 60% of the funds raised by CIFOR for implementing the CRP on Forests, Trees and Agroforestry, are development funds. The core niche for the CGIAR should remain quality of science.

Structure: Atta-Krah noted that CGIAR currently has three “systems” programs, but is this the best organization? We need to put together mechanisms for strengthening efficiencies.

De Miranda Santos concluded the discussion with the broad question of how we should best intensify agriculture in a sustainable way. Is the current structure of the CGIAR the best scientific approach for the Centers to respond to effectively to this strategic and societal challenge?

Agenda item 4. Pathways to poverty alleviation through agricultural research

The purpose of this session was to provide an update on a paper under development that builds on (i) earlier work commissioned by SPIA to assess poverty impacts of CGIAR research and (ii) the outcomes of a workshop held recently (Minneapolis, July 26th 2014) to examine methodological and data related challenges to assessing poverty impacts. Issues arising here are likely to be relevant for the subject matter of the next Science Forum. *Doug Gollin*, chair of SPIA, provided historical background to SPIA’s work on assessing the poverty impacts of CGIAR research. This included commissioning a methods-oriented review in late 2010; a workshop at IFPRI with 7 Centers, 6 universities, 3 donors and SPIA to solicit ideas for technologies that could be amenable to rigorous analysis of poverty impacts; commissioning via competitive call four case studies to document poverty impacts of CGIAR research; and, commissioning three poverty impact case studies under the DIIVA project.

The presentation covered theory and conceptual framework; methods and literature review; and research design. A key point is that poverty is a complex outcome. The pathways to poverty reduction do not necessarily involve agricultural research. In fact, many other factors drive poverty reduction such as widespread economic growth and employment opportunities for low-skilled workers, safety net programs, social mobility for the poor, and health and education. Policy interventions are various and include those in housing, water and sanitation, infrastructure, etc. Higher agricultural productivity in itself is neither necessary nor sufficient for poverty reduction. Specific poverty impacts of a new technology depend on a complex set of circumstances, and no easy generalization is possible. Instead, we need to think more broadly about a wider range of potential impact channels, both direct and indirect, affecting different population groups differently, both positively and negatively. Thus these impacts are often heterogeneous across and within groups. Gollin then discussed the ‘impact evaluation problem’ associated with many evaluations: selection bias (on observables and unobservables), heterogeneity of impact, placement bias, diversification of households’ incomes, intra-household impacts, and dynamics (impacts changing over time).

The literature review focuses on relatively recent (last decade or so) mainly quantitative studies examining the impact of research on household welfare/poverty. Some 58 studies have been reviewed (36 are micro studies investigating direct farm-level impacts of adoption of a single technology; 5 micro- and meso-studies on direct and indirect impacts of adoption of a single technology, and 15 macro studies on the impact of general agricultural productivity growth on poverty). These studies employ a variety of methods and models to estimate poverty effects which are reviewed in the paper. Gollin elaborated five key areas in research

design: (i) the geographic area and time horizon of technology diffusion and impact; (ii) key impact pathways and population(s) that will experience most significant impact; (iii) appropriate counterfactual scenario; (iv) defined and validated metrics to monitor uptake and impacts; and (v) means of assessing attribution for the innovation.

Three key messages emerged from this presentation: (i) It is rare to find strong evidence with a single study that covers the long causal chain from a new technology to long-run poverty impacts; (ii) The magnitude of impacts may be small in general (e.g., VPI study on beans in Rwanda and Uganda estimates that reductions in poverty are on the order of 0.1% to 0.3%), and, (iii) Despite the challenges, producing this evidence should be a priority for the CGIAR. Gollin believes that while identifying poverty impacts of agricultural research is difficult, it is feasible - not with a single study but with sufficient data and insights from different approaches. It is not primarily an issue of the statistical method used: if applied rigorously many approaches, both quantitative and qualitative, can yield useful insights. But one must begin at early stages of the introduction of a new technology, and it may need to last for many years. All this implies that close collaboration between social scientists and the developers and disseminators of a new technology is crucial.

The discussion was wide-ranging. An ISPC member noted that there are clear implications for targeting – the complexity of impact pathways described suggests we should not only be focusing on small-holder farmers as the key beneficiaries of agricultural research but must also consider poor urban consumers (and the new focus on value chains may be better able to reflect this). While agreeing with the desirability of having baseline data for valid comparison, an ISPC member highlighted the difficulty and complexity of collecting such data – and choosing the right area. An observer noted that the “small effect” on poverty in Rwanda/Uganda from improved beans may actually be very large from a “returns on investment” perspective – suggesting we should not be discouraged by such an “apparently small” effect of 300 000 people moved out of poverty. Gollin, while agreeing that it was not a small number in human terms, pointed out that being able to actually measure such a small effect reliably is difficult.

An observer suggested that, given the length of the impact chain and the complexity and difficulties of disentangling different types of impacts on different groups, perhaps we should simply focus on the first links of the chain – those most likely to be directly affected by the agricultural research. Gollin agreed that measuring adoption and productivity impacts is itself difficult enough. But at the same time there are things we can measure which will require using different approaches. We may not need to consider all different potential impact pathways in every situation. But there may be cases in which considering the impact on, for example, migration may be relevant. Observers questioned why the CGIAR system should engage in poverty impact? Why not lean on partners to do more? Gollin responded that most of SPIA’s work is done with partners. SPIA focuses on laying out methods and best practices. For example, we are working with the World Bank LSMS surveys to integrate data that allows assess of adoption of technology and its impact. Partners outside the CGIAR system also have difficulties assessing impacts.

Other comments and questions from observers related to issues about: the specific poverty measures used (most often income or consumption expenditure related; and usually head-count based); whether increasing income of people is the same as alleviating poverty (no, not always), whether proper random sampling can overcome the problem of selection bias (no, due to selection bias); whether it's even possible to measure poverty impacts from adoption of new technologies given the myriad other changes occurring over time (yes, if one has sampled appropriately and has enough statistical power); whether it is actually worthwhile doing, given the difficulty, the cost, and the very small expected poverty impacts that can be measured (yes, as there are opportunities for good research and we can learn a lot - research systems tend to have few successes and many more failures. But we can learn a lot from these questions); if and how 'sentinel sites' could be used as locations for doing poverty impact assessments (possibly, but to obtain realistic assessments of the impacts at larger scale, it will be necessary for the sample to be more representative); the value of qualitative studies in poverty assessments (both types are important; one of the best studies of long-term impacts is qualitative - the Hayami and Kikuchi Laguna survey in the Philippines); the desirability and feasibility of going beyond a single SLO assessment, to looking at combination of several outcomes, i.e., poverty and nutrition and health or poverty and environmental impacts, given the fixed costs in visiting households. Gollin noted the issue of survey fatigue. He emphasized that given poverty is a long run outcome, it will require longitudinal studies and hence will be costly to conduct. These (cost-) trade-offs are important and have to be considered.

Discussion continued around the topic of learning from impact assessments, as opposed to there being used only to document success. One observer suggested that "failures" were the most interesting cases (rather than successes) and that the former needed serious investigations. The donors present indicated that to them the learning agenda is critical – finding out what is the best way to reduce poverty. Learning is part of the research process, and we miss an opportunity if the constraints to technology adoption are not investigated. If the motivation of IA is only to show impact to donors, one observer noted, how will the ISPC create the workspace for 'learning'? An ISPC member noted, however, that the long term impact on poverty and the shorter term aspect of managing the research seem to be in conflict. Accountability needs to be separated from learning. Working on poverty impact assessment contributed to IPGs and should probably be de-linked from management.

The ISPC Chair indicated that while it has been decided that the theme for Science Forum 2015 would be agriculture and poverty, responses suggested it would be better to narrow down the topic. One option is to cooperate with CCAFS, i.e., frame it as poverty reduction in an era of climate change. Another would be to think about poverty and systems research. One observer suggested poverty and risk – given that exposure to risk often constrains households in their ability to adopt new and more profitable technologies, keeping them poor. The ISPC Chair indicated that the framing of the subject would be explored more by the ISPC and the Steering Committee selected. In concluding she thanked Doug Gollin for a very informative and thought provoking presentation.

Agenda item 5. Mobilizing Science

Maggie Gill, ISPC Chair, introduced the topic by stating that the Science Forum (SF) series is a flagship event initiated by the ISPC under its remit of mobilizing science for development. Three SFs have been held so far (2009 in Wageningen, 2011 in Beijing and 2013 in Bonn).

(i) ***Follow-up on the outputs from the 2013 Science Forum on nutrition:*** She informed the meeting that the 2013 SF focussed on “Nutrition and Health Outcomes: Targets for Agricultural Research” and was held in Bonn, Germany from 23-25 September. It was co-hosted by the Federal Ministry for Economic Cooperation and Development (BMZ) Germany. John McDermott from the CRP-A4NH had worked in close cooperation with the Steering Committee to develop the program.

A distillation of the key messages from the 2013 SF had recently been published as an ISPC Brief Number 43 outlining the context and the existing evidence base, together with priority research areas, and the key issues that were identified by participants at the Forum as those around which the CGIAR needs to consider designing agricultural research that can deliver better nutrition and health outcomes. These findings of SF13 had also been relayed verbally to the Technical Meeting of the Second International Conference on Nutrition (ICN2) in November 2013. Gill mentioned that a further series of papers arising from issues raised at 2013 SF would be published (online in early 2015 and in hard copy in April 2015) as a special section of the journal *Food Security*.

The ISPC had also conducted an evaluation of the SF in terms of its utility as a core mechanism for mobilizing science. It was organized as a self-evaluation but with external assistance on evaluation and quality assurance. The evaluation report was published in April 2014 and reflects that the SFs have evolved since their inception in line with experience and the lessons learned. The 2013 SF was considered very positively by attendees particularly the focus on science issues and a good array of plenary events at relatively modest outlay. She indicated that although the intention had been to aim for 50% discussion time, the program was a bit congested, leaving insufficient time for discussion. The ISPC would strive for improving this balance for the 2015 SF. An innovation in the 2013 SF was the introduction of a session targeted at early-career scientists (ECS), encouraging studies in inter-disciplinary research. The ISPC supported seven exchange visits in 2014.

A follow-up workshop to the 2013 Science Forum would be held at IFPRI Headquarters in Washington, DC on 22-23 September 2014, with the main purpose being to inform the second round of CRP proposals in terms of delivering improved nutrition outcomes from agricultural research, as well as to feed into the special issue publications where appropriate. The workshop would have two themes for discussion: "Research to increase access to an affordable, nutritious and safe diet" and "Evaluating the impact of agricultural interventions and investments on nutrition". 44 participants were expected to attend including representatives from CRPs, private sector, NGOs and donors.

(ii) Planning the Science Forum for 2015: the Chair gave an indication of what had been done to date in planning for the next Science Forum. The idea of reducing rural poverty (SLO1) being the potential theme for the 2015 SF had been tested at the last ISPC meeting held in March 2014 in Washington, DC and there was consensus that since poverty is a very broad topic, careful framing and articulation of the question would be essential. An angle suggested was the resilience of poor people in the face of climate change and how agricultural research can contribute (see Agenda item 4). Advice had been solicited from CGIAR colleagues to finalize the theme for the 2015 SF and to sharpen the focus of the Forum. The ISPC had received a few offers for co-hosting the Forum. IFAD had also expressed in co-funding the Forum. The ISPC planned to form a Steering Committee (SC) to first meet in late 2014.

Further to Agenda Item 4, it was suggested that since poverty is a big issue, it would be right to bracket vulnerability and climate change together and focus on poverty reduction systems approaches to vulnerability and risk management. However attention was also brought to the fact that a characteristic of the SF series is that they deal with topics that interest all CRPs and not necessarily focus on one dimension - climate change could thus perhaps be dealt with in a parallel session. In reflecting on how the SF could be held in conjunction with another event that would attract a similar participatory community, the 3rd Global Conference on Agricultural Research for Development (GCARD3) was mentioned and that offer by two regional organizations in West Africa to co-host the 2015 SF could be an opportunity to see regional collaboration and priority-setting as well as to inform the CGIAR in terms of partnership planning. Responding to questions on the composition of the SC, the Chair mentioned that the key issue for the SC was to identify the most interesting and innovative speakers; the ISPC was very conscious of trying not to repeat what had already been done, rather trying to build on what had been done and take it further for the benefit of the CGIAR community.

(iii) Update on Partnership Study: Peter Gardiner briefly outlined the approach for the study of research for development partnerships emerging for the CRP portfolio that had been postponed late 2014 due to Council's time constraints. He noted that finding the right partners is still a learning game for the CGIAR. Paraphrasing several interventions from the day before, he stated that "The CGIAR is a research organization but it has a responsibility for envisioning and organizing strategies to engage the relevant development partners."

The new CGIAR states its four System-level goals in the language of development outcomes, and therefore the background papers for the study would need to distinguish pathways towards the four system-level outcomes and likely partnership arrangements (for delivery, enhanced vehicles for delivery, scaling). Previous discussions had identified the implementation of partnerships and partnership management, as well as innovations in partnership (e.g. lessons from the public health sector which has mobilized effective consortia around reducing child mortality) for inclusion in the study. The papers would then be discussed at a workshop with boundary and development/funding partners to: a) sketch where other public sector organizations are investing in agriculture, b) draw lessons on effective

partnerships, c) discuss with development partners/development banks opportunities to use development vehicles for increased impact and scheduling of future joint interventions. The study would draw on several active partnership initiatives and develop aspects of partner relationships: e.g. need to create space and incentivize trans-disciplinary research; create knowledge products for all the partners across the impact chain. The ISPC expected to involve funders and development agency players as interlocutors and in the development of papers.

In the substantial discussion that ensued, it was unanimously agreed that this was an important and timely topic. There is major potential for the CGIAR to play an important linking role between upstream and downstream partners (in addition to just a technology production role). Network challenges are particularly important in trying to reach marginalized, vulnerable groups. Thus there are powerful implications for how work is done collaboratively but also in terms of accountability and governance with users of information. It was suggested that while there was heavy emphasis on the public sector (in the concept note), the CGIAR needed to reach out to the community of the tens and thousands of smaller private sector initiatives that were quite active. Additional suggestions included the inclusion of upstream partnerships in addition to the downstream ones; assessing existing experiences and paradigms within the CGIAR and using that as a base to build on; thinking about different models of partnerships depending upon the kind of research outcome (in terms of the wide range of partners along the impact pathway); incentivizing trans-disciplinary research in different geographical domains and, capitalizing on the excellent platforms that the CGIAR has to do systems research that are currently underutilized.

Participants brought up some critical issues that needed to be addressed. The roles and responsibilities of partners are not clearly demarcated and often the funding situation is not clear. Should boundary partners be funded by the CGIAR, CRPs, bilateral or external sources? A system-wide approach would be useful since currently each CRP was handling its partner networks differently leading to different results. A donor participant indicated that the resource mobilization group was also trying to capture the issue of funding boundary partners, particularly since it seemed pointless having an impact pathway with boundary partners without clarity on how they would be funded. An added complexity is that funders are not homogenous; there are discrete budget lines for research and development and it is not always straightforward to link and integrate the two. A CIFOR representative offered to share their experiences of a bilateral donor that was also an involved partner. Previous partnership studies that had been carried out were referenced, including the most recent 2012 CGIAR Stakeholder Perceptions Survey – even though there was some bias since the people who received the questionnaire were selected by the Centers and CRP, the criticism voiced on transparency was worrying. This had also been registered by the MTR. Finally, there was consensus that there appeared to be too many partnerships across the CGIAR. The ISPC had flagged this issue in its commentary on the overall portfolio based on the CRP extension proposals, recommending that fewer, more strategic partnerships were critical.

Gardiner concluded by thanking everyone for their valuable inputs and agreed that while extending the chain to upstream partners was appropriate in considering the whole research to

delivery spectrum, the aim of the workshop would be to focus on the potential inter-linkage with development agencies in highlighting and scheduling delivery.

Agenda item 6. The CGIAR approach to place-based research in West Africa

(i) **DDG IITA: IITA's approach to regional agricultural research:** *Ylva Hillbur*, DDG of IITA, outlined the regional approach of IITA to agricultural research in Sub-Saharan Africa. Her presentation focused on describing IITA's regional strategy in West Africa, and showcasing three of its new regional initiatives. The IITA target domain covers 4 major zones, with various strategic entry points, i.e., the Humid Forest zone (cassava, yam, banana/plantain in WA and CA lowland cassava expansion in EA and SA), the Moist Savannah zone (diversified maize-legume systems), mid altitude savannah (Banana cropping systems) and the Sahelian drylands (cereal, cowpea and livestock integration), with additional cross-cutting topics on high value crops, cocoa, and vegetables and fruits. IITA has 1100 employees, including 180 scientists. The IITA research portfolio includes contribution to 9 CRPs, distributed as follows: Humidtropics (28%), RTB (26%), MAIZE (10%), Grain Legumes (10%), A4NH (9%), PIM (7%), WLE (6%), CCAFS (3%), and Genebanks (1%). The total W1&2 + W3/bilateral of IITA is about USD 103 million.

Hillbur described the regional characteristics of IITA's location in West Africa, the main agroecological zones and the corresponding strategic research entry points of IITA, including the Humidtropics action area in West Africa. The institutional environment in the region includes, in addition to CGIAR Centers, numerous private sector agencies, NARS and Universities, farmers' organizations, NGOs (e.g. Africare, Catholic Relief Services, SNV, WV), and regional/sub-regional agencies (e.g. CORAF/WECARD, etc.). She described 3 new regional initiatives led by IITA:

- a) The Cotonou Center for climate change and biotic stresses involves several partners in addition to IITA, i.e., CORAF, INRAB, Africa Rice, Bioversity, CIRAD/Agropolis, Regional center for research and capacity development, and 18 NARS from the region. The main rationale for the center is related to the new and emerging biotic stresses, their regional importance, the limited capacities in diagnosis, the lack of a concerted approach to common problems, and the need for a coordinating body in the region.
- b) The IITA Youth Agripreneurs is an IFAD-funded pilot involving a gender-balanced group of BSc holders in different disciplines and mentoring by IITA staff. Agriculture is considered as a livelihood and business opportunity and agripreneurial training is provided across the value chain, with focus on science-based technologies (e.g. quality seed), and capacity development of other youth, with two pilots in Nigeria and Tanzania.
- c) The Business Incubation Platform (BIP) is considered as a bridge between research and dissemination. Objectives are to align research and market needs, increase visibility, provide training and technology transfer, manage PPP, attract funding, and generate new knowledge. This project includes four major components, i.e., *GoSeed*, *Nodumax*, *Aflasafe*, and *Agriserve*. *GoSeed* is specialized in producing and selling breeder and foundation seeds to private seed companies (maize, cowpea, soybean, cassava). *Nodumax* is funded by BMGF as part of the N2Africa project, focusing on production of *Rhizobium* inoculant,

increased soybean production and biological N-fixation. *Aflasafe* produces fungal strains that outcompete aflatoxin-producing *Aspergillus* strains, as part of the MAIZE and A4NH CRPs with funding from USAID and BMGF.

Finally, *Hillbur* concluded that IITA's exit strategy is to transfer these projects to the private sector within 3-5 years and use the platforms for other purposes.

(ii) FAO and CGIAR collaboration in the region: the case of the *NERICA* rice varieties

Ren Wang, FAO Assistant Director-General for Agriculture and Consumer Protection Department, and *Robert Guei* joined the meeting to discuss the FAO-CGIAR collaboration and the new regional initiative on rice production in Sub-Saharan Africa.

Wang reported that the rice initiative is related to commitments made by FAO in the general meeting of the Coalition for African Rice Development (CARD), for the development of the rice sector in Sub-Saharan Africa. CARD is a consultative group of bilateral donors and regional and international organizations working in collaboration with rice-producing African countries, with the goal to support the efforts of African countries to double rice production on the continent to 28 million tonnes per annum within 10 years.

Describing the evolution of FAO's role in the International Rice Commission (IRC), Wang stated that while the commission had initially an active role in promoting rice production in 64 countries, its activities and role declined after the nineties, with the rapid development of other fora and initiatives, and many aspects and previous roles of the IRC were taken by other international institutions, including the CGIAR. FAO has consequently announced the suspension of the commission¹ and a reduction of its activities on the ground. Based on the new rice R&D initiatives such as GRiSP and building on its comparative advantage, FAO started then focusing on building linkages and partnerships rather than creating new programs.

Wang noted that "GRiSP and AfricaRice are excellent engines for the production of new technologies, and FAO can strengthen its role as a partner in these important activities". He further stated that what is needed are the networks and relationships to ensure that successful new technologies - once tested and proven - can be scaled up to reach the millions of farmers who need them; adding that "This type of development work is one of FAO's strengths". Wang reported that the new FAO rice initiative would help realize the potential, productivity and production of Africa's major rice ecosystems, and promote the use of quality seed as well as secure the production of certified rice seeds for efficient and sustainable rice production. He also emphasized promoting partnership initiatives, maximizing impact and coordination, and introducing new business models as major objectives of the initiative. New business models would include expanding the training program of AfricaRice, massive extension of new technologies and promotion of best practices, using training centers (e.g. in Senegal), and working with the governments to link farmers with the innovation training centers. The training centers would also serve as business incubators to help farmers become small entrepreneurs. Wang also reported on FAO's dialogue with IFAD for transforming small farmers to entrepreneurs, using mechanization, with pilots of such new business models in 10

¹ A Global Rice Roundtable was convened in Montpellier, France in July 2012 to consider possible future directions of the International Rice Commission; the report is available [here](#).

countries in SS Africa. The initiative had received positive responses in the last African Rice Congress (Cameroun, 2013) as well as from countries and donors, e.g., the pledging of USD 5 million by the government of Venezuela to the project.

In discussion, *Peter Matlon* (Board Chair of AfricaRice) said that AfricaRice welcomes collaboration with FAO and looks forward to the next steps of the project implementation. The rice regional initiative, and mobilizing resources and actors in collaboration with FAO generates greater synergy and impact, with less confusion of roles. He suggested that this model opens new opportunities for other CRPs to work with FAO on similar partnership schemes.

Wang clarified that all the 10 target countries have already developed national strategies in coordination with AfricaRice and CARD. He added that FAO initially wanted to focus on existing AfricaRice hubs in six countries but there was a demand from member states for expanding the project to 10 countries, and FAO is currently looking for additional funding.

Harry Palmier, GFAR (also on skype) confirmed GFAR's support to the FAO rice initiative with AfricaRice; he mentioned a paper recently commissioned by GFAR on GRiSP, looking at engagement of partners, and linkages with extension, research and agribusiness.

(iii) Partnering with NARS: CIRAD's involvement in Partnerships Platforms: *Patrick Caron*, Director General for Research at CIRAD, contributed a paper on "Multistakeholder platforms in partnership for integrated and participatory research and training". In the CIRAD 10-year strategy, he outlined the priority lines of research in the following major areas: ecological intensification of agriculture, biomass uses, food security, animal and vegetal health and emerging diseases, public policies, poverty and inequalities, and agriculture landscape and territories. *Caron* presented CIRAD as an original research organization, having national public institution status but with a global mission, based on 90 years' experience through partnership (within partners institutions), and gradually moving from research for development towards development through research. CIRAD has three main research thematic fields which correspond to 3 departments: Biological systems, Technical Systems, and Institutional systems.

He defined dP as a platform in partnership for research and training set up by diverse Science, Technology and Innovation institutions which agree to pool resources (especially human resources), in the long term (up to 10 years), on a common development challenge and in a given location, through a jointly defined research and innovation agenda and under a shared governance. dP major thrusts include: i) Contract-based programs focusing on locally relevant global issues (alleviating poverty and inequality, food security, resource management, climate change, emerging diseases, etc.), ii) excellence and concrete results benefiting stakeholders, supply chains and public policy, with priority to the world's least favoured people, iii) Medium term structures built on shared governance and backed up by contract-based, transparent management methods: stability over time, yet adaptability, iv) Operational bridges (networking) between more than 150 agricultural and veterinary research and teaching establishments in both North and South.

Caron described the key dP principles and gave examples, such as the one on production and conservation in partnership in Southern Africa. This project tackles the question of how can the sustainable development of rural populations be combined with biodiversity conservation in zones of substantial interaction between man and nature? He then mapped 21 dPs in 15 countries/regions across three continents, including 5 platforms in partnership in West Africa which are evolving in connection with CORAF. He superimposed the maps of dPs and CRPs action sites, and discussed in more detail the interactions and relationships between dPs and CRPs in West and Central Africa. Active CRPs in the region include Livestock and Fish, Dryland Systems, Dryland Cereals, Policy, Institutions and Markets, GRISP, Humidtropics, Forest, Trees & Agroforestry, and Roots, Tubers and Banana. Active dPs in West Africa include Agro-silvo-pastoral Systems, Agro-ecological Pest Management, Genetic innovations & breeding, Pastoralism and Drylands, and Spatial Information Systems in West Africa. Caron highlighted the current potential future collaboration among CRPs and CIRAD dPs, noting the large network of associates universities, NARS, private sector and CIRAD teams in 4 major dPs working on R&D projects relating to food security in West Africa.

Segenet Kelemu opened the discussion by thanking *Caron* and acknowledging the role played by CIRAD in the region through the secondments of its excellent scientists and the focus on the regional R&D priorities in Africa. She emphasized the need for looking at the big picture and recent developments in Africa, which is now hosting 7 among the top 10 best-growing economies, and quickly becoming a major global player. She also highlighted that economic growth in Africa is influencing consumption patterns, for instance as middle-income consumers increase significantly, the importance of rice in African diets, demand for rice (and for rice research as heard earlier) all increase. She stressed the need for a comprehensive strategy for boosting capacity in the continent, to increase the capacity to innovate, create enabling environments, reducing the huge postharvest losses, and decreasing the inputs cost (e.g. fertilizers). *Kelemu* concluded her intervention by emphasizing the need for enhancing partnership initiatives, and working closely with local governments to ameliorate and use their own plans and capitalize on their resources.

Hillbur explained that in IITA's Youth Agripreneur initiative, the youth mentors are both scientists and successful private entrepreneurs and companies. *Sayer* also praised the impressive work that IITA is doing in terms of partnership and leading R&D regional initiatives in Africa.

Atta-Krah commented on the examples given by IITA's role in fostering new partnerships for reaching development targets, and for possibly bridging the gap between research and development. He added that bringing more private sector groups into partnership can help in further reducing the R4D bottlenecks. He remarked that the CIRAD regional initiatives provide a second example of partnership for bridging the gap with upstream research. A third model on partnership with development and intergovernmental institutions was provided by FAO and the rice initiative with AfricaRice.

Ren Wang mentioned that FAO is currently discussing with AfricaRice, FARA and other institutions, trying to better understand and analyze the bottlenecks in R4D partnership. He recognized that the driver is the national governments and people who implement on the

ground, e.g. farmers organizations, CSOs, NGOs etc. FAO's role is to help them, link them and better organize them for scaling. The new strategy and policy of FAO for decentralization aims at providing human capacity for delivery in the region. Only when capacity is insufficient in the regions, is there back-up from the HQ.

In response to a question from *Shoba Sivasankar* (Dryland Cereals CRP), Caron replied that the current partnership on dryland cereals is mainly focusing on breeding but more can be done in the future, especially with systems CRPs, since this is different for other commodity crops.

In response to a question from the Chair, *Harry Palmier* informed participants that GFAR is currently preparing GCARD3 for a smaller conference with development partners, although the date and venue of the conference (Senegal, November 2015) are still tentative.

(iv) Building partnerships and capacity through joint programs: Kola Masha of Doreo partners described the aims of his company's agricultural initiative in Northern Nigeria. The Company adopts a comprehensive business model through which they franchise agricultural organisations for the production of maize by small holder farms. His organization provides training (basic technical and business approach skills), credit (considered the lynch pin of the approach), agricultural inputs (e.g. seeds, Aflasafe, technical visits and harvest services) and they also conduct collection and marketing on behalf of the farmers (one important market being Nestlé). The organization provides the contributing farmers with quarterly dividend payments. They are also implementing a World Bank funded weather index insurance scheme. One of the key points of contact with IITA is that Aflasafe has allowed the organization to produce some of the best maize in Nigeria, up to 6.3 tonnes per hectare.

In discussion, Masha gave further details of the business model which although linked to agency investors did not receive subsidies. He noted that weather in Northern Nigeria was dry and unpredictable and so they operated their schemes below 11 degrees North. Observers noted that the model should be extended to other crops which might reduce risk in the longer term. However, Masha noted that the core of the model was the scale which could be reached and so they were dealing only with maize in the first instance although he believed it would work with rice and soy bean in the future although they were too complex currently. External impact assessments are being conducted by DFID and AGRA.

(v) How Humid Tropics approaches regional research and selects research sites: *Kwesi Atta-Krah*, CRP Leader for Humid Tropics, spoke to the case of his CRP as a preface for a wider discussion of systems research. Systems research is characterized by whole system analysis including multicropping systems, integrated livestock, and natural resources management with project activity, markets and institutional interactions. At issue was to blend local and technical knowledge and to match technological options to the biophysical and socio-economic context. Depending on the scale, this would require participatory multi-stake holder donor engagements and partnerships. For Humid Tropics, the goals were livelihood enhancement, sustainable intensification and natural resources integrity. He also recognized the "melting pot" dimension allowing integration of CRPs operating within an AEZ. He

considered there were 10 elements of “systemness”: 1: Systems mindset (boundaries and components), 2: Inter-disciplinary Teams (Partnerships and New competencies); 3: Stakeholder engagement (R4D, Innovation Platforms), 4: Integrated systems: Interactions and trade-offs, 5: Innovation: hardware, software and ‘orgware”, 6: Scale dimension: scaling up/out, 7: Gender research: women and youth, 8: Capacity building – across actors, 9: Development orientation – IDOs; 10: Learning – mechanisms and strategies.

The Humid Tropics framework starts from strategic research themes (such as system analysis and global analysis) through flag ship projects in large but discreet agro-ecological zones across the Humid Tropics. It seeks to deliver improvements such as enhanced income and nutrition or innovation capacity as IDOs which in term would contribute to the higher system outcomes embraced by the Program e.g. livelihoods, sustainable intensification etc.. Thus the approach to the area-based flagships was supported by cross cutting activities such as nutrition, innovation, monitoring, evaluation etc... To further strengthen the program, they believed they would have to develop sites in partnership with CRPs, secondly develop metrics of integrated soil fertility, management, productivity and markets; and, thirdly to incorporate social science and policy dimensions to a greater measure.

Site selections had been made by a combination of hard criteria (poverty, market access, risk of degradation) and soft criteria (following dialogue with partners in which institutional, political and security considerations played a role, including developmental opportunities). The three hard key variables were mapped spatially, and sites chosen to encompass the range of social political and environmental heterogeneity. The spatial mapping is then subject to stakeholder consideration before final choice. Action sites were chosen also with a view to scaling, and similarity mapping had been undertaken to identify likely areas of interest. He noted that the development of systems CRPs was a new venture for the CGIAR but there was consultation amongst CRP directors with an Integrated Systems Conference for Sustainable Intensification planned for the 3rd to 4th of March of 2015 at IITA, Ibadan. There were links principally with RTB, A4NH and LF and other collaboration with Maize, FTA, PIM and CCAFS.

In discussion, ISPC member Tom Tomich welcomed the potential for synthesizing experience across sites, as this had the potential to provide IPGs. He noted that the thrust of the ISPC’s commentary on the portfolio was to raise what the key factors of the systems programs were for the CGIAR system as a whole. Are they to continue to be self-contained programs or to provide innovation platforms with other CRPs? Key to this, are the ideas and the relationship with the commodity CRPs and the balance between CRP driven research and a structure of use across the CRP portfolio. Additional considerations should be the partnership interface, to avoid multiple sourcing of NARS by the CGIAR, and while we need to get an integrated view of systems research we need to unify the vocabulary of place-based research and the meaning of sentinel sites, actions areas etc. In response it was suggested that there were still commodity issues but that the other interacting elements should be provided through a system perspective (as an example, supporting a cattle program in Vietnam with the necessary resource management research). Certainly RTB and Humid Tropics are planning to do work

at common sites. Atta Krah thought however that a potential drawback might be that collaborative approaches end up focussed on small sites or smaller numbers of people.

Patrick Dugan of AAS suggested that system CRPs address a demand-driven agenda. They work through multi-stakeholder processes to address integrated agendas rather than being dominated by lead commodities. He agreed that integration of other CRPs was still a problem although AAS provided L&F an entry point to Bangladesh and future work was planned with Grisp and L&F in Myanmar. He noted that NARS had been heavily involved in the research. Thus, whilst ‘place’ is a powerful integrator, he agreed that there is not a uniform view of sentinel sites but that they will be moving towards clarity in the new year. Richard Thomas of the Drylands Systems CRP, noted that in the dry areas livelihoods were derived only 50% from agriculture and so a fully integrated system approach would look at the co-benefits from different avenues - biophysical, economic and social perspectives. He thought that the CGIAR could introduce a systems view into development projects. The programs thus had a role as integrator and building trans-disciplinary teams but may currently be spread across too many sites and regions.

Of particular interest was the possibility that the derivation of CRP site similarity indices (with other parts of an AEZ) could help structure data collection for later impact assessment studies. A donor thought that greater use might be made of regional organizations as a cost effective interface between CGIAR and NARS. Surely the system programs would play an integrative role but to identify the outputs and outcomes of this role was less clear, and issues of leadership and attribution would have to be considered. Sayer reminded the meeting that the NRM stripe review recommended enhancing the scale of systems analysis and of systems modelling capacity. Whilst breeding (for instance) and analysis work were being considered within programs, who is thinking how the CGIAR is maximizing its returns to investment in systems approaches?

Agenda item 7. Impact Assessment

Progress of the SIAC Program: Doug Gollin, Chair of the Standing Panel on Impact Assessment (SPIA), provided an update on the progress on the four-year program Strengthening Impact Assessment in the CGIAR (SIAC) funded by W1 funds and the BMGF. He noted that the SPIA team itself is small – a total strength of less than 3 FTE – to address a very large agenda. For this reason, almost everything SPIA does is done in partnership with others. SPIA, in particular, works closely with Center and CRP IA Focal Points (IAFPs), a good example of which was the recently held SPIA-IAFP meeting in Minneapolis, where almost all IAFPs in the System were in attendance. A clear message from that meeting is the glaring lack of attention and priority being given to IA at Center and CRP level. This should be a major concern to the CGIAR System, and particularly donors. Understanding the importance and use of IA-related information to donors and their IA expectations, is the subject of a current SPIA survey. Some donors have suggested, amongst other things that defining SLO-related indicators of most importance to them. SPIA is summarizing these results. The full results will be available soon.

Gollin reviewed progress made under each of the SIAC Objectives. He began with Objective 4 - *building IA capacity within the CGIAR*. This area covers a number of activities aimed at helping strengthen the CGIAR's IA community of practice, such as: competitive awards to collaborative CGIAR Center and ARI programs aimed at capacity-building, SPIA-organized technical workshops (e.g., IAFP meetings), a new impact website with resources, and a soon-to-be introduced on-line quality review system for IA studies. The latter is expected to give Center- and CRP-based economists the leverage they need to argue more effectively for required resources for implementing more impact studies.

Under Objective 3 – *broadening & deepening impact assessment of CGIAR research*, Gollin briefly reviewed the state of play across four key initiatives: (i) *a nutrition and health impact study* where SPIA is funding five case studies that seek to measure the nutrition impacts from adoption of new agricultural technologies/institutional arrangements; an inception workshop was held in Wageningen University in June; (ii) *micro-level studies* using RCTs to gain a better understanding and evidence base about the potential for impact (or lack of) of certain technologies – now in the final proposals evaluation stage; (iii) *long-term/large scale impact study* to measure ex post the impacts of widely adopted CGIAR research related innovations – now in the expressions of interest stage; (iv) *under-evaluated areas of CGIAR research* to address the serious gap in IA in major areas of CGIAR research, irrigation/water management - SPIA has commissioned a critical review of the IA work to-date in which is currently under external review.

SIAC's Objective 2 – *institutionalizing the collection of adoption data* – is important in establishing a credible and up-to-date database required for conducting impact assessments. SIAC-partner MSU is working with five CGIAR Centers in directing a major effort to collect data on the release and adoption of improved varieties of CGIAR mandate crops in South, South-east and East Asian countries over the next 6-9 months. Joint workshops have been and are being held with NARS to establish consistent protocols for data collection (using expert elicitation methods). Gollin also described the progress being made in developing a comparable database for policy research outcomes as well as an NRM research outcomes database. SPIA has formed a partnership with the World Bank LSMS-ISA team, through two SPIA research associates working in LSMS-ISA countries over the period mid-2014 to mid-2016. Efforts are being made to improve the way that agricultural technologies are uniquely identified in the surveys of 8 Sub-Saharan African countries. MSU is also working in parallel with the same objective with a focus on Mozambique, Zambia and India.

Underpinning Objective 1 is the development of a robust set of methods for routinely tracking adoption of CGIAR-related technologies in a cost-effective manner. This objective is managed by MSU. Focus is on new methods for crop germplasm improvement and NRM adoption data collection. For the second of these activities, following a competitive call for proposals in 2013, two experiments for new methods for collecting data on NRM adoption are being implemented by IIRR (remote sensing for alternative wetting and drying) and CIMMYT (a cell phone app. for monitoring improved nutrient management practices) and

will be completed in early 2015. A feasibility study is being prepared by ICRISAT on using remote sensing to track improved tank bund management in India. For the first activity, three DNA fingerprinting experiments, comparing a gold standard of DNA fingerprinting to alternative methods for varietal identification, are in the process of being analysed following data collection in 2014. Preliminary results from the DNA fingerprinting suggest that farmers (much less experts) are frequently unable to identify their own varieties correctly. The crop-country combinations are cassava in Ghana, beans in Zambia and maize in Uganda. BMGF is, at the same time, independently working on these issues with maize and wheat in Ethiopia and with rice in India. Gollin explained that if results hold, it suggests that we will need to rethink our methods for collecting adoption and diffusion data. It may also mean our existing estimates are flawed – but this may differ substantially across regions and crops. This is potentially a major issue for SPIA and partners engaged in impact assessment.

An observer noted with appreciation SPIA's continuing work in both providing guidance and in helping strengthen IA capacity at CGIAR Centers and NARS. He requested, if possible, more opportunities like those under SIAC Objective 4 in building IA capacity, and if need be Centers could even self-finance these activities. It is particularly important to get guidance in facing some of the new IA challenges of the System CRPs.

An observer questioned whether or not there are resources earmarked within CRPs and Centers, for scientists (not just economists) to be participating in conducting IA work. If not, significant provision should be made for this in the next round of CRPs. Currently, it does not appear that resources are being allocated on any significant scale to IA in many of the CRPs, e.g., as indicated by Campbell for the CCAFS CRP. The cost of a single ex post IA varied but on average would be about USD 250,000. A number of participants agreed this was a serious flaw - not investing in the early stages in IA and not having baselines against which to monitor progress. At BMGF, about 10% of the budget is allocated for M&E, which includes a strong focus on learning. With respect to the latter, there was some surprise about a result from the donor demand survey where 'learning' as a primary objective of IA was scored relatively low (vs. accountability which scored quite high), but in fact, this result was consistent with the earlier (2004/05) survey results.

CRP representatives commented that it has not always been easy to find the relevant expertise in IA. In one case, after trying for a long time to recruit an IA specialist, the CRP Director decided to invest in an existing staff member (sent for Masters in Canada) to oversee the IA effort, but recently this staff member left for another position. Another CRP is using prizes to encourage development of relevant 'outcome cases', 32 were submitted this year and they hope to take some of these to impact stories. Many would be useful as input into the NRM and Policy research outcome database, where they have identified a number of good policy related outcomes from India. Of course these would need to be verified, including adequate attribution. A Center representative indicated they were about to launch a global wheat adoption and impact study – and hadn't been aware of SPIA's recent call for large scale adoption studies.

With respect to the DNA fingerprinting results, the Consortium noted there needs to be greater emphasis on quality of data collected, how it is maintained and means for validating it, but it also raises questions about how a seed may change before it gets to a farmer, i.e., how it is multiplied and distributed and re-used by farmers in a specific agronomic system.

Agenda item 8. Strategy and Trends

(i) **Metrics in the CGIAR:** Jeffrey Sayer, Council member, presented an update on the strategic study on *Data, Metrics and Monitoring within the CGIAR*. Since the panel report of the study was already presented and discussed in the previous ISPC meeting², the present discussion focused on the ISPC synthesis and commentary on the report. He highlighted the panel conclusion that the CGIAR system has made valuable contributions in collecting and storing valuable datasets on agricultural systems (e.g. Gene banks, data and information on commodity crops, IFPRI models and databases etc.), but still lacks a system-wide capacity for collecting, archiving and storing data. Most initiatives remain patchy with poor coordination in data collection, archiving and curation, low accessibility and lack of adequate skills. This concern was also previously expressed in the ISPC Review of Social Science in the CGIAR in 2009 and the Natural Resources Management study in 2012.

Summarising the ISPC commentary on the panel report, Sayer stressed first that the provision of comprehensive, accessible high-quality data and metrics on agricultural systems should be a major public goods product of the CGIAR. He also emphasized the need for both a learning focus and accountability in a data, metrics and indicator system, and that indicator targets for CRPs must use consistent vocabulary to maximise comparability in full agreement with the *Open Access & Data Management Policy*. He reiterated the ISPC caution against establishing a centralized system, and that special attention and research effort should be devoted to resolving issues of aggregation/ disaggregation of the data collected at different spatial and temporal scales, to allow analysis of trade-offs and interactions across system components. Endorsing the conclusions of the report, he then stated that “More is not better”, since the CGIAR needs to focus mostly on getting the basics right.

To facilitate implementation of the ISPC and panel recommendations, Sayer suggested that action and coordination of the Consortium Office was needed: to play a normative role for the consortium; to ensure systematic data peer review and quality control; to develop a common ontology and consistency in use of terms across the CGIAR; to strengthen the DMI community of practice; and to allocate funding adequately to fulfil the objectives of the Open Access Policy.

In discussion, Tomich expressed agreement with the panel conclusion that DMI can be a research resource and constitute an important research activity that could generate IPG international public good. He found the section on the issues of big data costs to be one of the best parts of the panel report, as many standards and assumed best practises are quickly

² [End of Meeting Report, ISPC, Washington DC 2014](#)

becoming obsolete, as the revolution on ‘big data’ brings about rapid changes in the methodologies and cost of sensing. He commented on the importance of ontologies, not just about definitions and indicators but also about systems causal relationships, which could constitute an important resource for systems research in the CRPs. He noted that the rapid technological changes are offering potential for exciting new partnerships with major global players (e.g., IBM, Microsoft, Google, etc.), with possibility for system-level collaborations. He also commented on the possible implications of the study for foresight and strategy of the system as a whole.

The SPIA Chair made a few comments relevant to the Minneapolis workshop on poverty (see section 4 above) and the current status of the socioeconomic data collection across the CGIAR, estimating that between 200,000 and 300,000 households are being surveyed per year in developing countries, which would probably make it the largest household survey data in the World. However, he questioned the overall efficiency and compatibility of such data, and how much can be learned from it, as there are apparently no longitudinal data collected. He remarked that the resources are mostly there but there is a need for enhanced coordination and efficiency gains in data learning vs. data collection. *De Miranda Santos* commented that one of the challenges in developing indicators for innovation systems is related to the fact that the CGIAR is focusing most of its data and metrics efforts on the beginning and the end of the impact pathways, documenting the processes for input and outcome monitoring. Little effort seems devoted to the middle, for developing managerial data, information and tools to see how the system evolving, and for tracking the level of synergy and progress of the CGIAR change process.

Several observers commented on various aspects of the study, including the fact that data quality is a reflection of the quality of the research, highlighting the need to open up the discussion on data and metrics to all partners of the CGIAR, since they are involved in the design of the research and data collection. *Atta-Krah* (Humidtropics) promoted possible strategies for data collection by the systems CRPs in all the common areas across CRPs for building coherence and focus on fundamental issues, but he pointed out that this would require additional resources. *Powell* commented on the cost of collection and management of ‘big data’, as many institutions and countries are currently involved, which requires the CGIAR to ask ‘smart’ strategic questions. He also highlighted the opportunity to broaden the horizon with CGIAR partners.

In his response and concluding remarks, Sayer recapitulated that the study of metrics is about the whole range of issues going from research design to data management. He agreed that more could be achieved with the same resources, while paying attention to the scale issues. He concluded that the CGIAR should not try to duplicate what national partners are doing, but focus more on its comparative advantage and on capacity building aspects, which are also aspects of the study report.

The Chair concluded the session by reminding the audience that the metrics report is in the final stages of editing for imminent publication. She also confirmed that the study is not just

about research metrics but also about providing a basic avenue for bringing more system efficiency to the CGIAR.

(ii) Development corridors: Eva Gálvez Nogales (FAO, AGS) presented an overview of a study carried out at FAO on economic development corridors, captured in a recent publication titled “*Making economic corridors work for the agricultural sector*” (Gálvez Nogales / FAO, 2014, in press). As background, Gálvez noted that economic corridors are emerging as a new model to attract sustainable investment into the agrifood sector of low and middle-income countries. They draw interest from many different stakeholders: governments, the international community, and domestic and international private investors. She noted however, the lack of systematic information on good design and implementation practices, especially on how to apply this model to agribusiness. The objectives of FAO study were to assess how corridors can contribute to unlocking the unrealized agricultural potential of developing and emerging countries, and to develop tools to guide policymakers to promote and implement agricultural growth corridors. Preliminary research was carried out to clarify the definition of economic corridor, corridor program and agricultural growth corridor, the evolution of the concept, and to establish a corridor typology.

After introducing the concepts of Economic corridor (a linear agglomeration of economic activities and people along a physical backbone of transport infrastructure) and Economic corridor program (i.e., conceptual and programmatic model to structure socio-economic responses to develop a territory, building on a transport corridor), Gálvez defined Agricultural Growth Corridors (AGC) as tools to promote sustainable agribusiness development by further leveraging existing economies of scale along enhanced connective infrastructure. She described the evolution of corridor functions and interventions from purely transport sector-based initiatives, to logistics and trade corridors, and finally to economic corridors with a multisectoral approach.

The report evaluates six major corridor experiences with a strong agricultural component in Central Asia, the Greater Mekong Sub-region, Indonesia, Mozambique, Peru and Tanzania. It confirms that agriculture has become a key part of economic corridor program, especially in the Southern Hemisphere.

The study concludes that agro-corridors attract agribusiness firms because they offer critical mass of potential consumers, producers/suppliers and support services, a business environment more favourable than in other parts of the country, and dedicated business and financial services. Governments and the international community can channel resources to high-growth areas along corridors, for creating synergies between soft, hard and org-ware interventions, for aligning the work of line ministries (MoA, transport, trade etc.) and decentralized entities around a roadmap, and for promoting support from development partners.

Gálvez summarized the good practices for successful corridors and described some of the key pitfalls including design problems (e.g. planning oversized programs, starting corridors from scratch, misaligning hard and soft interventions; mis-targeting, etc.), implementation problems (e.g. administrative and institutional shortcomings, lack of coordination, inadequate balance among components, etc.), and governance issues such as potential environmental problems, social sustainability, lack of fairness; land tenure issues, etc.

For the future, *Gálvez* suggested that the early stages of agro-corridor implementation must focus on evaluation to inform a more strategic approach to corridor policy and practice. There is a need for developing advanced indicators for corridor performance: i) return on public investment and additionality; ii) inclusiveness; iii) environmental sustainability; iv) capacity to leverage private investment; v) impact on regional integration (agricultural trade and FDI in agriculture). More work is needed for monitoring and correction of negative externalities; e.g., land grabbing, market exclusion, negative environmental impacts (of mono-cropping, pollution, water scarcity, soil degradation, etc.). Finally evaluation of performance of new governance models and market structures emerging in corridor areas is also needed.

The Chair opened the discussion by reminding participants that the discussion on agricultural growth corridors is part of the scoping of an ISPC commissioned study and an international workshop (initially planned to be held in Ghana in conjunction with this ISPC meeting but postponed to a later date). She mentioned that the scope of the ISPC study would be broader than just economic corridors, to include other spatial development initiatives. To questions, *Gálvez* replied that the job creation in corridors includes both permanent jobs in agriculture and temporal jobs in infrastructure development; she further explained that selection criteria for FAO of the corridors included a detailed mapping exercise, importance of the agricultural sector program, and diversity of corridors with priority to comparing the oldest corridors with new ones to analyse the evolution of corridors across geographic zones.

Gálvez stressed that FAO work on PPP does not focus on big multinationals but includes local smallholder farmers and small businesses in developing countries. She mentioned that there are several ways for dealing with the risks and pitfalls of multi-stakeholder megaprojects (e.g. land grabbing) and to manage the constraints, although in Africa there are issues of communal lands that still need to be resolved.

Tom Tomich commented positively on the FAO framework for analysing corridors, and shared the concerns about governance and potential impact on the environment. He also questioned the rationale for selecting the corridors topic as a potential ISPC study, as it seems it was previously more relevant to development banks. In response, *Gálvez* indicated the existence of new tools combining finance with PPP, contract farming and inclusive business models, for managing corridors. *Sayer* clarified that one of the reasons behind the ISPC choice for this topic, following on previous studies, is the concern that CGIAR and most CRPs are currently assuming that smallholder farming will remain somehow unaffected in areas where development corridors are being implemented. This raises the question for the CGIAR about understanding what impact these initiatives might have on smallholder farmers,

the importance of future transformational changes in agriculture vs. the hinterlands, and what implications will this have for CGIAR research.

Cooke commented that some of the corridor initiatives have a very long history (e.g. Tanzania, Mozambique). The earlier concerns of development banks for corridors in Africa probably relates to the notion that these large-scale territorial approaches were thought to be driven by macroeconomists, and not led by countries. He also commented that the massive GDP increase observed in some corridors depend mostly on older investments. An observer questioned the conceptualisation of corridor initiatives and whether they include analysis of the social and environmental costs.

Gálvez concluded by reminding participants that the aim of FAO work is not to support corridors but to understand the changes they induce. The objective is to analyse the situations and start the dialogue with policy makers in member countries, to provide policy advice, and to develop the basis for good practices in implementing corridors and to avoid negative outcomes. She mentioned that there is a long history behind corridors (e.g. transport infrastructure), but the new aspect is the focus on agriculture. For instance in Africa, there is a conflict between agriculture and mining in some corridors, as they are both competing for infrastructure. The tools developed by FAO for policy makers include policy briefs, dialogue based on facts, a check list for good practices on corridors, and a checklist on PPP for agriculture.

Agenda item 9. Concepts for the new ISPC work plan and budget 2015

Peter Gardiner, Executive Director of the Secretariat noted that 2014 had seen the appointment of a New Chair and 2 members and that the Secretariat staff strength should be re-established by the end of the year. The Review of CRP extension proposals had entailed an extra meeting for the Council in Rome in June. This had led to rearrangement of ISPC's own agenda, but the previous agenda items had highlighted the several major products developed by the ISPC in 2013/14.

He reported that the general structure of the ISPC WP&B 2015 would be similar to previous years. Under *Independent Program Review* the Council would review CRP pre-proposals in "the 2nd call". Council would also expect to provide input to the Consortium on the guidelines for the 2nd call proposals, and reviews of outline and final forms of the SRF to the Fund Council. The ISPC anticipated that further workshop discussion of IDOs and indicators may be required to help match CRP implementation to the new SRF.

Under *Strategy and Trends*, the ISPC would pursue the implications of spatial area/economic development programs in Africa on CGIAR prioritization and research. Given the postponement of the Ghana workshop on this topic, the 2014 activity was likely to be completed in the first half of 2015. He noted that the draft Workplan envisaged two potential studies: (i) Research into practice – a study of innovation platforms in the CGIAR, and

(ii) Developing a theory of change for the ISPC – to understand which ISPC products and modalities have had maximum effect, restructuring approaches and developing agenda (and communications) aligned with highest CGIAR needs. Noting the responses to the partnership study (Agenda item 5. iii) it had been agreed that a paper on innovation platforms would be incorporated into the background papers for that study, leaving the development of a theory of change for the ISPC as a key deliverable for 2015.

The activities of the ISPC under its remit of *Mobilizing Science* would focus on the planning and conduct of Science Forum 15 on routes from agricultural research to poverty reduction

The study of boundary and development partnerships for the CGIAR to take research outputs to development impacts, would be likely to carry over into 2015. The ISPC would also publish a SF2013-related special edition of scientific papers on Nutrition and health outcomes: targets for agricultural research.

Under *Impact assessment*, the ISPC will continue its contribution to SIAC activities, under which SPIA has primary responsibility for a number of objectives. In 2015 SPIA funds will be contributed to on SIAC objective 2: Institutionalize the collection of diffusion data needed to conduct critical CGIAR impact evaluations; SIAC objective 3: Assess the full range of impacts from CGIAR research; SIAC objective 4: Support the development of communities of practice for ex-post impact assessment; and the SIAC program management and oversight.

The Budget for these activities is to be confirmed at between USD3.6 to 3.7million of which USD 850,000 – 950,000 are activity costs and of which approximately USD 500,000 contributed to impact assessment. Approximately two thirds of total budget (USD2.3 million) will be requested from the CGIAR Fund (system costs) and FAO contributes USD1.34 million. As the 4 year totals (2013-2016) for the SIAC program are USD11.3 million from all sources, the ISPC will add a project funded professional for stringent budget management in 2015.

It was noted that the WorkPlan & Budget would be finalised incorporating the outcomes of the discussion of the individual elements at this meeting and presented for the endorsement of the Fund Council at their meeting in November.

Agenda item 10. Independent program review

(i) Council reflections on the review of CRP extension proposals and planning for future reviews: Two key areas of work under Independent Program Review in 2014 were the review of *Strategy and Results Framework*, and *15 CGIAR Research Program (CRP) extension proposals*. In relation to the extension proposals, criteria/guidelines for the extension proposal were put forward by the Consortium Office on December 31, 2013 and *Gardiner* noted that ISPC had been pleased to be invited to comment on the guidelines. He also described the ISPC review process for the 15 proposals: once the Council and Secretariat staff had individually reviewed proposals, and written reviews from independent external experts were

received, there was a face-to-face meeting in Rome where the proposals and reviews (internal and external) were discussed and commentaries developed for each CRP. The key process difference, in comparison to the last round of CRP proposal reviews, was the fact that the ISPC was able to look at proposals simultaneously, and also to produce an overview of the portfolio.

An ongoing refrain from the donors, ISPC, and other stakeholders is the need for a document that provides good direction, and the earlier comments, made on the Strategy and Results Framework (SRF) giving strategic direction, still stand. He stated that the ISPC had sight of all (documented) responses to the ISPC commentaries, but would preferentially be reviewing these revised CRP extension proposals which needed to respond to the ISPC concerns. It was emphasized that the ISPC provides feedback with the expectation that the CRPs take the comments onboard and develop – the intention is to be helpful to CRP management. During the review process, the ISPC went back to the original *must haves*, and was gratified that action had been taken by some CRPs. Some others had not – although the ISPC recognizes that this may have been a factor of the maximum length imposed on proposals. He proposed that there would have to be further interaction between the ISPC and the CO to balance the desirability of shorter proposals in the 2nd call commensurate with the availability of quite a range of supporting documentation.

Many observers from CRPs stated that they found the comments useful, particularly in planning and setting goals. In general, the guidance from both ISPC and CO were along the same lines. In cases where *must haves* previously identified were not included in the proposal, this was due to the page limit. In reflecting on the extension proposal process, one of the comments WLE received was to restructure the program around flagships (FPs) – while this was initially not well received, it (paradoxically) was helpful in reformulating the CRP in a language and along lines that the leader was comfortable with.

Observers from CRPs also noted that the ISPC meetings offer a safe space to raise more contentious issues. One observer noted that the request for performance metrics (from CO) has been challenging to address. The Performance Matrix itself is a welcome addition that helps improve accountability of CRPs. The challenge was primarily three fold: (1) this being new to most scientists, it was very difficult to get buy-in for “stretch” goals; (2) staff strength, both in numbers and experience, needs to be addressed first before being able to be accountable for a satisfactory performance matrix; and, (3) is the necessity that it imposes to produce annual reports on what has been completed or achieved, what it cost etc. While the need to pay attention and monitor how well one is doing (connected to long-term outputs) is important, reporting in shorter timeframes appears counterproductive.

Along the same lines, an observer noted that they view the reform process from two aspects: the “what” of the reform process has been clearly identified – the endpoint in terms of positively impacting smallholder agriculture is clear. The “how” remains unclear. While IEA evaluations (in reference to Governance and Management Review) have helped with guidelines, this has not percolated through the system. When CRP Directors are charged with

accountability, they need the authority to implement (and many other observers from CRPs agreed with this view). Until this aspect of the reform process is properly implemented, the process will not be successful and donor funds may be in question.

Observers also stated that one needs to view the reform process as evolutionary rather than revolutionary – that CRP staff are distracted by constantly moving goal posts and there is a sense of fatigue. The effort on extension proposals applies to two years of work, and there is uncertainty about what happens after – that lack of clarity is even more of a concern than transaction costs. In many cases, in response to commentaries, changes have to be made within 2 years. And all this has diminished the capacity of the CGIAR to attract the best brains to be at the forefront of science. Later, responding to the comments on accountability, moving goal posts and shorter timeframes, an ISPC Council Member noted that he did worry about these issues from having been within the system. The answer to some of the information problems was not lengthier documents. He added that he had reviewed the proposals on the understanding that commentaries would feed into the second round of proposals (not result in rewriting of extension proposals).

One observer also raised the issue of capacity for implementation. While it is recognized that the CGIAR has good strengths, there are technologies that have progressed beyond what the CGIAR has the capacity to handle. There is a need to be open and transparent about this fact, and develop competence in programs that may lack capacity.

In responding to the focus on the Theory of Change (ToC) in commentaries, one observer thought that there was an exaggeration around the ToC. He opined that the ToC had to be written/done by the person at the forefront of the impact pathway – not at the CRP level. He also added that the focus on outcome matrix (performance metrics) was to be valued as it exerts pressure on everyone to evaluate and think about where they are headed. A Council Member noted that while it was possible to have a good research program for which the ToC has not been well articulated, the process of going through the ToC is useful – the ISPC is careful that a criticism of the ToC is not a criticism of underlying research. The Chair added that in commenting on the ToC, the ISPC had not just considered how it was written, but also the thought process – did we believe that a specific CRP has thought through the consequences- activities to impact - rather than a specific technique/approach being presented. An observer from a donor agency strongly stated the need to have CRP proposals (in this instance, extension proposals) released to the donor in time. Typically, documents are provided a few days before the Fund Council meeting and that isn't acceptable – especially when these proposals and commentaries have been available since July 2014. He also noted that the donors were happy to have ISPC to provide comments.

In response to the donor, the representative of the Fund Office stated that per the legal agreement, the Consortium Board needed to approve the CRP proposals before they could be circulated. He also added (in response to comments by CRP Directors and their need for authority alongside accountability) that the IEA report on Governance and Management was considered very seriously in the pre-Fund Council sessions in Mexico this year and was

discussed in detail. EAC has been asked to establish a joint committee with the CO, CRPs, and FC to come up with a possible model for CRP governance.

In response to observer comments, the Consortium CSO acknowledged some of the deficiencies of the last process – that the CO would need to demonstrate a bit more agility. He also noted that these complex programs may need a different way of being reviewed and the CO are considering including aspects like site visits. The ISPC Chair noted that in the portfolio commentary, the ISPC is also considering the possibility of face-to-face meetings with the CRP Directors during the review process – potentially helping avoid clinical assumptions made from simply reading documents.

Agenda item 11. AOB

There being no items raised under any other business, the Chair noted that Council would be following with interest the development of the Strategy and Results Framework in the next months and would be looking forward to providing its inputs to the Fund Council in November. She reiterated her thanks to the University of Copenhagen and CCAFS (Bruce Campbell, Torben Timmerman and Martin Lund), to the Executive Director and Muriel Pougeon of the Secretariat for the swift re-arrangement so that the meeting could take place in Copenhagen. She thanked all members of the Secretariat for their support to the Council and thanked observers for their continuing contribution and interest to the ISPC. The meeting was then closed.



Annex 1

5 Sept. 2014

Agenda

10th Meeting of the Independent Science & Partnership Council 15 - 17 September 2014

Ceremonial Hall (Festsalen), University of Copenhagen, Frue Plads 4, 1168,
Copenhagen K., Denmark

Sunday 14th September

*Arrival of ISPC members - Council and participants
ISPC closed dinner (19:00)*

Monday 15th September

ISPC Meeting

09:00	1. Opening of the ISPC Meeting i. Welcome and opening from ISPC Chair, <i>Maggie Gill</i> ii. Welcome from the University of Copenhagen, <i>Svend Christensen</i> (Professor and Head, Dept. Plant and Environmental Sciences)
09:30	2. CCAFS – The CGIAR Program on Climate Change, Agriculture and Food Security <i>Bruce Campbell</i> , CRP Leader
10:30	<i>Coffee break</i>
10:50	3. Reports of CGIAR System Units i. ISPC Chair, <i>Maggie Gill</i> ii. Consortium CSO, <i>Wayne Powell</i> iii. Fund Office, <i>Samy F. Gaiji</i> iv. Head of IEA, <i>Rachel Bedouin</i>
	Discussion
12:30	<i>Lunch</i>
14:00	Development of the CGIAR's Strategic Results Framework (SRF) A discussion.
15:00	4. Pathways to poverty alleviation through agricultural research Report by <i>Doug Gollin</i> (SPIA Chair): SPIA's experience in assessing poverty impacts by the CGIAR: Feedback from a workshop held in Minneapolis, July 26 th 2014
15:45	<i>Coffee break</i> Discussion: Framing the issues on poverty for CGIAR research and partnership strategies.
17:30	<i>End of Day 1</i>
19:00	Meeting reception and dinner, hosted by the ISPC for all participants

Tuesday 16th September

09:00

5. Mobilizing Science

Maggie Gill, ISPC Chair and Chair of SF 2013

- i. Follow-up on the outputs from the 2013 Science Forum on nutrition
- ii. Planning the Science Forum for 2015
- iii. Update on Partnership Study

10:30

Coffee break

11:00

6. The CGIAR approach to place-based research in West Africa

- (i) *Ylva Hillbur, DDG IITA: IITA's approach to regional agricultural research*
- (ii) *Ren Wang, ADG, Agriculture Dept., FAO: FAO and CGIAR collaboration in the region: the case of the Nerica rice varieties (by skype)*
- (iii) *Patrick Caron, Director (Strategic Research) CIRAD: Partnering with NARS: CIRAD's involvement in Partnerships Platforms*

12:30

Lunch

14:00

6. Continued: Discussion on systems research in the CGIAR

- (iv) *Kola Masha, Doreo partners: IITA: Building partnerships and capacity through joint programs*
- (v) *Kwesi Atta Krah, CRP Leader, Humid Tropics: How Humid Tropics approaches regional research and selects research sites*

15:50

Coffee break

16:00

7. Impact Assessment:

Doug Gollin, SPIA Chair: Progress of the SIAC program

17:30

End of Day 2

Wednesday 17th September

09:00	8. Strategy and trends Metrics in the CGIAR – reviewing Panel Report and next steps: <i>Jeffrey Sayer</i> Development corridors: Report by <i>Eva Gálvez Nogales</i> Agribusiness Economist, FAO
10:30	<i>Coffee break</i>
10:50	9. Concepts for the new ISPC work plan and budget 2015 <i>Peter Gardiner</i>
11:15	10. Independent program review Council reflections on the review of CRP extension proposals and planning for future reviews (CRPs, SRF etc..)
12:00	11. AOB
12:30	<i>Close of open meeting</i>
12:30 – 14:00	<i>Lunch</i> (all participants)
14:00 – 16:00	ISPC Closed session
17:00	Council free to depart



Annex 2

List of participants **10th Meeting of the Independent Science & Partnership Council** **15 - 17 September 2014**

Ceremonial Hall (Festsalen), University of Copenhagen, Frue Plads 4, 1168,
Copenhagen K., Denmark

ISPC COUNCIL

Margaret Evelyn Gill
Chair, ISPC
Professor of Integrated Land Use
University of Aberdeen
14B/10 Riversdale Crescent
Edinburgh, EH12 5QT
United Kingdom
Tel. +44 770 31 31 373
Email: m.gill@abdn.ac.uk

Segenet Kelemu
Director General, International Center for Insect Physiology and Ecology (ICIPE)
African Insect Science for Food and Health
P.O. Box 30772-00100
Nairobi, Kenya
Tel: +254 (20) 8632000
Fax: +254 (20) 8632001/8632002
E-mail: skelemu@icipe.org

Douglas Gollin
Chair, SPIA
Department of International Development
Queen Elizabeth House
3 Mansfield Road
Oxford OX1 3TB
United Kingdom
Tel. +44 (0)1865 281 832
Email: douglas.gollin@williams.ed

Jeffrey Sayer
Director, Development Practice Programme
School of Earth and Environmental Sciences

James Cook University
PO Box 6811, Cairns
N. Queensland 4870
Australia
Tel. +61 74-042-1663
Email: jeffrey.sayer@jcu.edu.au

Marcio de Miranda Santos
Executive Director, Center for Strategic Studies and
Management of Science, Technology and Innovation
Tel. +55 61-342-49-601/11
Fax. +55 61-342-49-660
Email: mmiranda@cgee.org.br

Thomas P. Tomich
W.K. Kellogg Endowed Chair in Sustainable Food Systems
Founding Director, UC Davis Agricultural Sustainability Institute (ASI)
Director, UC Sustainable Agriculture Research and Education Program (SAREP)
Host, Inter-Institutional Network for Food, Agriculture and Sustainability (INFAS)
Professor of Community Development, Environmental Science & Policy
University of California, One Shields Avenue, Davis, CA 95616-8523 USA
Tel: +1 (530) 752-3915
Email: tptomich@ucdavis.edu

Takuji Sasaki
Professor NODAI Research Institute
Tokyo University of Agriculture
1-1, Sakuragaoka 1-chome, Setagaya-ku
Tokyo 156-8502, JAPAN
Phone/fax: +81-(0)3-5477-2376
E-mail: t5sasaki@nodai.ac.jp

SPEAKERS

Svend Christensen

Professor and Head
University of Copenhagen
Faculty of Science,
Department Plant and Environmental Sciences
Rolighedsvej 21, DK-1958 – Frederiksberg C, Denmark
Email: svc@plen.ku.dk

Bruce Campbell

Program Director
Coordinating Unit, Independent Science Panel, Program Management Committee
CCAFS
University of Copenhagen
Faculty of Science,
Department of Plant and Environmental Sciences
Rolighedsvej 21, DK-1958 – Frederiksberg C, Denmark
Tel. +45 35331046
Email: b.campbell@cgiar.org

Wayne Powell

Chief Science Officer
CGIAR Consortium Office
c/o AGROPOLIS INTERNATIONAL
Avenue Agropolis
F-34394 Montpellier Cedex 5
Tel. +33 4 670 47 575
Email: w.powell@cgiar.org

Samy Francois Gaiji

Senior Operations Officer - Science
CGIAR Fund Office
The World Bank
1818 H Street, NW
Washington, DC 20433
USA
Tel: +1-202-473-8912
Email: sgaiji@worldbank.org

Rachel Bedouin

Head
CGIAR Independent Evaluation Arrangement (IAE)
c/o FAO
Tel: +39 0657053721; or +39 3401613203
Email: rachel.bedouin@fao.org

Ylva Hillbur

Deputy Director General for Research

International Institute for Tropical Agriculture (IITA)
PMB 5320 Oyo Road
Idaban, Nigeria
Tel. +1 201 633 6094 or + 234 2 7517472 ext 2335
Email: y.hillbur@cgiar.org

Ren Wang (*by skype*)
Assistant Director General,
Agriculture Department
Food and Agriculture Organization of the United Nations, FAO
Tel. + 39 06 57054523
Email: ren.wang@fao.org

Gouantoueu Guei (*by skype*)
Robert G. GUEI (Ph.D)
Secretary of the Committee on Agriculture (COAG)
Senior Technical Officer
Office of the Assistant Director-General
Agriculture and Consumer Protection Department
FAO, Rome, Room B-637
Tel: + 39 06 570 54 920
Fax: + 39 06 570 55 609

Patrick Caron
Director General in charge of Research and Strategy
CIRAD
TA 179/04 / bureau 223
Avenue Agropolis
34398 Montpellier cedex 5 FRANCE
Tél : +33 (0)4 67 61 75 90
Email: patrick.caron@cirad.fr

Kola Masha
Managing Director
Doreo Inverness Partners
Plot 4, Block 113
Prof. Olagoke Street
Oceanside Estate
2nd Roundabout
Lekki, Lagos
Tel. +2347084530691 and +2348055000350
Email: kola.masha@doreopartners.com

Kwesi Atta Krah
Director
CGIAR Research Program on Integrated Systems for the Humid Tropics
International Institute of Tropical Agriculture (IITA)
PMB 5320, Oyo Road, Ibadan, Nigeria
Tel: +1 201 633 6094 or +234 2 7517472 ext 4900
Email: k.attakrah@cgiar.org

Eva Gálvez Nogales
Agribusiness Economist
Rural Infrastructure and Agro-Industries Division, AGS
Food and Agriculture Organization of the United Nations, FAO
Tel: +39 06570 55262
Email: eva.galveznogales@fao.org

OBSERVERS

Rodney Cooke

Board Chair
International Potato Center CIP
Avenida La Molina 1895, La Molina
Apartado Postal 1558
Lima, Peru
Email: rodneydcooke@yahoo.co.uk

Thomas Rosswall

Independent Science Panel
CCAFS
University of Copenhagen
Faculty of Science,
Department of Plant and Environmental Sciences
Rolighedsvej 21, DK-1958 – Frederiksberg C, Denmark
Tel. (+46-760) 19 16 78
Email: thomas.rosswall@gmail.com

Andrew Wardell

Senior Manager of Research Capacity and Partnership Development
Center for International Forestry Research (CIFOR)
CIRAD
s/c Biens et Services des Ecosystèmes Forestiers tropicaux (B&SEF)
Département Environnements et Sociétés
TA C-105/D Campus International de Baillarguet
34398 Montpellier Cedex 5 France
Tel. +33(0)467593761 Fax. +33(0)467593909 Cell. +33(0)786985145
Tel. +243(0)990849996 (DR Congo)
Email: a.wardell@cgiar.org

Andrew Noble

Program Director WLE
International Water Management Institute
IWMI Headquarters – Sri Lanka
P. O. Box 2075, Colombo, Sri Lanka.
127, Sunil Mawatha, Pelawatte, Battaramulla, Sri Lanka
Tel. +94-11 2880000
Fax: +94-11 2786854
Email: a.noble@cgiar.org

Jürgen Anthofer

Executive Secretary
European Initiative for Agricultural Research for Development
Senior Advisor
European Commission
Agricultural Research for Development
DG Research & Innovation
F3 Agri-Food Chain

COVE 08/105
B-1049 Brussels/Belgium
Tel. +32 229-91790
Email: juergen.anthrofer@ec.europa.eu

Jennifer "Vern" Long
Senior International Agriculture Research Advisor
USAID/Bureau for Food Security
Office of Agriculture, Research and Policy
Research Division
1300 Pennsylvania Ave. NW
Washington, DC 20523
Tel. 202-712-4887
Email: jolong@usaid.gov

Noel Ellis
Director, CGIAR Research Program Grain Legumes
International Crops Research Institute for the Semi-Arid Tropics
ICRISAT-IN
1 Patancheru 502324
Andhra Pradesh, India
Tel. +91 40 30713071
Fax. +91 40 30713074
Email: n.ellis@cgiar.org

Maarten van Ginkel
Deputy Director General - Research
ICARDA
Amman Office 2, Abdoun al-Shamali,
Behind Darouzeh Pharmacy, Khalid Abu Dalbouh Str.
Bldg. no. 15, Amman – Jordan
Tel. +962-6-5903120; +962-79-514-8262; +971-50-558-4043
Email: m.vanginkel@cgiar.org

Kamel Shideed
Assistant Director General for International Cooperation and Communication
International Center for Agricultural Research in the Dry Areas (ICARDA)
P.O.Box 950764
Amman 1119 – Jordan
Tel. Office: (+962-6-5560948/5560832/5525750)
Mobile Jordan: (+962-799766221)
E-mail: k.shideed@cgiar.org

Richard Thomas
Director
CRP/Dryland Systems Program
International Center for Agricultural Research in the Dry Areas (ICARDA)
Abdoun Al-Shamalie, Behind Darouzeh Pharmacy,
Khalid Abu Dalbouh Str., Bldg no. 15,
P.O.Box 950764

Amman 11195–Jordan
Tel. +962-6-5903120 (switchboard)
Email: r.thomas@cgiar.org

Ingrid Öborn
Professor, Senior Research Fellow
World Agroforestry Center
United Nations Avenue, Gigiri, Nairobi, Kenya
Post: P.O Box 30677, 00100, Nairobi, Kenya
Tel. +254 20 7224106
Email: i.oborn@cgiar.org

Peter Matlon
Board Chair
AfricaRice
Adjunct Professor, Dyson School of Applied Economics and Management
Cornell University
1909 Berthoud Pass Ct.
Ballwin, MO 63011 USA
Tel. 917-330-6522
Email: matlonpj@aol.com

Robin A. Buruchara
Africa Regional Director for CIAT
c/o ICIPE Duduville Complex,
P. O. Box 823-00621,
Nairobi, Kenya
Tel. +254-20-8632800
Mobile: +254-718-000986
Email: r.buruchara@cgiar.org

Patrick Dugan
Deputy Director General
WorldFish
AAS Program Director
Jalan Batu Maung
11960 Bayan Lepas
Penang
Tel:+60124829771; +604 6202 211
Email: p.dugan@cgiar.org

Simon Heck
Sweetpotatoe Program Leader
International Potato Center (CIP)
P.O. Box 22274
Kampala, Uganda
Tel.: +256 312 266250; + 256 781 890317
Email: s.heck@cgiar.org

Sobhana (Shoba) Sivasankar
Director
CGIAR Research Program on Drylands Cereals
ICRISAT
Patancheru 502 324
Andhra Pradesh, India
Tel. +91 4030713086 Cell. +91 9573225463 Fax. +91 4030713074
Email: s.sivasankar@cgiar.org

Lilli Teresa Probst
SPIA/Oxford University
Bichlacker 13, D-82418 Seehausen am Staffelsee,
Germany
Tel. +49 151 26564203
Email: lilli.probst@gmx.de

ISPC Secretariat

Peter Gardiner

Executive Director
c/o FAO
Viale delle Terme di Caracalla
00153 Rome Italy
Tel. +39 570 52458
Email: peter.gardiner@fao.org

Timothy Kelley

Senior Agricultural Research Officer
c/o FAO
Tel. +39 570 54210
Email: timothy.kelley@fao.org

Rachid Serraj

Senior Agricultural Research Officer
c/o FAO
Tel. +39 570 55659
Email: rachid.serraj@fao.org

James Stevenson

Agricultural Research Officer
c/o FAO
Tel. +39 570 52251
Email: james.stevenson@fao.org

Preetmoninder Lidder

Agricultural Research Officer
c/o FAO
Tel. +39 570 56208
Email: preetmoninder.lidder@fao.org

Lakshmi Krishnan

Agricultural Research Officer
c/o FAO
Tel. +39 570 53422
Email: lakshmi.krishnan@fao.org

Muriel Pougheon

Program Assistant/ Administrative Coordinator
c/o FAO
Tel. + 39 06 570 52103
Email: muriel.pougheon@fao.org

CCAFS COORDINATOR UNIT STAFF

Torben Timmermann

Head of Program Coordinator and Communications Evaluation Manager
CGIAR Research Program
Climate Change, Agriculture and Food Security
CCAFS Coordinating Unit
University of Copenhagen
Rolighedsvej 21 DK-1958 Frederiksberg C
Denmark
Tel. +45 24433242
Email: t.timmermann@cgiar.org

Martin Lund

Program Manager
CGIAR Research Program
Climate Change, Agriculture and Food Security
CCAFS Coordinating Unit
University of Copenhagen
Department of Plant and Environmental Sciences
Rolighedsvej 21 DK-1958 Frederiksberg C
Denmark
Tel. +45 24851613, office +45 35331046E-
Email: m.lund@cgiar.org