



6th Meeting of the Independent Science & Partnership Council

26-29 September 2012
ILRI Campus
Addis Ababa, ETHIOPIA

END OF MEETING REPORT *(ISPC Secretariat, November 2012)*

Agenda Item 1. Opening of the ISPC Meeting

The ISPC Chair, *Ken Cassman* opened the meeting and welcomed participants. He noted that the ISPC was an integral part of the CGIAR reform in being responsible for science quality and for contributing to a cohesive strategy for the CGIAR. To fulfil this requirement the ISPC conducts work on strategy and emerging trends with specific reference to the CGIAR. It contributes, as it had in the last year particularly, to the independent review of programs, as well to mobilising science and to impact assessment. The Chair noted that this was the second ISPC meeting of the year. The Council has particular interest in understanding how the process of transformation is working and selects venues which are at the nexus of different areas of work that contribute to the new CGIAR portfolio. He noted that Ethiopia presented many concerns relevant to the work of the CGIAR.

Jimmy Smith, Director General of ILRI, welcomed the Council and participants to ILRI's Addis Ababa campus which constitutes a hub of the CGIAR with nine Centers represented. Ethiopia was still basically an agrarian country and the climate, ecological diversity and the extent of poverty and population challenges, especially in the highlands, provided the real life challenges which the CGIAR was attempting to address. He noted that the key element of the transformation was to try and make the whole greater than the sum of the independent parts: Ethiopia provided a good place to test this thesis for the CGIAR. The DG observed that the meeting was being held during the week of the Meskel holiday and he welcomed participants to join the celebrations planned on the ILRI campus.

Agenda Item 2. Agriculture and the environment in Ethiopia

“The situation in Ethiopian agriculture today and strategies for the future”

a) Agricultural Development Strategy and Priority Directions

Ato Degene Abesha gave a presentation on behalf of State Minister, Ministry of Agriculture, on “Agricultural Development Strategies and Priority Directions” for Ethiopia. Outlining an explicit policy of agricultural development-led industrialisation, Ato Degene described the government's Growth and Transformation Plan, with a wide-ranging set of initiatives aimed at increasing agricultural production,

smallholder commercialisation and introduction of high-value crops to highland and peri-urban areas, and the promotion of mechanisation and inward investment in areas with low population density and large land surpluses. Degene noted that Ethiopia has enjoyed average agricultural growth of 8% per annum for the last 9 years, and agricultural exports have now reached USD 1 billion annually.

In response to questions regarding future scenarios for pastoralists, given predictions of climate change, Ato Degene explained that pastoralists are one of three agricultural sub-sectors in the Growth and Transformation Plan – alongside “private sector” and “smallholders”. There is a move to take services such as education and health to pastoralists, but there is also a modernisation process with the government encouraging agro-pastoral interventions.

b) The work of the Agricultural Transformation Agency

Ato Mirafe Marcos gave a presentation on the foundation and operations of the Agricultural Transformation Agency (ATA), established in December 2010 by the Ministers of Finance, Water, Agriculture, and the Heads of the four regions within Ethiopia. The agency is modelled on “acceleration units” as adopted in Taiwan and Korea during their successful industrialization process. The ATA operates by supporting the Ministry of Agriculture and other partners to make measurable and sustainable improvements in service provision and in finding evidence-based solutions to systemic bottlenecks that hold back agricultural development. The ATA has three prioritised areas: value chains – maize, wheat, sorghum, teff, pulses, rice, oil seeds, livestock; systems – soil, seeds, cooperatives, input and output markets, extension, research; and special initiatives. The Agency has a clear monitoring, learning and evaluation framework, with clear targets for each year of operations, and the organisation aims to phase out in not more than 15 years. Examples for the teff value chain, and a new strategy on strengthening cooperatives were presented.

In discussion, Mr Marcos explained that farmers were diversifying out of teff production because it is so labour intensive. However, with the right kinds of supporting investments, teff may still be an attractive option for farmers, given the increasing price for this nationally important commodity. In addition, it is important for the ATA to consider agriculture in relation to the rest of the economy, for example, where can the industrialization process absorb the labour that is migrating out of agriculture?

In relation to a question about the level of private sector investment in Ethiopia, Mr Marcos explained that ATA is looking at two categories of investments. The first is promoting investment that links farmers to output markets, such as contract farming and out-grower schemes that help secure markets, particularly in areas where access to commercial land is difficult. The second is commercial farming activities for crops such as cotton and rice in the lowlands. The ATA wants to aggressively promote investments that are a win-win for smallholders and private sector, as there are 20 million smallholders in Ethiopia; however the quantification of this direct investment has not been done yet. Mr Marcos explained that ATA does not replace any existing government agency, but aims to bring about greater impact from those agencies, and facilitate the transition from an agrarian to an industrial society.

c) Ethiopian Institute for Agricultural Research

Dr Tekelewold of EIAR gave a message to the group on behalf of Dr Solomon Assefa. Dr Tekelewold thanked ILRI and the ISPC for meeting in Ethiopia, and wanted to acknowledge the recent increase in the number of CGIAR Centers in Ethiopia, with ICRAF and ICRISAT both recently opening offices. Tekelewold stated that most of EIAR success is attributable to support from CGIAR partners, be it in the form of germplasm, information and other spillovers.

Dr Tekelewold pointed out that population is very high in the highlands and agricultural production in the region is low. The intention is to create employment in highland areas by switching to higher-value crops.

“Meeting future water demand and expectations for development of irrigated agriculture”

State Minister, Ministry of Water and Energy, His Excellency *Ato Kebede Gerba*, gave a presentation outlining the extent of the opportunities for greater irrigation in Ethiopia, as well as the challenges of developing suitable infrastructure in a country that suffers from economic water scarcity (defined as a country having biophysically “adequate renewable water resources, but with less than 25% of water from rivers withdrawn for human purposes, and needing to make significant improvements in existing water infrastructure to make such resources available for use”). Looking ahead to the drivers of water demand, largely population growth, economic growth etc., Mr Gerba outlined how storage capacity is low in reservoirs, with only 9 dams in the country. Possible solutions to the problems included improvements in water governance and water use efficiency / technology, as well as a dematerialisation of the economy into less water-intense sectors (i.e. services), were all being explored. Mr Gerba reiterated that growth of irrigated agriculture for Ethiopia is essential, given the highly concentrated nature of rainfall. This requires significant infrastructure development – at both large scale (e.g. new dams) and small scale (e.g. on-farm water harvesting).

The Chair asked how the water resources of the country were split into surface vs groundwater. Mr Gerba responded stating that this division depended on the potential, and that a master plan for each basin is being developed, based on the estimate of what amount of water can be used safely for each basin. In further discussion, Mr Gerba explained that water pricing was being considered as a strategy for controlling use based on the concept of safe yields. In relation to trans-boundary water issues, Mr Gerba acknowledged that most rivers in Ethiopia are indeed trans-boundary, with Sudan, Egypt and Kenya as the key involved neighbours. Ethiopia is looking at shared benefits for the water resources, with the potential to supply power to neighbouring countries as a result of hydropower schemes, and jointly evaluating projects through national and international panels of experts, examining the impact on downstream users.

CGIAR in Ethiopia and East Africa

Livestock development priorities and strategies for Africa

ILRI DG *Jimmy Smith* provided a research view of the priorities and strategies for the African livestock sector. He noted that the 4 billion people who live on less than USD 10 a day, primarily in developing countries, represent a food market of about USD 2.9 trillion per year. Consumption of meat and milk in developing countries is forecast to increase faster than any crop product. 70% of the world’s livestock (18.5 billion head) are in developing countries and of the 1 billion people earning less than USD 2 a day who depend on livestock, 600 million are in South Asia and 300 million in Sub-Saharan Africa. 70% of the world’s rural poor rely on livestock for important parts of their livelihoods. About 2 thirds of poor livestock keepers are rural women. For the vulnerable, up to 40% of the benefits of livestock keeping may be derived from non-market or intangible benefits, mostly insurance and financial. In relation to the later discussion on nutrition it should be pointed out that small amounts of animal source foods have large benefits in child growth and cognition and the outcomes of pregnancy. In developing countries, livestock contributes 6 to 36% of protein and 2 to 12% of calories. In value terms, livestock are 4 of the 5 highest value commodities globally (and 2 of the 5 highest value in Africa).

Challenges to the livestock revolution are the roughly 1 billion additional cereal grains required in 2050 to meet food and feed demands. Of this, around 430 million metric tonnes will be required for, mostly monogastric, livestock. Livestock are suggested to contribute 18% of global green house gas emissions considering all parts of livestock and livestock-related enterprise. The productivity gap estimates are up to

130% in beef and 430% in milk. Estimates suggest typically 50 to 70% deficits in feed relative to genetic potential. Animal diseases cause mortality and low productivity.

However, it is encouraging to know that win-win situations exist in that better management of production systems, can both improve productivity and resources efficiency, whilst reducing green house gas emissions per unit of product. To date, production increases have mainly been through the increase in livestock numbers and there are opportunities for production with a smaller environmental footprint. Reducing animal numbers in developing countries has implications for livelihoods. There are opportunities to benefit soils in livestock based natural resource management options. The disease challenge however is substantial: animal source foods are the biggest contributor to food-borne diseases and zoonotic diseases or contaminated livestock products kill more people each year than malaria. One new human disease emerges every 2 months and 20% of these come from livestock. In developing countries, domestic markets for livestock products dominate, in part because opportunities for exports are limited by sanitary and phytosanitary (SPS) and quality standards. “Supermarketization” threatens small holder market participation which is driving high standards for quality and food safety and changing market structure towards vertical integration and large scale production. In the African context, ILRI identifies two different scenarios for growth, namely “inclusive growth” where good market access and increasing product activity provides opportunities for continued small holder participation, e.g. in mixed crop-livestock systems like East Africa dairy; and “fragile growth”, where remoteness, marginal land resources or agro-climatic vulnerability restrict intensification, e.g. in many agro pastoral settings. ILRI’s strategic interventions therefore focus on organizational options for linking farmers to markets, the mitigation of both animal and human disease threats, improving feeds, development and dissemination of useful livestock breeds tailored to local settings and the development of climate smart productions strategies. ILRI believes that there is opportunity to take advantage of the increasing capacity of its research and development partners and the current interest of investors in improving the situation of livestock and their contribution to developing country agriculture.

In discussion, it was noted that there were major differences in appreciation of livestock and animal-source diets in developing countries. Smith noted that there was indeed a need to change diets in the developed world, but that there is no moral equivalence between those who made poor choices in food and those who have no choice in food. We need to get livestock products into the diet of the malnourished. Resource issues include the reduction of water use and there are food chain and food safety issues –although we need to inform policy makers on the real risks. As well as technical innovation there were opportunities for institutional innovation, e.g. Operation Flood in India. It was noted that there was considerable work in improving grain across CRPs but a comprehensive view of forages and livestock feeds was still missing. The DG responded that forage breeding was much more widely established in Latin America but that grown forages had not taken hold to the same extent in Africa where land is held communally in extensive production systems. The ILRI DG felt that huge progress could be made from collaboration with crop scientists, e.g. in stover digestibility. The future grain demand is largely for monogastrics but 70 to 80% of crop residue feeds are in livestock-crop systems. It was noted that the grain price spikes have barely affected livestock demand. This was in part because small-holder production leads to consumption at the local scale. In contrast, large industrial systems have the increased risk of diseases and issues of waste management. For ILRI, breed improvement was not so much breeding but matching genotypes to environments where they could be productive. Smith noted that many of the figures quoted commonly for livestock in media and the literature needed to be revisited or rationalized; for instance the figures for water used per kilo of beef were for feed lot fattening in the USA and were not globally relevant. He believed that more should be made of the animal source food benefits in developing countries in promoting their needs for research on livestock.

IFPRI's institutional research and the broader impacts of CGIAR research in Ethiopia

Dr. Kwadwo Asenso-Okyere, Director of IFPRI's Eastern and Southern Africa Regional Office, gave an overview of IFPRI's activities under the title of "*IFPRI's institutional research and capacity development and the broader impacts of CGIAR research in Ethiopia*" which highlighted the following: IFPRI assesses impacts of CGIAR research in Ethiopia, focusing particularly on the food price effects that have not been covered in other impact assessments. Economy-wide models are needed to estimate the size and consequences of the impacts (including positive and some negative) on income, poverty and nutrition. SPIA's DIIVA study results for varietal adoption and impact have been used as an input to the study that also looks at policy impact from IFPRI's work, and *ex ante* impact predictions).

Assistance is provided to the establishment of public development organizations, including the Ethiopian Commodity Exchange (ECE) and Agricultural Transformation Agency (ATA) in Ethiopia. For ATA, IFPRI conducted a series of studies in partnership with national and international agencies to identify best practices for guiding the establishment of ATA in 2010. The ATA activity involves seconded staff and coordination of international partnerships. Also Nigeria has established an Agricultural Transformation Agency, and IFPRI has assisted in this process.

Impact evaluations on development projects include the Productive Safety Net Project, and growth and development implications of the Comprehensive Africa Agriculture Development Program (CAADP). IFPRI's approach in capacity development involves both joint research work with local organizations and training workshops on topics such as: CGE and econometric modelling, GIS, supply chain operation, and writing, presenting and publishing. IFPRI engages with national institutes such as the Ethiopian Development Research Institute (EDRI), Central Statistical Authority (CSA) and Ethiopian Economic Association (EEA). Regarding the ATA, IFPRI conducts international public goods research on the potentials and challenges of the ATA model.

IFPRI's outreach activities have focused on publishing (Atlas, discussion papers, books) and organising a conference on agricultural productivity.

In the discussion, the comments touched on the methods of attribution for policy separate from technology value in impact assessments; the selection of topics for impact assessment and focus on impact on direct beneficiaries rather than up-scaling and macro-economics; linking documented impacts to the high-level goals and the effects of capacity development; IFPRI's activities elsewhere in the region apart from Ethiopia and to what extent funding drives the volume of activities; and the ability to share the IFPRI contributions on ATA with other countries.

CAADP and CGIAR Alignment

Due to unforeseen events, the Africa Union representative was unable to attend the meeting. *Shirley Tarawali* reported on the CGIAR-CAADP relationship and how it can add to the CGIAR's ability to enhance partnerships and collaboration. She reported on recent efforts that include meetings in Dublin in 2011 and in September 2012. These events take advantage of the CGIAR reform coinciding with the African countries efforts to establish compacts and investments plans under the CAADP.

As an input to the process, FARA had organized productivity workshops prior to each meeting attended by people working within CAADP and different CRPs. The joint initiative also includes development partners focused on agricultural research, education and extension in Africa. In the most recent meeting, it was emphasised that the different groups needed to tie their activities more around science in Africa and identify priority activities. The Steering committee (for the Dublin process) has designed steps to facilitate greater coordination and collaboration. Through priority setting, areas need to be identified where CRPs

can better support the CAAPD. An MoU is to be developed between the African institutions and the CGIAR. In Tarawali's view, much can be learned on both sides; CAADP focuses on the role of agriculture in the development agenda whereas the CGIAR has focused on research, but is now talking more explicitly about research for outcomes and impact. The collaborative mechanisms are good for making the agendas more effective on delivering results and they need investment, including for transaction costs.

Iain Wright, Director of the ILRI campus in Addis Ababa, gave some highlights of the CGIAR presence in Ethiopia as an example of how disparate research agendas could start to be brought together. Seven Centers have offices in Addis Ababa, an additional two are joining and two more work in the region through partners. This provides a huge opportunity to expand the traditional bi- or trilateral partnerships to engage across Centers. The campus will become a true CGIAR hub that can drive the CGIAR agenda. An example of such a collaboration is the "Africa Rising" program funded by the USAID. All Centers are involved with national and regional partners including universities in the program that focuses on sustainable intensification of mixed crop-livestock systems.

Kwadwo reminded the audience that CAADP has four pillars: 1) Access to land and water; 2) Infrastructure; 3) Access to markets; and, 4) Research and training. The process should drive African agriculture and it is expected that each country invest 10% of its GNP on the activities. The CAADP compacts are agreements for each country to plan how agriculture will be financed over a period. Centers should assist countries to develop the compacts and implement them. An ATA representative directly involved in CAADP stated that the CGIAR has a comparative advantage to be involved in the sector working groups. Countries can invite CGIAR Centers to donor platforms to identify agenda and to work on it.

The ISPC Chair concluded that these reports were very encouraging. The relationship allows learning on what works and what doesn't. The Addis Ababa campus is a crucible in the evolution of the CGIAR and regional relationships and he felt that relationships were clearly going in the right direction.

Agenda item 3. Strategy and trends

The Chair introduced the session noting that the ISPC's work in strategy and trends (a foresight function) was both to provide longer term advice to the development of the System's Strategic Results Framework and to provide leadership or brokerage of scientific issues that might be a bottle neck to future CGIAR program development. This approach was reflected in the two activities in train in 2012 reported under items (i) and (ii). In a similar vein, items (iii) to (v) were to be treated as discussions of potential elements of the future ISPC workplan for attention in 2013.

3.i. Foresight study: farm size and the effects of urbanization on demand "Changes in Urbanization and Farm Size and their implications for CGIAR research"

Ken Cassman, chair of the ISPC provided the background and rationale for this study, indicating how essential it is for the ISPC, and indeed the Consortium and Funders, to have a clear understanding of how continued growth in urbanization and changes in the structure and size of farms in SSA and South Asia are likely play out over the next two decades and how this in turn influences the priorities of the CGIAR. He then invited ISPC Member and SPIA Chair *Doug Gollin* to provide an update on progress with this study.

Gollin emphasized that this study will be looking at the full range of views as to global projections on farm size (land area, value of farm assets, number of people working on the farm, livestock herds) and will be paying particular attention to diverse trends across and within regions of South Asia and Sub-Saharan Africa, as well as factors driving those trends. He noted that the data on urbanization and trends in farm

size are, generally speaking, well documented (e.g., foresight studies undertaken by UK, FAO and others), though some updating and making intra- and inter-regional comparisons could be helpful in setting the stage. As such, this study will, at least initially, pull together and summarize what is already known about the changing structure of demand and farm sizes, and of course fill gaps where possible. Building on that knowledge base, a major focus of this study will be in drawing out the inferences of those changes on international public sector agricultural research and for the CGIAR in particular.

The ISPC has been liaising with potential contributors. The plan is to commission a set of papers from experts in farm size/urbanization analyses having a strong economics focus, but other disciplinary perspectives—from geographers, demographers and production agronomists will also be sought. A workshop is planned for early January at which four or five papers will be presented and discussed by a wide range of participants with expertise in different disciplines. A study coordinator will convene and host the workshop and be charged with producing an integrated synthesis document, drawing on the analyses provided by the papers and discussions at the workshop. The ISPC will review the synthesis document, provide its own critique and submit this to the CGIAR Consortium for input into the SRF Action Plan. Gollin encouraged ISPC members and observers to suggest people with the appropriate disciplinary backgrounds to invite to the workshop.

A number of issues were discussed, beginning with the need to clarify the meaning of ‘farm size’ – whether it goes beyond simply crop farms that uses total land area, to the exclusion of elements such as numbers of animals (for livestock-based systems), or trees (for tree-based systems), or variability in quality. Will distinctions be made between entrepreneurial versus non-entrepreneurial farms? This is not a simple issue, but clearly shows the need for multi-disciplinary approaches. As the topic is politically and emotionally charged in current land tenure/policy debates (with land grabbing and imposition of farm size limits), there is a need for broader perspectives and to look beyond simple farm size data. Cultural (inheritance norms) and religious values would be important to consider. The ISPC recognizes the difficulty of ‘farm size’ – is it farm size in terms of ownership or management? This will be a question to be addressed. The relationship between the large scale growing sector and the smallholder scale (which are expanding together) also requires examination. It may be that the *average* farm size is not such an important thing to examine (not the most powerful indicator). How, for example, will the large scale conversion of farms in Africa, or the advent of agricultural and development ‘growth corridors’, affect general trends in small farm ownership? The analysis should be sufficiently granular to pick up these heterogeneous effects.

In response, Gollin referred to the draft concept note which elaborates on a number of these issues. Trends in urbanization and farm size are well covered in the literature, but there is considerable variability across and within regions and factors driving these trends need to be looked at more carefully and, most importantly, assessed for the implications of those changes for the CGIAR. On the legal and cultural restrictions on land sales, this is something that the study will have to address. While markets play a dominant role, they alone do not drive these processes. The ISPC are in contact with demographers who will look at some of these issues as well. Farm size and choice of technology is at the heart of the issue. Also, farms closer to the markets face different challenges and have different opportunities. The urbanization of Africa and “supermarketization” are major developments – and spelling out what this means for the CGIAR in terms of the role of urban agriculture, the implications for energy and the environment, the role of non-farm sector (transport and processing), will all be a part of this study. At the same time, there is a need to provide boundaries for the study in places (since perhaps the purpose of the study should also be to highlight areas needing more detailed assessment rather than include everything) and to keep it sufficiently focused in the available time.

(ii) Report on Conservation agriculture.

James Stevenson of the ISPC Secretariat presented the work that has been carried out in the preparation of this strategic study since the beginning of 2012. Four review papers have been commissioned on: Impact of conservation agriculture on agricultural yields; Impact of conservation agriculture on ecosystem services; Farm-level economics of conservation agriculture; Promotion and adoption of conservation agriculture in southern Africa. A workshop at the University of Nebraska, Lincoln, USA, will take place on 15th and 16th October, where 45 participants will discuss drafts of the review papers. The goal of the workshop is to achieve consensus on the main scientific issues in conservation agriculture (CA).

An observer noted that studies have shown that adoption of the technology depends in some cases on the availability of herbicides. Would that affect the availability of the technology for smallholders and what might the substitutes be? *Stevenson* noted that in Sub-Saharan Africa, more labour (for weeding) is the substitute for chemical use which, in turn, raises the question of who is providing the labour – studies in Lesotho have shown a negative impact on unpaid women's labour in smallholder systems.

Other points arising in discussion were that the promoters of CA have sold the concept on the basis of economic and environmental benefits in the long-run, which should be considered together. The study, and the topics of the review papers, seemed compartmentalised on single issues. However, the Chair replied that the workshop is where the discussion will take place across disciplines. Other observers suggested that the challenge is often the availability of machinery, such as seeders, and the costs involved that could be prohibitive for farmers. A recent example from China was cited of a direct seeder that is adapted to small-scale farming. This is consistent with ICARDA's experience in West Asia and the long-run interest in CA.

The Chair highlighted the critical issue of a lack of crop residues asking what level of productivity do you need before you have enough residues to make a difference? Others noted the importance of focusing on the process of targeting the technology and achieving outcomes, rather than on promoting the technology. It is possible to forget about the process of *why* we are using this technology. It was more important to work back from the outcomes that you wish to seek for any system and see what alternatives are available for achieving them – the technologies have to be flexible. Finally a CRP leader felt that the community had been down this road before; and that the viability of the approach is context specific, and we may end up not being able to conclude much more than that. However, it was hoped that the forthcoming meeting would make some of the contextual issues clearer as well as the scientific basis which supported likely future options.

(iii) Biotechnology

Sirkka Immonen from the ISPC Secretariat introduced a concept note on the proposed strategic study on biotechnology, designed to address three broad objectives of: (i) assessing the pipeline of deliverable research products deriving from biotechnology research of nearly two decades; (ii) analysing the internal and external partnership opportunities and strategies in the context of the reformed CGIAR; and (iii) analysing scenarios for the near- and medium on biotechnology development, research application and constraints to adoption that will influence investment choices in the CGIAR.

The meeting was supportive of the study and raised the following issues in the discussion for inclusion and consideration; such a study should involve all biotechnologies, not only transgenic technology, and the context in which the CGIAR operates in pursuit of the production of IPGs. The study is timely, but potentially a very big field, including the capacity building that is necessary for outcomes. Judging by the CRP proposals, the debate is still not at the point at which the key investments and strategies to get the outputs developed and delivered can be determined. There has been limited discussion on where the

research focus should be; on development of technical solutions or understanding of biological processes, and what strategies to adopt for interpreting the huge amount of information and data generated. This study will allow these issues to be clearly stated and debate promoted around them. An aspect is the extent to which the CGIAR maintains an agenda in biotechnology that helps it to recruit and retain very good staff. It is important to distinguish biotechnology research as answering specific research questions from its role in contributing to delivery. Yet, it is equally important for the CGIAR as an applied science organization to have a clear delivery timeline. Some contrasting examples can be found: such as the Harvest Plus initiative where the assumed lack of a delivery pipeline for GMOs led to the program choosing not to invest in transgenic technology, and the case of Golden Rice where a different diagnosis was made and scaling up is forecast only in 2015. The meeting was in agreement that the scope of the study should include livestock, as for livestock disease the CGIAR operates in areas where endemics occur, which gives it a comparative advantage to do research in-house and not to commission research - which may be impossible to conduct elsewhere on a cost effective basis. The new (programmatic) funding mode in the CGIAR may have effects on such fields of investigation that depend on infrastructure and longer-term investments, and which previously accessed core funding. The study can build on the proceedings of the 2010 FAO Conference on agricultural biotechnologies in developing countries which provided inventories, biotechnology reviews for crops, livestock, forestry, fisheries/aquaculture and for food processing/safety and evaluated options and opportunities. Finally, it was emphasised that encouraging dialogue with donors on what the CGIAR is doing, particularly regarding GMOs, will be an important objective of the study.

(iv) The future of irrigated agriculture in Africa

As background to thinking by the possibility of the ISPC commissioning a study on irrigation for agriculture in Africa, *Simon Langan* from IWMI gave a presentation on the status of the use, research and funding of research on irrigation in Africa. The main question rising from his presentation was the need to understand why the donor community was reluctant to support activities for increasing irrigation. The justification for the ISPC to take on a strategic study on irrigation based in the need for consensus on the role that irrigated agriculture plays for agricultural productivity enhancement and food security, particularly in Africa. Due to its impartiality, the ISPC could convene discussion on irrigation at an independent level and raise donor awareness on the topic better than any individual CRP. The key question in any such study would be “Can Africa become food secure without irrigated agriculture and if not, what is the CGIAR’s comparative advantage in engaging on research on irrigation?” On the other hand, there was little consensus whether the ISPC should take on a study on a topic that was in the area of one CRP, namely CRP5. Thus, CRP5 should be encouraged to address the issues of irrigation if it was not already doing so. It wasn’t clear that such a study would help the CGIAR prioritise its research. An argument was made that even in rainfed agriculture, there were huge potentials for increasing food production. A donor representative agreed with the perspective that this topic seemed to lack a foresight dimension and therefore fell under the mandate of CRP5. In conclusion, this topic was deemed a low priority for the ISPC to address.

(v) Metrics

The ISPC Chair introduced the topic by summarising the results from the Science Forum 2011 on the issues. There was controversy regarding what to measure, how and by whom. The CGIAR has certain comparative advantages as concluded at the SF11. The Chair outlined briefly what a study on metrics might cover and produce. One challenge was that data are collected at different scales. In general, the topic was perceived as highly important. While all CRPs are dealing with measurement, they seem to be taking different approaches. For instance, several have certain geographic spaces where they plan to measure livelihoods. These CRPs need to be efficient in creating synergy. Shared metrics would be one way. While clearly there were metrics that would be “nice to have”, there was need to identify rather simple and low-cost metrics for immediate use that have sufficient robustness across sectors.

The SPIA Chair, Doug Gollin, drew attention to a future activity related to impact assessment (SIAC) where half of the program was planned to deal with issues very closely related to measurement and developing metrics. In his view, the focus of an ISPC study should be on areas of metrics that CGIAR has not been measuring. For instance, livelihood metrics are already well developed. Coordination with what SPIA is already doing would be important. It was noted that DFID has recently commissioned a study that ICRAF is taking on for scoping the current situation with metrics drawing on literature and project activities. This initiative is closely aligned with research in the CRP on Water, land and ecosystems. One initiative closely related to this is the Africa Rising program that has a goal to develop multi-scale metrics and measurement also for use by others and the program is keen to collaborate. The issue of data-bases is of major importance. Clearly, good coordination with the existing initiatives within CRPs and being promoted by Consortium would be required. Possibly, the ISPC's role could be in facilitating internal discussion and building on available studies. It could have a role in facilitating discussion on the metrics needed for planning in the development of the Intermediate Development Outcomes. This could help harmonise the development of IDOs and with linking them to System level outcomes. The IEA Director, *Rachel Sauvinet-Bedouin* considered that it was important to develop metrics relative to their purpose [and see discussion of Agenda item 4.] For IDOs, the work should aim at clarifying the various milestones and causal chains along CRP impact pathways, acknowledging the complexity and the degree of unpredictability of research impact pathways and therefore, the iterative process required to define "intermediary" outcomes. In that context, it will be important to distinguish research outcomes (e.g. adoption) from development outcomes (e.g. increased productivity/ increased production) and other parameters (e.g. timeframe, risks) that make results from research specific and challenging to assess. Given the comments and various interpretations from the Centers on IDOs, there is clearly a demand for defining such common understanding.

Although a lot has been said in the literature about methodological challenges around metrics, there may be room for exploring new (cost-effective) tools (including new technology, e.g. GIS?) for assessing research and development outcomes. These approaches should include an institutional accountability framework: clarifying and mapping responsibilities for accountability (who/what/what level) in a realistic manner. For instance, clarity is also needed in how the metrics study would serve the *ex post* evaluation needs and a performance management system where monitoring and evaluation are synergistic.

Agenda item 4. CGIAR progress update

Jonathan Wadsworth (Executive Secretary of the Fund Office) addressed the meeting by video.

He apologized for not being with the meeting in person but was constrained by current CGIAR issues of governance and finance. He and the FC were appreciative of the work the ISPC is doing, and noted, for instance, receipt of recent ISPC commentaries on three revised CRP proposals.

The Fund Council (FC) will be considering an update on the CRP portfolio at its meeting on October 21st in Uruguay. The FC will also consider the Work Plan and Budgets of system entities, including those of the Fund Office and ISPC. Wadsworth then turned to the performance of CGIAR Fund: the Fund was expecting to show 28% growth from USD 384 million in 2011 to USD 491 million in 2012, considering current cash and all hard promises of funding. This represented strong growth as in the decades prior to 2008/9 growth had been around 4% and in the reform years 2008/9 to 12 had been around 12% a year. The amount of bilateral support in 2012 would only be clear at the end of the year. However, total income was projected as around USD 800 million. However, the distribution of funds showed that the large donors were targeting Window 3: Window 1-2 was maintaining but not showing much growth (with Window 2 favoured over Window 1). However, Window 3 will increase from 18% to reach 40% of the overall fund

this year. There was a tendency for donors to only commit funds in the last 3 months of the year and there will be a need to keep a carry-over balance to smooth end of year funding. This requires working closely with the Consortium in relation to cash flow. So far this year, USD 110 million had been provided to the Consortium, although he recognized that Centers do need in some cases to do some pre-financing of CRP activities.

In discussion, he noted that the Fund Office (FO) was hoping as a priority to develop multi-year payments or promissory notes from FC donors and to help even out funding over the year. This would be one the items on the agenda of the Funders Forum in Uruguay in November. He further noted that the funding to Window 3 is not under control of the Fund; it essentially acts as pass-through funding, but the activities it supports should be still aimed at goals of the SRF and should be described in the CRP. This was the subject of active discussion with the Consortium because otherwise if W3 funds take away from Windows 1 and 2, it could result in a tension between the Fund and Centers.

Wadsworth then provided an update on IITA and governance in the CGIAR. He noted that failed investment policies at IITA had repercussions and potential impact on the Fund. He reported that the FC had held an extraordinary meeting on the 30th of August to consider the specific case and the impact on the reputation of the Fund. As a consequence, further disbursements from the Fund had been suspended temporarily (representing around USD 49 million of requested funding from the Consortium). However, an FC working group has been formed which has requested the Consortium and Centers to respond on the identification of current Board processes and procedures and, given satisfactory responses the suspension to 14 of the Centers will be revisited around October 15th. The FC will also have further discussions at its meeting in Uruguay, for which the Executive Secretary will be making a written report. The Chair thanked Wadsworth for his update and candid report.

Frank Rijsberman (CEO of the Consortium) addressed the meeting by video.

He too apologized for not being present in person and for the same reasons as given by John Wadsworth which, as described, required responses from Centers and the Consortium. However, he will look for further opportunities to develop the relationship between the Consortium Office (CO) and the ISPC. On his return to the CGIAR, he found that much progress have been made in the transformation in terms of tools and infrastructure for the new system, but there remained a lot of “last mile” work to do, which was very important for the success and transition to a new system. For instance, the CRPs were established practically on paper, but if we look in detail we find that milestones, for instance, are highly variable and not yet coherent. Further, many do not make sense for investors in a new CGIAR. An approach to performance management was at the top of the agenda. The system as a whole sorely lacks metrics and we need a strategy which has agreed indicators and metrics so that we can engage with the CRPs in strategic revision. For these reasons Rijsberman said he was extremely pleased with the ISPC white paper on priority setting, as he believed that the Consortium Office and the ISPC were closely aligned in the understanding of system requirements. He noted that the Consortium had developed an Action Plan for the renewal of the SRF which has been put out for comments through e-consultation. The ISPCs suggestions for focusing on intermediate development outcomes (IDOs) at the CRP and system-level were included in these plans. To this end, he had held an important meeting with DDGs-Research and CRP leaders on the 13th and 14th of September. He believed it would be important to further these discussions to come up with a small set of meaningful indicators, both to focus CRPs and to make the portfolio coherent for donors. [The video was cut-off by technical reasons at this point].

The meeting continued to discuss indicators and the clarity of the meanings of the words “intermediate”, “outcomes” and the time or scale steps in the research to development process which should be considered. Whilst all these terms could be described by the ISPC (and some argued that a common lexicon such as

that used by the OECD/DAC community should be adopted), it would be more important to discuss requirements directly with the CRP planners themselves. This was considered part and parcel of developing more convincing impact pathways than the CRPs have managed to date. Being able to define the expected outcomes at the CRP level would help CRP planning and the reassessment identified by Rijsberman. This also contributed to the broader issue of metrics since currently the CRPs describe nearly 300 different deliverables.

The IEA Director noted the importance of the definition of IDOs to the subsequent development of impact pathways. There were methodological concerns and the level of accountability and roles of the various parts of the CGIAR for the development and measurement of metrics. She looked forward to collaboration with the Consortium, the IEA and the ISPC in developing the way forward.

In summary, the Chair noted that the major focus of attention in the CGIAR should be on theories of change, impact pathways, defining beneficiaries and having measures that would indicate progress and success at the level of the SLOs. Metrics for monitoring and evaluation of CRPs may be different from those for judging the overall achievement of the SLOs but the former would be of particular relevance to the IEA and the Chair hoped that all elements of the CGIAR would be party to the development of such metrics. It was also noted that when there was clarity on these elements a greater understanding of partnership, capacity building and gender requirements across the system could be considered.

Agenda item 5. Mobilizing Science

Maggie Gill, ISPC member introduced the agenda item noting that the ISPC's convening of a Science Forum in both 2009 and 2011 had been designed to bring new communities of scientific partners together around themes of importance to the CGIAR. In consultation with the Consortium and Centers and as a means of contributing to addressing the CGIAR's new SLO on nutrition and health, the ISPC had decided that the next Science Forum would be on the topic of "Nutrition and health outcomes: targets for agricultural research". She was pleased to report that the Science Forum 2013 would be held from the 23rd – 25th September 2013, at the Gustav-Stresemann Institute, Bonn, Germany, and co-hosted by the German Federal Ministry BMZ.

André Fabien, Policy Adviser to BMZ on Rural Development and Food Security, spoke on behalf of the co-host. Germany has a long standing cooperation with the CGIAR and BMZ was very happy to host the Science Forum in Bonn. The focus on nutrition is welcome as following the Aquila declaration, which put more effort on rural development, nutrition is a major element of the new 10 point program. Fighting malnutrition has high social welfare impact and, of course, responds to humanitarian concerns. BMZ was particularly keen to help translate research into practice in its target countries for development assistance. He further saw this as an opportunity for linking German and European science into cooperative research arrangements.

Marlene Diekmann on behalf of GIZ provided an introduction to Bonn and to the Gustav-Stresemann Institut where the meeting will be held. She noted that the meeting would target around 300 people with up to 180 in residence. As well as supporting a reception, Germany would be particularly interested in determining the involvement of young scientists and in working with the organizers on appropriate media attention for the meeting. She noted that the proximity in dates to the Tropentag annual conference (17th to 19th of September in Hohenheim) might allow participants to attend both conferences and take excursions in Germany between the two meetings. She looked forward to welcoming CGIAR participants to the city of Beethoven!

Maggie Gill reiterated that the aims of Science Forum 2013 were to provide opportunities for the CGIAR community to interact with the health and nutrition communities with the aim of helping to facilitate SLO 4. She suggested that this would be enhanced by opportunities for co-authoring of papers for presentation at the meeting and publication in a high impact journal, and by stimulating new multidisciplinary partnerships to address SLO4.

She reminded the meeting that the topic built on discussions at ISPC 5 in Delhi, particularly the talks of Dr Alan Dangour, who had reviewed the lack of evidence linking agricultural research to nutrition outcomes and Dr Sesikeran who had detailed the challenges of implementing nutrition programs in India. She then introduced *Dr Robert Mwadime* who gave a presentation on the topic of *Considerations for Addressing Malnutrition in Africa* providing examples from the findings of the USAID project on nutrition in Uganda which he leads. He noted that it was first important to distinguish what targets any program was trying to achieve i.e. changes in food prices, reductions in poverty or solving specific nutritional problems and the consequences on health/survival, educability and productivity? There are several sorts of nutritional problems, e.g. over-weight, protein-energy-malnutrition or micronutrient deficiencies. Whilst overweight would probably not be the major issue for the CGIAR, this was a growing problem in Africa (particularly but not exclusively in some Southern African countries); for instance, in Uganda one in every three women in urban areas is overweight. However, over-nutrition is not a problem of urbanites only and rural areas have experienced a higher percentage increase in overweight. Stunting is the most usual measure of under nutrition but the speed of nutrition transition is increasing the likelihood of stunting and over-nutrition co-existing in the same households. Lifestyles, opportunities and income make broad generalizations about nutrition effects difficult to make.

Both moderate and severe stunting are apparent in several African countries with 11 (mostly LIDC) countries showing severe stunting rates of 20% or more and there are 12 countries in which some form of stunting affects 43% or more of the population. Within a country such as Uganda, vulnerability to malnutrition is higher in some regions than in others based on the metrics of height-for-age or weight-for-age. Anaemia in children (measured as a haemoglobin level less than 11grams/l amongst children of less than 5 years) is also prevalent across Africa and 42% of Africans have urinary iodine levels less than 100 micrograms/litre.

In considering what needs to be done, two concepts are particularly useful. Firstly is the understanding of vulnerability and that children malnourished in the first few months of life tend to stay at risk of continuing stunting or underweight status. Secondly, in considering strategies to address “hidden hunger” it was useful to split approaches by plant and animal source foods and to consider energy and micronutrient contributions to overall nutrition from the immediately available traditional sources. An overall conceptual framework builds on this approach and considers how remaining specific gaps can best be filled by additional measures including biofortification, supplementation and home fortificants underpinned by needs for nutrition education at all levels. Mwadime provided examples from the USAID project on the experimental addition of oranges, carrots, meat and amaranth leaves to basic maize-based diets to enhance key micronutrients such as vitamins A and C, folate, iron and zinc. There were also food-based approaches (packet additives particularly for young infants) which had to be supported by maternal education programs.

When thinking in programmatic terms it is important to define what is the minimum scale for impact indicators? How can the program be demand- rather than supply-driven and what are the incentives for generating demand? The complexity of the programmatic context should not be underestimated because there was a need to 1) link livelihoods to nutrition (considering nutrition verses commodities, the ability to sell easily, asset build-up, marketing systems, climatic change and marginalization), 2) embrace multidimensional approaches (such as gender dynamics, the role of government verses community empowerment, and disparities, particularly in incomes between groups), and 3) demographic changes (and

the link to teenage/youth – where youth make over 50% of the population, increasingly dictate lifestyles, with changing eating patterns, unemployment and the influence they have on work ethics and agriculture). For instance, teenage pregnancies and school dropouts are key considerations in the ability of mothers to provide adequate nutrition for the children subsequently.

In discussion, it was noted that gender strategies would be critical to understanding how women could be helped and empowered to enhance child nutrition. Women's needs (such as ease of cooking, fuel efficient foods) could be the target of crop breeding strategies. However, we also need to understand that women often cook for men and not for themselves. Child and ante-natal nutritional education was required in these circumstances. It was important to understand how assets/food and nutrition were viewed by poor households – for instance, for many, chicken was not a food but an “ATM” or source of cash. Similarly, the “white revolution” in India led to the sale of milk by poor households and not to automatic nutritional improvements in producer households. However, we don't perhaps have the time series data that would distinguish if this was an initial reaction or a condition that persisted with time. Crop-based strategies address dietary energy but could oversimplify what is actually required ‘on the plate’. However, whilst the vogue of kitchen gardens undoubtedly has its place in nutritional strategies, they aggravate the burden on women's time still further and put extra demands on supplies of water. In short, the pathways for achieving nutritional enhancement for the poor are likely to rest on understanding of the biophysical opportunities for doing so and on socio-economic decision-making at the household level. There are also additive effects of health, water and sanitation to consider. Given the multidisciplinary approach and issues relating to availability, adsorption, etc., it was difficult to determine the best indicators for the overall success of nutritional programs. One observer suggested that a 1% reduction in stunting per year for the target human population would be a good higher-level indicator.

Subsequently, Maggie Gill provided a summary of the points raised during consultation on the Science Forum topic and invited the meeting to provide additional input into the focus and scope of the Science Forum in 2013. Given the preceding presentation, many thought that a focus on nutrition and the health measures associated with nutrition was most important. Determining the direct (nutrient availability), indirect (income) or un-intended effects (e.g. gender differentiated pathways of control of nutrition assets) of interventions on household nutrition would be a key component for elucidation and framing future strategies. Including environmental issues seemed a step too far, unless one considered perennials and their products, or perhaps water and its availability in relation to nutrient strategies. An issue that had not come up was the seasonality of agriculture and how this affected household strategies. It was noted that there would be large differences, continent to continent. The role of the private sector (both local and food industry related) should be included. The Chair reminded the meeting that the CGIAR's comparative advantage was to consider means through which agriculture could affect nutrition. The benefit of the Science Fora, as with much that the ISPC tried to do, was to concentrate on evidence of case studies and to determine what research was still required. The idea of having some small competitive funding available to stimulate new partnerships was welcomed if it could be linked adequately to the meeting.

Maggie Gill reported that a Steering Committee would be established which would meet in mid-November to plan the Forum and invite speakers by end of 2012.

Agenda item 6. Report of the Standing Panel on Impact Assessment (SPIA)

Doug Gollin, SPIA Chair, highlighted progress on the items in the 2011/12 work program, outlined in the SPIA Activities Update handout. Steady progress is being made on the Diffusion and Impact of Improved Varieties in Africa (DIIVA) study. Key results from Objectives 1, 2 and 3 will be presented and discussed at the Final Workshop to be held at Bioversity 8-10 November 2012. While Objectives 1, 2, and 3 reports will be finalized early in 2013, Objective 4 (new component to analyse economic rates of returns) which

was added in March 2012, will be finalized in May 2013. Notwithstanding some delay in activity on the Legume Impact study, major adoption studies of chickpea varietal use in two states of India (with ICRISAT and with ICAR) and chickpea in Turkey were initiated and are expected to be completed by first half of 2013, along with final report of the main study. In addition, SPIA recently field tested a varietal identification protocol for pigeonpea in Tanzania as a trial run before introducing this into the LSMS-ISA survey for that country. One is also planned for cowpea in Nigeria. The Genetic Collection, Conservation, Characterization and Evaluation impact study is nearing completion with the finalization of two commissioned case studies (CIP's C88 potato variety in China and CIAT's KU 50 cassava in Thailand and Vietnam). The four Poverty Impact case studies were reviewed critically in a mid-term meeting held at the London International Development Center in May 2012. The final draft reports of those studies are due in March, 2013, and would be finalized after external review and published as a green cover report. Two important activities related to Capacity strengthening and building an IA community of practice were organized and financed by the SPIA budget in 2012: (i) A pre-conference workshop on "Innovations in impact assessment of agricultural research: Theory and practice" held at the 2012 International Association of Agricultural Economists meeting in Brazil in August that was attended by more than 60 people, of which about half were CGIAR; (ii) a SPIA-Impact Assessment Focal Point (IAFP) meeting (CGIAR Centers, SPIA members, donors, other stakeholders) which was also held in August in Brazil.

Gollin also gave details of a program proposal for Strengthening Impact Assessment in the CGIAR (SIAC), which is expected to start from January 2013 and is supported by contributions from several donors. The SIAC proposal responds to concern from donors and outside academics on the quality of impact assessment claims that emerge from the CGIAR system, and the need to get claims on impact under control so to prevent a loss of credibility to the entire CGIAR system. The SIAC program has 4 objectives:

1. Develop, pilot and verify innovative methods for collection and assembly of diffusion data
2. Institutionalize the collection of the diffusion data needed to conduct critical CGIAR impact evaluations
3. Assess the full range of impacts from CGIAR research
4. Support the development of communities of practice for ex-post impact assessment within the CGIAR and between the CGIAR and the development community more broadly

In the discussion that followed, the ISPC Chair urged SPIA to consider creative solutions to challenges in assessing NRM research impacts. How can SPIA work with NARS extension systems and seed dealers in order to judge contributions to the System-Level Outcomes (SLOs) of the CGIAR? Cassman noted that there would seem to be a synergy with the ISPC workplan item on metrics.

A Council member noted that the NRM stripe review report identified the need to capture multifunctionality in agricultural landscapes, and the implicit trade-offs, with different things happening at multiple scales. The report encourages the CGIAR to invest in Sentinel Sites, at which multiple things could be measured at the same place. The CRPs are currently setting things up their Action Sites, so there is a small window of opportunity for this. SPIA recognises the need here, Gollin said, but SPIA should not attempt to collect this data – this has to be done through conversations with CRPs about what the data needs are.

Another issue raised concerned the use of the data once collected, and whether SPIA has a strategy for influencing decision-making in the CGIAR. Is there a learning feedback loop? Is this a SPIA role or something for the wider ISPC group? Gollin suggested that SPIA provides the input to the learning process, but that SPIA will not be dictating priorities. For example, SPIA expects to be able to report back on areas of research where we can't demonstrate impact, rather than recommending closure of particular activities, which could indeed be a role for the wider ISPC.

An observer noted that SPIA has an accountability objective for the new proposal, and wondered about timeliness – SPIA works on studies looking back 10 or 15 years. How can this be reconciled with the decision-making process? In addition, as the evaluation function is being established in the CGIAR, there is a need for a coordinated regime for the CGIAR as a whole, so how does SPIA relate to the Independent Evaluation Arrangement? Gollin noted that accountability to the CGIAR system itself is critical and that SPIA is open to ideas about how that should work. There would seem to be a good division of labour between SPIA and the IEA, with SPIA working on long time-scale studies. There will likely be some overlap on metrics and measurement questions with the IEA, but there are likely some other metrics that are very different.

Another observer spoke of the growing demand across the development community for impact assessment results, and that it is sometimes difficult to meet expectations, pointing out that there is a fine line between “very difficult” to demonstrate impacts and “impossible”. Why are we not satisfied with the idea that there are general improvements and that we have contributed to them? Gollin noted two points: (i) SPIA has a responsibility to tell donors if and when it is not possible to measure impact; and, (ii) SPIA institutionally has responsibility to do what can be done, and not run from the challenge. We should take studies as far as we can, with high levels of rigour.

A donor observer noted an important role for SPIA in quality control, with studies being commissioned to a wide range of people with different standards of rigor. SPIA has an important role in making sense of them for the donor community. Gollin agreed but noted that SPIA has no real authority over what others do on impact assessment, but that it can synthesise and pull together what is out there, in order to make sense of it for the CGIAR. This is part of the quality control function.

Another observer encouraged SPIA to also look at the potential bad news stories, examining where things have not progressed as much as was expected by the research proponents. Gollin responded that historically, SPIA has seen its mission as documenting the benefits of the CGIAR system to the outside world. This is clearly an important function, but it loses any learning dimension. Currently, and in future, SPIA will examine a range of things, some of which have worked and some which have not. It is clearly awkward to go out to document failures and SPIA has to think carefully about how it chooses projects for study. However, lack of impact needs to be documented – “bad news” and “no news” are all part of the learning function.

A Council member asked whether SPIA has ever been able to demonstrate an example of impact assessments that have been used as a basis for deciding whether to invest (or disinvest) in the CGIAR. The GTI representative noted that they regularly get asked questions about what impact Centers have had with their funding; sometimes these requests are rather general, but sometimes quite specific. GTI also uses the SPIA briefs for public relations work. The USAID representative noted how SPIA’s experience is relevant to the USAID-funded “Africa Rising” program, from design through to later impact assessment. For example, drawing out lessons from the evaluation of the sub-Saharan Africa challenge program, and how these results can be translated into action. It was noted that SPIA had conducted a survey of donor demand for impact information several years ago and found that, while learning function is an oft-stated use of IA, this is often truer for nearer-term evaluations of research processes and short- and medium term assessments. The survey of donors found that, in fact, there were very few examples of explicit use of long-term, large scale *ex post* impact assessment results in decision-making.

The ISPC Chair concluded by thanking the SPIA Chair, noting that one of the comparative advantages of SPIA is that it is embedded in the ISPC, and that SPIA can feed on the experience and impact assessment perspective into ISPC deliberations. There is a need for everyone working on metrics and pathways to come together to discuss and reach agreement on roles and responsibilities ISPC/SPIA, the IEA, the Consortium and CRPs.

Agenda item 7. Areas of assistance to the Consortium in the future

(i) Cross-CRP analysis

Sirkka Immonen from the ISPC Secretariat introduced the item on cross-CRP analysis. The ISPC had decided to focus the strategic overview of the CRP portfolio on selected themes so as to provide examples and guidance for the evolution of the CRPs towards better alignment with the System level outcomes and synergy across programs. The ISPC commissioned three papers: one on Theories of Change and impact pathways to look at the vertical linkages in CRPs from proposed activities to planned outcomes, and two papers on cross-cutting themes common to a number of Centers; namely on Seed Systems and Value Chains. All papers were based on the consultants' analysis of the CRP based on extracts from the proposal, their own professional expertise and literature on the topic.

The draft paper on Theories of Change contained definition of the key terms, an analytical framework for the assessment of the CRPs, observations on key issues and recommendations for enhanced understanding of the mechanisms through which change happens in the real world, and subsequently planning of interventions. Particular challenges that were identified were the way the non-linearity of impact pathways was addressed, the realism of the impact pathways, inclusion of policy and end-user analyses in the plans, defining the boundaries for the research programs in pursuit of impact, discussion of conditioning and facilitating factors, and analysis of power and influence for directing the benefits of research to those intended. The paper concluded by making several recommendations for enhancing the way the CRPs analyse and describe the complexity of the impact pathway, explicitly consider the mechanisms of change, build in learning and feed-back loops, and revisit their theory of change as evidence becomes available.

In the paper on Value Chains the entire CRP3.7 proposal and extracts from other CRPs were used as source material. Observations were made on the CRPs' interpretation of the value chain concept; the extent to which the proposals addressed market linkages and addition of value, governance, upgrading and methodologies for value chain analysis and research. Observations were also made on cross-CRP linkages that were identified at product, value chain and methodology levels. Considerable variation was found in the understanding of value chain concepts, consideration of methodologies and inclusion of value chain performance issues in the CRPs. CRPs 3.7, and, to a large extent, CRP3.4 and CRP2 dealt with the different aspects of value chains in a comprehensive way. CRP collaboration could improve knowledge and capabilities; such as the choice of criteria for selecting value chains; budgeting for value chain work; and dealing with data. The paper concluded by stating that the CGIAR has comparative advantage due to the fact that its work covers a wide range of value chains and systems, particularly as the value chain approach is emerging as a common framework in development studies and change projects. The paper contains two annexes on value chains in developing countries and upgrading value chains.

The basic premise in the paper on Seed Systems is that seed is the foundation for much of agriculture and that for the CGIAR, seed delivery is an issue of survival. The paper is structured around the different aspects of seed systems, such as seed delivery, policy, regulatory systems, source seed management and information. Some assessment is included on where the CRPs' attention on "seed activities" would be best placed. In general the paper concludes that the CRP proposals lack clarity of what actually is being suggested to be done, despite some of the CRPs allocating considerable funding to seed systems activities. There is caution against getting too involved in developing seed systems or conducting analyses of seed-related issues across countries, when they tend to be very localised by nature. The paper emphasises the need to prioritize activities so that seed delivery will be enhanced. Relevant activities may deal with variety release regulations, and issue related to source seed. The paper proposes attention to organization and implementation of variety release; production of breeder seed by NARIs, handover of source seed from public research to commercial sector, and identifying effective ways for those "orphan" crops where benefits to farmers are estimated to be high but production and delivery mechanisms are lacking. The paper

concludes that the high priority activities required are not necessarily research and do not necessarily need to be done by the CRPs although they are vital for the CRPs' future impact.

In discussion, the first draft paper was found to be very useful for engaging with the Consortium to debate the critical issues related to theories of change. If the theories of change are properly diagnosed, they can be powerful for building teams and deciding on subsequent actions and allocations. There is a need to broaden and deepen the impact pathways developed in the CRPs, particularly for NRM. Theories of change could also be vehicle for narrowing the CRP focus in prioritization. All Centers and CRPs should take this seriously because the only way to eventually show impact is to start with planning and then link it to monitoring along the impact pathway. In the paper, a missing dimension was the understanding about the unpredictability of research and the recognition that theories of change may have to be revised based on new system evolution. This paper is linked to the discussion of defining IDOs in the context of better definition of impact pathways. Next steps are to define what data and tools are needed, and who should collect the data. Monitoring and evaluation will help gauge movements along the impact pathway.

The paper on seed systems was well received. Several common issues are raised that apply across the CRPs. If indeed it is true that seed systems and the related policies and practices are specific to each country, this is likely to have consequences for CRP plans on seed systems. The issues are so important for impact that an even a more in-depth analysis of the constraints and practices might be justified to help understand the role of the CGIAR in seed systems. Such an analysis should consider the whole chain to the market, and the role of both public and private actors. Seed multiplication doesn't have to be a CGIAR activity or a research activity, but could be addressed through partnerships. For instance FAO is active in this area and helping national partners to establish seed systems.

On value chains, there is an opportunity to analyze the potential of synergies among CRPs, as different CRPs have different responsibilities in value chains and rely on different types of partners. There is also a need to look at the System level a "supra value chain and theory of change". The Chair suggested that the next steps are to share the report with CRPs, Centers and the Consortium and for the ISPC to prepare a summary and synthesis of all three papers. This would be made available for further comments and use by the Consortium and for engaging in dialogue on the main issues.

(ii) Outcome mapping

This was considered to have been covered by the discussion reported in association with Agenda Item 4.

(iii) Potential requirements for the future were listed at the end of Agenda item 8.

Agenda item 8. Review and finalization of the ISPC WP&B for 2013

Peter Gardiner, Executive Director of the ISPC noted that the ISPC interprets its mission to the CGIAR through four major avenues of work: Strategy and trends, Mobilizing science. Independent Program review and Impact assessment. In a draft workplan document prepared for the meeting the ISPC had set out its activities for 2013 under these headings. Gardiner recapped the contents of the draft, taking into account the decisions or directions arising from the current meeting. The revision included two studies under Strategy & Trends (rather than the three earlier proposed). These were (i) A strategic study of biotechnology in the CGIAR: returns to investment, issues and best practice. This was of agreed utility to the CGIAR if the scope for the study is defined (definition of biotech.) addressing pipeline of delivery, synergies and efficiencies in organization/use of technologies in the new CGIAR, and realising the future of CGIAR transgenic research to contribute to impact on SLOs; and (ii) Indicators, metrics and data management: proposed as a collaborative undertaking between the ISPC, the IEA and the Consortium for

the purposes of bench marking; monitoring and evaluation; and assessment of future IDOs/CRP and system level impacts. Budget had been reallocated, including small increases to support the work on IDOs and metrics that were the focus upon as high priority areas at the current meeting.

Preparing for the Science Forum 2013 would be the major activity under Mobilizing science (as described under Agenda item 5).

Under Independent Program Review, following the intervention of the Consortium CEO and the discussion held, continued definition and mapping of intermediate development outcomes (IDOs) was included in the workplan including a workshop with CRPs on the elaboration of IDOs. In a continuing effort to map individual topic or commodity elements across the portfolio for synergies and maximal impact, the ISPC would build on work already conducted to determine if the elements of livestock research so far provided give a sufficiently comprehensive strategy for the CGIAR, particularly with respect to fodder, feeds and cross CRP interactions. The ISPC would also conduct evaluation of the Science fora (09, 11) and planning of evaluation methods for SF2013

Work in Impact Assessment would continue the completion of current studies and contribute to objectives 3 and 4 of the new SIAC proposal as described in Agenda item 3.

Additionally the ISPC Secretariat in 2013 would place additional emphasis on the implementation of the ISPC communication strategy in relation to recent and forthcoming reports and studies. This undertaking was made feasible through the hiring of staff resources in 2012 rather than additional activity budget.

The total budget request for support of the ISPC and its workplan in 2013 is USD 3,75 million of which USD 2,43 million is requested from the CGIAR Fund.

In the process of preparing the draft workplan and in the discussions at this meeting a set of possibilities for studies which were of potential benefit to the Consortium and the CGIAR as a whole had been raised. The Chair invited further input from ISPC members and observers, and that these ideas would be worked up into concept notes. The best of these would be discussed by the ISPC at the next meeting and shared as suggestions for discussion with the Consortium, IEA and other stakeholders, so that the process for the choice of items to be included in the future workplans would be made even more transparent. The Chair noted that the revised Work Plan and Budget would be considered with other system unit workplans by the Fund Council for endorsement at its forthcoming meeting in Uruguay.

Agenda item 9. Other business

The Chair invited ILRI to give a brief presentation on the evolving strategy for livestock. *Shirley Tarawali* outlined ILRI's new strategy for 2013 to 2022 noting that this was a framework for the whole organization and should not be viewed as an operational plan. The draft strategy was on-line for review and comment. In response to questions, she noted that they have mapped intensive and extensive livestock systems and also the relationship with other CRPs was being evaluated. Given this, Council members asked whether a cross-CRP analysis was indeed necessary. The ILRI DG welcomed a potential independent review of livestock needs and activities across the system, noting that there was some negativity to livestock in relation to the increasing grain requirements and there would be important opportunities to examine how cereal-related feeds and fodders may be handled, as well as issues such as vaccine development and genetics underpinning health and production research. Smith thanked the ISPC for having chosen ILRI Addis to hold its meeting and noted, of the many items that had arisen during the meeting, that the subject of attracting and keeping good scientists in the CGIAR was highly relevant to building hubs like Addis.

Karin Nichterlein of the FAO announced that the 2014 State of Food and Agriculture (SOFA) document was being developed on Agricultural innovation in family farming, and she welcomed the CGIAR at large to share experiences and case studies that could be considered.

Departure of Council member: *Vibha Dhawan*. The Chair noted that both the ISPC and the Consortium Board have been set up in the new system with a rotation of membership. To stagger membership turnover, members would be replaced at regular intervals now that the Council was approaching 2 years after its formation. Vibha Dhawan would be stepping down therefore at the end of 2012 and so this represented her last ISPC meeting. He thanked her for her conscientious contribution to the work of the ISPC and for a lot of background work in relation to the ISPC meeting in New Delhi which had contributed to the interaction with the national program. He presented Vibha with a plaque in recognition of her service to the ISPC and the CGIAR. Vibha thanked the Chair and colleagues for an interesting and valuable experience noting that, unlike several other Council members, she had come to the Council with little prior exposure to the CGIAR. She was pleased that she would be continuing her association therefore and in providing assistance to the set-up and implementation of the Borlaug Institute in New Delhi, India.

The Chair thanked ILRI's DG and staff for the hospitality and support received by the Council for the staging of a successful meeting. He noted that the next "spring" meeting of the ISPC will be held in Latin America [since confirmed as the 25th to 27th of March 2013 to be held in CIAT, Cali, Colombia]. He was convinced that meetings gained from interactions with host Centers and other CGIAR representatives and observers, particularly being at a hub of activity for the CGIAR. He wished ILRI well in the development of this new way of working for the CGIAR. He would be making a particular invitation to CRP leaders to join the discussion at the next meeting.

There being no further business, the meeting was closed.



03 October 2012

Meeting Agenda

**6th Meeting of the Independent Science Partnership Council
26-29 September 2012**

**International Livestock Research Institute
(ILRI)
*ILRI Campus, Addis Ababa, Ethiopia***

Tuesday 25th September

Arrival of ISPC members

ISPC closed dinner (19:00 hours - buffet dinner organized at ILRI)

Wednesday 26th September

09:00

1. Opening of the ISPC Meeting

- i. Welcome and opening from ISPC Chair: Ken Cassman
- ii. Welcome from the DG ILRI: Jimmy Smith

9:30

2. Agriculture and the environment in Ethiopia

Presentations:

“The situation in Ethiopian agriculture today and strategies for the future”

- State Minister - Ministry of Agriculture:
His Excellency Ato Windirad Mandefro / Ato Aberra Mulad
- Agricultural Transformation Agency, CEO: Ato Mirafe Marcos
- Crop Director, EIAR - Director General: Dr Adefris Teklewold

“Meeting future water demand and expectations for development of irrigated agriculture”

- State Minister - Ministry of Water and Energy:
His Excellency Ato Kebede Gerba

10:30

Coffee break

10:50

CGIAR in Ethiopia and East Africa

- *“Livestock development priorities and strategies for Africa”*
Jimmy Smith
- *“IFPRI’s institutional research and the broader impacts of CGIAR research in Ethiopia”*
Kwadwo Asenso-Okyere (IFPRI-Addis Ababa)
- *“CAADP and CGIAR Alignment”*
Boaz Blackie Keizire (AU)
- General discussion *“CGIAR Research Programs and an African regional approach”*

12:30

Lunch

13:00

*ISPC closed session (ILRI Campus / room tbd)
(13:00-17:00 with lunch and coffee break arranged in the meeting room)*

17:00

End of session

17:30

*Reception kindly offered to all participants by the ISPC.
Ethiopian Cultural Event
Dinner kindly offered to all participants by ILRI.*

Thursday 27th September

09:00

3. CGIAR progress update

- i. Report from the ISPC Chair (Ken Cassman)
- ii. Report from the Consortium CEO (Frank Rijsberman)
 - Priority setting/Consortium Action Plan
 - Review of the portfolio/ Progress in development of CRPs
 - Monitoring and Evaluation in the CGIAR-- moving towards a performance management system
- iii. Report from the Fund Office / Fund Council (Jonathan Wadsworth)

Discussion

12:30

Lunch

14:00

4. Strategy and trends

Presentation and open discussion: Developing advice for the Consortium and the future planning of the SRF

- i. Foresight study: farm size and the effects of urbanization on demand (Doug Gollin)
- ii. Report on Conservation Agriculture (Ken Cassman/James Stevenson)

15:30

Coffee break

16:00-17:30

4. (continued) Strategy and trends

Topics for future inclusion in WP&B, e.g.

- iii. Biotechnology in the CGIAR (to be introduced by Sirkka Immonen)
- iv. The future of irrigated agriculture in Africa (Simon Langan, IWMI)
- v. Metrics (Ken Cassman)

Discussion

18:00

End of session

Friday 28th September

09:00

5. Mobilizing Science:

Introduction from ISPC Member: Maggie Gill

'Nutrition and health outcomes: targets for agricultural research'

Invited Speaker: Robert Mwadime (USAID Uganda)

“Challenges of alleviating under-nutrition in Uganda”

Update on the design of the Science Forum 2013 (Maggie Gill)

Response from BMZ (Federal Ministry for Economic Cooperation and Development of Germany): André Fabian

Discussion

10:30

Coffee break

11:00

6. Report of the Standing Panel on Impact Assessment (SPIA)

Report from SPIA Chair: Doug Gollin

- i. Report on activities since last meeting
- ii. Meeting donor requests for increased impact assessment and meta-review of CGIAR impacts
- iii. Implications for SPIA program in 2013/14

12:30

Lunch

14:00

7. Areas of assistance to the Consortium in the future

Update and introduction from ISPC Chair: Ken Cassman

- i. The cross CRP review (Sirkka Immonen)
- ii. Outcome mapping
- iii. Potential requirements for the future (discussion)

15:00

8. Review and finalization of the ISPC WP&B for 2013

Presentation by Peter Gardiner

16:30

9. Other business

17:00

Close of the Open meeting

Free

Saturday 29th September

*****Field Trip*****

On Saturday, the field trip departs early in the morning west towards Jeldu (site of an ILRI/IWMI project).

Organized with EIAR, it will include stops at national research stations/sites where different livestock, crop, and NRM research and development activities can be observed.

Breakfast and lunch will be provided.

Participants should be back in Addis Ababa early evening in time to catch flights to Europe and beyond.

Time	Activities	Responsible person/s
06:45	Departure from Addis	
07:45 -08:45	First stop: Breakfast at Holetta	Organizers
09:45 -10:05	Second stop - Kidamie Gebeya (close to Galessa watershed) to see the pressure on communal grazing land- conversion of grazing lands to potato fields	Dr. Kindu Mekonnen (ILRI)
11:05 -11:35	Third stop - Meja watershed, Jeldu – visit hydro-met stations	Dr. Simon Langan (IWMI) Dr. Berhanu Zemadim (IWMI)
11:40 -12:25	Forth stop - Meja watershed, Jeldu - visit one of the NBDC IP action research activities on forage development for livestock feed and land management purposes	Dr. Beth Cullen (ILRI) Mr. Aberra Adie (ILRI) Mr. Tibebe Sifu (LA, Jeldu) Dr. Kindu Mekonnen (ILRI)
13:25 - 14:25	Lunch at the view point of Chilmo forest	Organizers
15:45- 16:45	Fifth stop - Holetta Agricultural Research Center – briefing by the center director, and visit one of the livestock research activities	Dr. Aster Yohannes (Center Director, HARC)
16:45	Back to Addis	Organizers

Sunday 30th September

Departure



INDEPENDENT SCIENCE &
PARTNERSHIP COUNCIL
CGIAR

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ISPC 6th Meeting

ILRI, Addis Ababa, Ethiopia

From 26th to 29th September 2012

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