



SIAC Program Progress Report
20th February 2015



Independent
Science and
Partnership
Council

SIAC Program Progress Report

Prepared by SPIA for the SIAC Mid-term Review (MTR), Rome, Italy

This progress report provides a brief background and update on the Strengthening Impact Assessment in the CGIAR (SIAC) program activities up to the end of 2014, and planned next steps into 2015 and beyond. Like the previous update, this report is organized around the Objectives spelled out in the SIAC program of work, with links leading to additional information.

Objective 1 (Methods): Develop, pilot and verify innovative methods for collection and assembly of diffusion data

Underpinning this objective is the development of a robust set of methods for routinely tracking adoption of CGIAR-related technologies in a cost-effective manner. Such information is a prerequisite for achieving the highest quality assessment of outcomes and impacts. A set of activities are designed to test innovative ways of assessing the adoption of improved varieties of crops, livestock and fish technologies, agronomic and natural resource management interventions, with the goal of eventually embedding protocols derived on these tests into large-scale surveys carried out by others. This objective is managed by Michigan State University.

Activity 1.1. Advance methodologies for tracking the uptake and adoption of improved varieties

The objective of this Activity is to pilot test and validate alternate approaches to collect variety-specific adoption data against a reliable benchmark to determine which method/approach is the most cost-effective (i.e., which method provides a given level of accuracy at the least cost). The idea is to come up with 'lessons learned' and recommendations on methods / approaches that can be used in scaling up the collection and assembly of diffusion data on improved varieties. The following three studies have been initiated and are at different stages of implementation as noted below.

1. *Cassava in Ghana*: This study tests the effectiveness of the following four household-based methods of tracking varietal adoption for cassava against the benchmark of DNA analysis of cassava leaf samples.
 - a) Method A: Elicitation from farmers by asking him/her the names of varieties planted and some basic questions for each variety planted
 - b) Method B: Farmer elicitation on varietal characteristics by showing a series of photographs (or actual plants). This information will be later used by the analyst to identify varieties based on morphological characteristic data.
 - c) Method C: A trained enumerator recording observations on varietal characteristics by visiting the field and sharing their opinion on what the variety is (based on observations). The information collected will be also used by the analyst to identify varieties based on morphological characteristic data.
 - d) Method D: Enumerator taking photos of the plant in the field for latter identification by experts (i.e., breeders)

The field work for this study is jointly supported by SIAC and the RTB CRP and conducted in partnership with IITA, Crops Research Institute (CRI)-Ghana, and Agriculture Innovation Consulting (AIC) Ghana. Field work was completed in late fall 2013. All the samples collected from the farmers' fields and the 40 genotypes included in the 'library' were sent to IITA by the Ghanaian partners in January 2014. DNA extraction work for almost 1000 samples was completed by IITA and all the samples were shipped to Cornell for GBS (i.e., Genotype by Sequencing). Data from the GBS analysis were submitted by Cornell to IITA in July. Preliminary results of the data interpretation were

presented by IITA at the DNA convening meeting held by the Gates Foundation in early August. More analysis of the data to get results at the variety level was recently conducted by IITA and results will be presented at the Annual Review Meeting. The emerging results from the available data indicate that: a) there is a large variation in the estimates of adoption of improved varieties derived using different methods (A to D) tested in this study; b) A large number of farmers are mistakenly identifying varieties as improved varieties when it was not or identifying a variety as traditional when it was in fact improved; c) the methods of varietal identification that relied on 'experts' were better than the farmers' elicitation, but still way off from the truth established by the DNA fingerprinting method. A poster describing initial results and a just completed full draft manuscript are available here ([Cassava Ghana poster](#) and [Tracking crop cultivars using genotyping](#)).

In summary, this case study of cassava in Ghana clearly demonstrated the unreliability of both farmer and expert elicitation based methods of varietal identification. In light of these results, estimating the adoption of improved varieties for cassava in a setting similar to Ghana (which is typical of many developing countries in Africa), based on traditional methods is questionable. Thus, as genotype by sequencing (GBS) method becomes increasingly affordable, it is likely to become the method of choice in variety identification for adoption studies.

2. *Maize in Uganda:* As part of the planned DTMA (Drought Tolerant Maize in Africa) adoption survey by CIMMYT in three districts in Eastern Province of Uganda, MSU had designed and implemented modules and protocols to test the effectiveness of the following three household-based methods of tracking varietal adoption for maize.
 - a) Method A: Elicitation from farmers by asking him/her the names of varieties planted and some basic questions for each variety planted
 - b) Method B: Asking farmers to show the bag in which maize seeds were obtained and enumerator recording the name of the variety.
 - c) Method C: Enumerator recording observations on phenotypic characteristics by visiting the field. The analyst will later use this information to identify varieties based on the varietal characteristics data.

Field data were collected in June 2014 and leaf tissues from 416 maize fields across 34 villages were collected for DNA analysis. The National Crops Research and Resource Institute (NaCRRI) of NARO served as the 'technical' partner for DNA analysis through their ongoing project with the University of Ghana (under a Gates funded project). Due to delays in transferring the leaf tissues from the field to the lab, about 50% of samples were lost due to mold development. The remaining samples were put in production line for analysis by LGC Genomics in December and we were informed that as they began the process of DNA extraction, they found that almost all the remaining sample plates contained mold. Although, the desiccants had been changed in order to stabilize the leaf material, due to the large amount of compacted leaf material in the tubes the samples continued to degrade, and due to their health and safety guidelines they were not able to continue with these samples. Thus unfortunately, all the samples collected in June 2014 have been lost. Due to the delays and difficulties experienced during this project, LGC has offered to repeat the work for this project for free of charge (for 34 sample plates x 146 assays). The cost share of the SIAC project for this purchase order with LGC was \$40,000. This offer by LGC to do the analysis without any charge is open till end of June 2015. The local partner, NaCRRI with the help of an economist at the Makerere University is available to help collect the samples in April-May of this year from the same farmers visited in June 2014 (for which CIMMYT has already shared the data with MSU). The cost of doing this sample collection from the same farmers, preparing the samples and shipping them to LGC Genomics (in U.K.) is estimated to be around \$15,000. The other alternative being explored by SPIA is to piggy back on a planned LSMS experiment on maize in Uganda this year, if it will be possible to collect the leaf tissues during the post-planting phase of the survey. This will be an entirely new

sample of farmers and data collected by the LSMS team will take some time to process and to be shared with MSU. Thus the time frame for completing this study under the LSMS option will be a bit longer. MSU awaits the decision by SPIA/PSC on which option (if any) to pursue for this study.

Regarding the survey data received from CIMMYT, here's a summary. The survey results indicate that in the case of maize, 13% farmers reported not knowing the name of the variety they had planted. Among the 87% farmers that did identify a variety they had planted by name, 73% reported a variety name that matched one of the varieties in the official release list. Longe 5, an OPV, was the most cited variety planted by the sampled farmers (28%), distantly followed by Longe 10H, a hybrid variety (13%). Overall the knowledge about what type of maize variety was planted by farmers, the farmer elicitation method (method A) gave a wide range of responses. For example, among the 119 farmers that reported growing Longe 5 (an OPV), only 48% correctly identified that variety as either an improved variety or an OPV. Forty two percent of farmers growing this variety misclassified it as either 'local' (22%), 'hybrid' (18%), or other/don't know category (14%). Among the 54 farmers that reported planting Longe 10H (a hybrid variety), only 44% correctly identified it as a hybrid and 35% identified it as an 'improved' variety. The other 20% of farmers identified this variety as either local (7%), recycled (6%), OPV (4%) or don't know (4%).

Not surprisingly, only 6% of farmers were able to show the bags in which the seed planted was obtained. The other 94% of farmers that could not show the bag had either no bag to show (which is not unexpected) (58%), or had obtained seed that did not come in a bag (31%), or refused to show the bag (5%). These results thus indicate that method B may not be a practical or a reliable method to use for varietal identification in developing country settings where the culture of sharing seeds (even purchased seeds) among farmers is common or the bag is not something a farmer saves for a long period of time. Perhaps, this method can be used as one of the additional name verification step if the data on varietal adoption is collected soon after the planting season (and the chances of farmers still holding on to the bag are higher).

The data on method C (enumerators collecting phenotypic data based on observations of plants in the maize field) were collected and are available for about 390 varietal observations. These are tabulated and will be shared with the maize experts at NaCRRRI to see if they can use this information to identify not only the type of variety it represents (i.e., local, OPV, hybrid) but also the name of the variety. In the absence of the DNA results, we are not able to determine the accuracy of the result of this method. But we will be able to check whether this can be a 'viable' method in future studies.

3. *Beans in East/Southern Africa*: This study tests the effectiveness of the following four household-based methods of tracking varietal adoption for common beans.
 - a) Method A: Elicitation from farmers by asking him/her basic questions for each variety planted
 - b) Method B: Showing the farmer seed samples representing different varieties and asking him/her to identify the sample that matches each of the variety grown on their farm.
 - c) Method C: Collecting seed samples representing each variety planted by farmers for latter identification by experts (i.e., breeders)
 - d) Method D: Enumerator taking photos of the seeds during the survey for latter identification by experts (i.e., breeders)

The accuracy of adoption estimates derived from the above four methods will be evaluated against the varietal identification established through 'DNA fingerprinting' of seed samples collected from the farmers.

This study is conducted in collaboration with CIAT and the Zambian Agricultural Research Institute

(ZARI) as part of the PABRA bean adoption study (which was already planned). Seed samples and data corresponding to the four methods have been collected from 402 households that were surveyed under the PABRA study. Byron Reyes visited Zambia to complete the varietal identification protocol using Methods C and D noted above. During this visit the team visited the local market (in Kasama) and collected some bean seed samples from local vendors. These seeds were added to the pool of seeds for DNA analysis to check if the seeds of varieties sold in the market as named by the 'vendors' match the actual variety as named and identified by farmers. The total seed sample (both collected from the farmers and from the vendors) to be analyzed in Zambia is about 900.

As a next step the seeds collected from the farmers' fields and from the market were germinated by the ZARI breeder in June. A technician from CIAT-Uganda traveled in July to Zambia to help with the DNA extraction and samples were shipped to LGC Genomics. This part of the project is being done in collaboration with CIAT scientists under their current partnership with ZARI and agreement with LGC Genomics through the Generations Challenge Program (GCP).

To establish the library, ZARI has included all the released varieties plus 15 other local materials in the samples shipped to LGC. The DNA analysis will proceed in two steps. In step 1 (which is currently underway), CIAT collaborators have suggested using 800 SNP markers that were applied in the GCP fingerprinting project to first analyze the reference materials. Once the reference materials are analyzed, in step 2, a subset of about 80 SNP markers will be identified that help distinguish and identify the reference materials. These will then be used to analyze the samples collected from the farmers' fields and the market. The completion of both these steps is anticipated to take another couple of months.

Data from the farm survey toward methods A and B, and from the expert elicitation toward methods C and D have been compiled, checked and analyzed. As anticipated, the response to the question "what bean variety did you plant this last season", farmers' response collated to more than 60 unique names of varieties or market class across the sample of 831 varieties grown by the sampled farmers. Among these more than 60 unique names, only 8 names matched the variety names on the official list of released varieties in Zambia (which included bean varieties developed and/or screened from landraces and released in Zambia by public and private sector breeding programs between 1970–2012). Together these 8 varieties that match with the names in the varietal release database represent 35% of the 831 observations of varieties enumerated in this study. Since, the varietal identification through methods B, C and D were focused on identifying improved varieties (by names), what this implies is that about 65% of varietal observations in this study, by default, cannot be matched by names across all the four methods.

The most common variety name identified by farmers (in method A) was 'kabangeti' (29% of observations) followed by 'white' (25%), which is more the name of a bean market class rather than the name of a variety. Kabangeti is a variety developed by ZARI from screening local landraces with the same name, thus it is difficult to classify this variety as either local or improved just based on the name. However, farmers were also asked about their knowledge/opinion on whether the variety they planted was local or improved. For Kabangeti, a pre-dominantly large number of farmers who were growing kabangeti reported growing 'local variety'. Similarly, in methods C and D, expert elicitation based on seed photo or seed sample, experts grouped a majority of kabangeti as local rather than 'improved kabangeti.'

Overall, the adoption (or more appropriately, the frequency of use by farmers) of improved variety as a group based on farmer elicitation methods varied substantially from 15% in method A (which was to simply ask farmers what type of variety they planted—local or improved) and 72% in method

B (i.e., showing farmers seed samples of improved varieties and asking them if the variety they planted matched any of these varieties—but not indicating their names or revealing that they were all improved varieties). The estimate of overall adoption of improved varieties based on the two expert elicitation methods—method C (showing breeders seed samples) and method D (showing breeders seed photos) were similar. The estimated adoption (or frequency of use) was 36% based on method D and 37% based on method C. Comparing the two methods based on farmer elicitation, results indicate that there was only 25% agreement on the name of the variety planted between methods A and B. In the case of the two methods based on experts opinion (i.e., methods C and D), there was close to 80% agreement on identifying the varieties either by name or by type.

In the absence of the DNA analysis, we cannot assess which method of varietal identification is closer to the ‘truth’. However, the preliminary results from this study reinforce the importance of doing the DNA analysis to establish the benchmark to be able to test the effectiveness (or non-effectiveness) of other less costly methods.

Activity 1.2. Advance methodologies for tracking the uptake and adoption of NRM technologies

In response to the ‘Request for Concept Note’ issued in July 2013, MSU and SPIA had received six 2-page proposals from CGIAR Centers (4) and U.S. Universities (2). Since one of the proposals was from MSU, SPIA provided the oversight of the review process. A review committee was set up. Based on the recommendation of the review committee, CIMMYT, IRRI, ICRISAT and MSU were invited to submit full proposals for the second step review and funding decision. Of these four full proposals externally reviewed in January 2014, two were funded: one from IRRI “Hyperspectral signature analysis: a proof of concept for tracking adoption of crop management practices in Gazipur, Bangladesh” (USD \$ 100,000) and one from CIMMYT “Innovative use of mobile phone based applications in tracking adoption of Natural Resource Management Technologies in Indian Agriculture” (USD\$ 100,019). In addition, funds were offered to ICRISAT (20,000 USD) to further develop/elaborate on specific aspects of the proposal their proposal (“Tracking adoption of rainwater harvesting structures”) and resubmit to SIAC, with no guarantee of any further funding. MSU was encouraged to submit their proposal to a different call based on some of the ideas presented, i.e., no funding provided. The ICRISAT re-submitted proposal failed to make significant progress on a number of key issues that we had doubts about in the original, and so no additional funding was provided to them.

Cost reimbursable contracts with CIMMYT, IRRI and ICRISAT were established in early 2014 to undertake the activities proposed. According to the recent annual progress reports submitted by CIMMYT and IRRI, field activities under Activity 1.2 are progressing as per the plan (see the technical reports “[Mobile phone applications in NRM practices CIMMYT progress report Jan 15](#)” and “[Remote sensing of NRM practices IRRI progress report Jan 15](#)”). IRRI had requested a three month extension of their project, which was approved by SPIA and MSU has amended their contract end date to March 31 2015. After several reminders, ICRISAT had submitted a report in October summarizing the results of their activities. Both SPIA and MSU had reviewed that report and feedback was provided to the ICRISAT team. A deadline was given to them to submit their final deliverable (i.e., a revised proposal) by December 31, 2015, but nothing was submitted by ICRISAT by that date.

Activity 1.3. Innovative approaches to collecting agricultural technology adoption data

Most diffusion surveys in the past have depended on CGIAR research teams, either working on their own or working in collaboration with national programs and statistical services to generate the data. In many countries, there are private market research firms as well as private survey firms engaged in carrying out household surveys for academic purposes. As part of this Phase 2 Activity, MSU is

exploring new alternatives for outsourcing the collection of data on a routine basis that will allow the CG system to track the adoption of major agricultural technologies in developing countries.

In preparation of this Activity, a concept note "[Call for proposals for Innovative Approaches to Collecting Adoption Data](#)" was developed by MSU and shared with SPIA in October 2014. The concept proposed the approach of using local enumerators— potentially including leader farmers, village knowledge workers, community leaders and others – who live in agricultural communities to complete interviews of farmers using mobile phone (or tablet) based questionnaires and transmitting the data through cellular connection. Over time, this could substantially cut per unit survey costs by eliminating enumerator transport and per diem costs as well as data entry or mobile device purchase costs. It could also reduce management costs as locally based enumerators require less travel-related logistical coordination. This service would be especially valuable to clients needing up-to-date data on a few indicators but on a regular basis (i.e., at seasonal, annual or bi-annual frequency).

This idea was put forward for consideration in a recent Call for Proposal issued by MSU with a focus on doing a case study in India. This Call for proposal was issued on February 6, 2015 and is targeted to private (for profit or non-profit) entities that have:

- a. Demonstrated experience in providing data services to national and international agricultural organizations by conducting rural household surveys, farm level data collection or any other type of surveys
- b. Interest in applying/promoting innovative methods for tracking the adoption/uptake of agricultural technology in a developing country context; and
- c. Interest in developing a business model to expand the approach and making it a sustainable model to serve potential public and private sector clientele groups interested in accessing technology adoption data at a low cost by in high frequency (i.e., seasonally, annually or bi-annually).

The goal is to fund innovative data collection project(s) in India to: 1) develop and pilot a cost-effective approach to collect diffusion data for selected technologies; and 2) demonstrate in a rigorous way that the data from the pilot survey are accurate. MSU will provide technical assistance and work with the selected partners to ensure the design of the pilot study meets methodological rigor.

Activity 1.4. Develop and disseminate best practices for collecting diffusion data (Phase 1 Activity)

No activity conducted thus far. A workshop will be organized to bring together results/learning from 1.1, 1.2, and 1.3 in late 2015



Objective 2 (Outcomes): Institutionalize the collection of the diffusion data needed to conduct critical CGIAR impact evaluations

The objective here is to compile and make available the best information on outcomes that are at least plausibly attributable to CGIAR research outputs, and on a large-scale. This is where a key bench-marking function for the CRPs is most obviously fulfilled by this program. Large gaps in existing adoption databases for genetic improvement technologies (activity 2.1), natural resource management technologies (activity 2.2) and policy-oriented research (activity 2.3) will be filled for priority regions. In addition, under activity 2.4, the World Bank Living Standards Measurement Study-Integrated Surveys of Agriculture (LSMS-ISA) team and SPIA and Centers are working together with NARS partners and statistical agencies to see how some of these processes can best be integrated into existing surveys to reduce cost and increase frequency of data collection. MSU is exploring similar objectives in Zambia and Mozambique and in dialogue with Indian counterparts for a similar objective.

Activity 2.1. Organize the collection of crop germplasm improvement research related direct outcomes

This activity expands on the DIIVA and TRIVSA projects that have come to a closure, and focuses on the collection of varietal diffusion data in South and Southeast Asia.

Each center/CRP with mandate for crops in this region was contacted to finalize the list of CCCs that will be the focus of the field work under this objective, as per Table 1 below.

Towards the planning of Activity 2.1, a two day inception meeting with Center and NARS partners was held in Bangkok on January 15-16, 2014. A total of 35 participants, including all the relevant commodity center/CRP representatives and NARS partners, two representatives from SPIA and three resource persons (Tom Walker, Sushil Pandey and Rob Tripp) attended this meeting which had the following objectives:

- Review 'expert opinion' elicitation method and seek input from the participants on how to revise and improve these methods for the SIAC project
- Take a stock of varietal adoption estimates/data for all the CGIAR mandated crops in South and Southeast Asia and identify gaps that can be filled by the SIAC project.
- Discuss an action plan, budget and a timeline for implementing the data collection efforts in this region.

Based on the discussion and input from resource persons and participants, a guideline document ([Guidelines for collections varietal release and adoption data](#)) on the methodology for collecting varietal release and varietal adoption data using expert elicitation methodology was finalized by MSU and shared with all the Center and NARS partners.

Subsequent to the inception meeting, and based on the workplan and budget guidelines provided by MSU, each participating Center prepared a budget and workplan. These were reviewed and approved by SPIA/PSC (since all the budgets submitted by Centers exceeded \$50,000). Upon receiving the approval and several iterations of budget negotiations to remain within the budget for this Activity, MSU has established sub-contracts with the following centers to collect varietal release and adoption data (using expert elicitation method) for the CCCs listed in Table 1.

CIMMYT: 39 CCCs

IRRI: 21 CCCs

CIP: 41 CCCs
CIAT: 10 CCCs
ICRISAT: 15 CCCs

As approved by the PSC, Iran has been removed from the workplan of MSU for Activity 2.1. The revised list of CCCs now includes 130 CCCs (Table 1).

For 3 CCCs (all legume crops), MSU will work directly with NARS to collect the information (neither the relevant CRP nor Centers were willing to take on this task). These include chickpea in Pakistan, and Lentil in Bangladesh and Nepal. For the former two CCCs, MSU has identified and contracted local NARS partners (NARC in Pakistan and BARI in Bangladesh) to collect the information and develop the two datasets by mid-2015. The NARS partners in Nepal were also contacted for their assistance in completing this Activity for lentils, but they have not been able to give their commitment to complete this task. MSU is working with the ICARDA researcher based in India to find an appropriate partner to collect this data for Nepal.

For the work contracted to CGIAR Centers, activities have progressed as per the plan. Towards the implementation of this Activity, CIMMYT organized a training workshop in August in Nepal for the NARS coordinators. Sushil Pandey and M. Maredia participated as trainer and resource person at this workshop. A similar training workshop was planned by IRRI in September 2014 in Laos, by ICRISAT in October 2014 in India, and by CIP in China in February 2015. Sushil Pandey participated in all these training workshops as a trainer and resource person. M. Maredia and T. Kelley participated in the India workshop in October. CIAT has identified a regional economist who will lead this Activity working closely with the NARS coordinators in each CCC.

Currently, the time frame for Centers to submit the two data base is end of June 2015 (for all Centers, except CIP) and October 2015 (for CIP).

Activity 2.2. Organize the collection of natural resource management (NRM) research outcomes

This was initially part of the Michigan State University sub-grant but it was agreed in Jan 2014 that SPIA would manage this part of the program. Subsequently, SPIA contracted a consultant (Nuri Niyazi) to analyze annual reports and old Performance Management System (PMS) data to draw up a database of NRM outcome claims by country. This will be used as a basis for consultations with relevant Centers about prioritisation, methods and data availability, for collecting national estimates of adoption for key practice-country combinations. Since September 2014, SPIA has worked further on cleaning and categorizing the draft database of potential cases. Currently, there is a draft of 123 NRM practice x country combinations that are considered potentially relevant for being the subject of data collection / verification by an independent third party. This set is broken down further as: Crop Management (51 cases); Agroforestry (12); Forest Management (4); Landscape-scale (8); Pest and disease management (21); Water management (27). The draft matrix is available here ([NRM outcome claims database](#)).

Next steps: Prior to consulting with centers / CRPs on this draft matrix, we need to document the trail of cases that fell out of this process (usually on the grounds of being very small scale) so that we can anticipate a number of potential challenges from researchers who think that particular cases should be in the set. We would like to discuss the proposed process for procurement of a service provider to collect the data on these cases, alongside the consultation draft of the database, in some detail at the mid-term review meeting. The consultation phase with Centers / CRPs can run alongside the procurement process, and we would expect an inception workshop with the successful bidders in September 2015. The contract for data collection will be two years from approximately

July 2015 – June 2017. The draft call for tenders document is available here ([NRM outcomes tender for EOs](#)).

Activity 2.3. Organize the collection of policy-oriented research outcomes

A consultant with expertise in the evaluation of POR outcomes completed the first component of the first phase of this activity – assembling a database of 93 POR outcomes drawing on information extracted from earlier CGIAR PMS data files from 2006 through 2010. The consultant’s summary report can be found here ([Tracking POR Outcomes - Final report \(Renkow\)](#)). The outcome statements are the basis for the initial CGIAR POR Outcome Database ([CGIAR POR Outcomes Database](#)) contained in an Excel spreadsheet which represents a useful source of information for CGIAR stakeholders wanting to see in one place a compilation of significant credible POR related outcomes from CGIAR research. The Database is divided into 14 different worksheets, one for each Center for which POR outcome statements exist (i.e., all Centers except CIMMYT). For each outcome, information is provided on the constraint or problem that was addressed, the key research outputs underpinning the outcome, a description of the specific POR outcome, what supporting evidence exists, and the region or country in which the outcome took place. The resulting initial POR outcome database represents a wealth of information of all types of POR “outcomes” initially proposed by the Centers, which had earlier been evaluated and scored by the ISPC using external reviewers and, now recently, evaluated and grouped into three categories by the consultant after critically reviewing the claims and the quality of evidence in support of those claims.

The 93 POR outcomes were broken down into three categories. Sixty-one of these were deemed to be Category I “strong” cases – ones that satisfied specific criteria. In addition to the 61 strong outcomes, there were 32 other outcome statements that were deemed to have significant potential but required further documentation. Of these 32 “non-strong” outcomes, seventeen were judged to require additional evidence linking the outcome to specific Center outputs. In other words, it was felt that the existing outcome statement provided insufficient information to make a compelling case that the policy outcome could be reasonably attributed to the Center. These outcomes are labeled Category II in the database. Fifteen additional statements described outcomes that look promising, but either were at an early stage (e.g., they described early outcomes emanating from pilot projects), or were simply not described well enough to make a strong case for being a POR outcome – but, again, appear to have good potential to generate meaningful policy outcomes. These outcomes are labeled Category III in the database.

Next steps: To complete the first phase of this activity, the initial POR Outcome Database will be shared with the relevant Centers (those associated with the outcomes reported) to verify that the earlier presented information is still accurate, or to provide additional up to date information to substantiate the claims. SPIA is also considering pursuing some kind of further more selective and in-depth external validation process of the kind described in Activity 2.2, if funding and management capacity permit.

The second phase of this study (proposed) would likely consist of building on this database by, for example, searching relevant documents published between 2011-2014 or soliciting directly from the Centers/CRPs. Relevant outcomes that this SIAC Activity would seek to document in the POR Outcomes Database include, among others, agricultural, trade and nutrition/health policies, that can have a large impact on economic incentives in agriculture, as well as modulating the poverty and nutrition impacts of some new technologies. . A series of steps (still to be defined) are envisioned in

going from assembling this larger body of yet-to-be submitted CGIAR POR outcomes to a reviewed and verified smaller set of “credible” POR outcomes to add to the initial POR Outcome Database¹.

IFPRI, the PIM CRP and SPIA recently co-sponsored a Workshop on Best Practice Methods for Assessing the Impact of Policy Oriented Research at IFPRI HQ in Washington DC. The workshop brought together more than 40 people, including evaluation experts from within CGIAR, the academic community, donors, and developing country policymakers. The workshop format was designed to foster the expression of different perspectives on the current state and prospects of impact assessment of POR. One of the workshop’s objectives was to seek agreement on realistic expectations for what can and cannot be achieved in evaluating the impact of different types of policy research, and how best to undertake the work. IFPRI is currently summarizing the key findings of the workshop and will produce a discussion paper in Spring 2015. See these links for a more detailed description of the purpose <https://sites.google.com/a/cgxchange.org/poria-workshop/about> and agenda <https://sites.google.com/a/cgxchange.org/poria-workshop/agenda> of the workshop.

Activity 2.4. Long-term institutionalization of collection of adoption data (Phase 2 Activity)

This Activity contributes to SPIA’s long-term vision of involving a broader and more diverse set of institutional partners in the collection of adoption data. SPIA’s long-term vision in achieving this objective is to involve a broader and more diverse set of national institutional partners in the collection of adoption data so as to systematize the collection of nationally representative adoption data on a regular basis in the most cost-effective way possible. We have several strategies for trying to achieve this.

SPIA is now in partnership with the World Bank Living Standards Measurement Study – Integrated Surveys of Agriculture (LSMS-ISA) team, through two research associates that we have hired to work in LSMS-ISA countries over the period mid-2014 to mid-2016 ([LSMS-ISA project document](#)). These research associates, Frederic Kosmowski (based in Ethiopia) and John Ilukor (based in Malawi) are SPIA’s focal points for efforts to improve the way that agricultural technologies are uniquely identified in the surveys of 8 Sub-Saharan African countries (Ethiopia, Malawi, Uganda, Tanzania, Nigeria, Niger, Mali, Burkina Faso).

These consultants visited Rome for 3 days in July 2014 for an induction with SPIA, LSMS-ISA and FAO-ESA. In August 2014 the two consultants then moved to their respective first field stations and started work from mid-August 2014. The period September – November 2014 was focused on discussing with the CGIAR scientists and other colleagues about the project and identifying the priorities and prospects for improving the data collected in the 4 countries they are responsible for.

¹ One possibility envisages Centers and CRPs being invited once a year to submit good examples showing how their research has influenced policy. These would take the form of short case-studies according to a standard format to be developed by SPIA in consultation with the Centers/CRPs. For example, this could comprise a description of the nature of the policy (e.g., a policy was changed or a negative policy change was averted or a new mechanism was set-up for investments), a description of the theory for how the research influenced this policy (e.g., the impact pathway), and description of all the possible sources of evidence that document this influence. SPIA would appoint an independent evaluation individual or team (having expertise in this area) to evaluate the credibility of the case-study reports, giving each a rating in terms of the significance (scale, poverty of the people affected, etc.) and attribution established (credibility of the theory suggested / comprehensiveness of the evidence provided). Highly rigorous evidence of influence is not expected at this stage (more appropriate under SIAC Objective 3 – Impacts) but some level of minimum evidence to establish either credibility would be expected (and needs to be defined). All case-studies above a certain quality rating threshold will be added in the POR Outcomes Database.

In Ethiopia, Frederic Kosmowski has been developing three lines of research: 1) a phenotypic protocol for sweet potato varietal identification with a DNA fingerprinting check, with field work taking place in January 2015; 2) plans for conservation agriculture questions to be piloted in Ethiopia using innovative visual identification methods (photos of residue cover in surveys; use of drones); 3) developing plans for DNA fingerprinting a sample of the crop-cuts taken in the Ethiopia Agricultural Sample Survey.

In Malawi, John Ilukor has been working to develop a cassava phenotypic protocol and a protocol for cassava DNA fingerprinting, to integrate into a large methodological experiment being implemented by the LSMS-ISA team in 2015. John has also been working with LSMS-ISA colleagues to integrate CGIAR technology-related questions and possibly DNA fingerprinting, into a large experiment being carried out on maize production in Uganda from April 2015 onwards.

During the remainder of 2015, John will be fully occupied with work in Malawi and Uganda, and this may spillover into 2016, though he will most likely be concentrating on Tanzania and Nigeria in 2016. Frederic will be focusing on Ethiopia for the majority of 2015, but can begin to plan for relevant entry points into the surveys in Francophone West Africa which will be the focus of his efforts in 2016.

This work is a collaborative effort among a number of parties. A five-page project document that explains the objectives and roles and responsibilities of the different parties is available here. (INSERT HYPERLINK).

MSU is working in parallel with the same objective with a focus on India, Mozambique, and Zambia. For India, Mywish Maredia (MSU) and Tim Kelley (SPIA) visited New Delhi in January 2014 with two objectives in mind:

1. To meet with key partners involved in nationally (or state) representative farmer level data collection and learn about the scope of their current survey activities and discuss opportunities for 'institutionalizing' the collection of technology adoption data through those surveys; and,
2. To explore opportunities to access (raw or processed) data that will help estimate the adoption of improved agricultural technologies by CGIAR/NARS partners on an on-going basis (i.e., every 3-5 years) to track and monitor the uptake (or dis-adoption) of technologies by farmers.

The specific focus of this visit was to meet with the Chairman of the Commission for Agricultural Costs and Prices (Ashok Gulati) to explore opportunities to leverage existing data or future cost of cultivation (COC) survey data for the purpose of tracking and monitoring the adoption of improved varietal technologies by farmers on a regular basis. They also met Dr. Datta, the DDG for Crops at the Indian Council of Agricultural Research (ICAR). The outcome of the visit was a tentative agreement to organize a 1-2 day meeting/workshop in India to bring together the Directorates of Crop Research, State Agricultural Universities and relevant state level agricultural production statistical units to discuss the plan for institutionalization of adoption data in COC or other agricultural production statistical surveys in India. Despite several attempts to engage with Dr. Datta in follow-up emails and via MSU's local contacts to implement the plan, no response was received.

In October 2014, while attending the expert elicitation training workshop in Karnal, Maredia and Kelley paid another visit to Dr. Datta and met with the DG of ICAR (Dr. Ayappan) to follow-up on the earlier meeting and to better understand the role ICAR can (or cannot) play in working towards institutionalization of adoption data in India. While the leadership of ICAR was supportive of having access to adoption data collected on a regular basis from a representative sample, the main mandate of ICAR is agricultural research and generating technologies; they do not have any

institutionalized data collection mechanism in place for this purpose – which they strongly support. To assess technology adoption they rely on the seed indent data (for varietal technology) or estimates provided (on an ad hoc basis) by the network of KVKs and extension workers. Maredia and Kelley also visited the National Center for Research on Agricultural Policy (NCAP), and based on the discussions with NCAP staff, it was decided that pursuing this idea with the Ministry of Agriculture or with NSSO to explore the potential for integrating technology adoption questions in the regularly conducted and nationally representative surveys may be a better option. NCAP offered to serve as a liaison to build the contacts with the appropriate office and people within these organizations to explore this idea further. Maredia is in contact with NCAP and is seeking information to build an inventory of different types of agricultural surveys conducted in India, information on type of survey, sample representativeness, frequency of data collection, organization in-charge of collecting this data, and their contact information. Based on this information, MSU will determine what is the best mechanism (if any) to institutionalize technology adoption data, and work with NCAP to explore such possibility. The idea is for NCAP (or ICAR) to play a leadership role in pushing this agenda, and the SIAC project (through MSU) playing a supportive role. Another option that was discussed during this visit but not yet explored by MSU is to work at the state level (in 1-2 states), and see if the Department of Agriculture in a given state is open to this idea of institutionalizing the collection of technology adoption data at least on a pilot stage.

Zambia and Mozambique are two other countries MSU is exploring to integrate technology adoption data into national surveys. In both these countries nationally representative surveys are routinely conducted, and the next rounds of this survey are scheduled in 2015. Questionnaire for these different surveys have been shared with MSU and Maredia is exploring ways to enhance the already existing technology adoption modules or to add new questions/modules in these instruments to get a better picture of agricultural technology adoption either at the HH or plot-level. With input from Frank Place (formerly with World Agroforestry and currently with PIM CRP), a module consisting of questions to capture some agro forestry technologies and conservation agricultural techniques was developed and shared with the Zambian Ministry of Agriculture and IAPRI (a think tank organization in Zambia that conducts agricultural and rural livelihood surveys in Zambia) to see if they would be willing to include this in their planned surveys. These surveys are already long and some resistance was expressed in expanding the survey to include more questions. No response on their final decisions has been received thus far.

Table 1: Final list of CCCs as per the workplan submitted by Centers (July 2014) – amended in September 2014

| Country | Rice | Maize | Wheat | Barley | Sorghum | Ground-nut | Chick-pea | Pigeon-pea | Lentil | Cassava | Potato | Sweet potato | ALL | |
|-----------------------------|-----------|-----------|-----------|----------|----------|------------|-----------|------------|----------|-----------|-----------|--------------|------------|-----|
| Afghanistan | | | 1 | | | | | | | | | | 1 | |
| Bangladesh | | 1 | 1 | | | | | | 1 | | 1 | 1 | 5 | |
| Bhutan | | | | | | | | | | | | | 0 | |
| Cambodia | 1 | 1 | | | | | | | | 1 | | | 3 | |
| China (specific provinces) | 8 | 8 | 6 | | | 2 | | | | 1 | 12 | 9 | 46 | |
| India (specific states) | 4 | 8 | 6 | 4 | | | | | 4 | 2 | 6 | 3 | 37 | |
| Indonesia | 1 | 1 | | | | 1 | | | | 1 | 1 | 1 | 6 | |
| Iran ** | | 0 | 0 | 0 | | | 0 | | 0 | | | | 0 | |
| Laos | 1 | | | | | | | | | 1 | | | 2 | |
| Malaysia | 1 | | | | | | | | | | | | 1 | |
| Myanmar | 1 | | | | | 1 | 1 | 1 | | 1 | | | 5 | |
| Mongolia | | | | | | | | | | | | | 0 | |
| Nepal | | 1 | 1 | | | | | | 1 | | 1 | 1 | 5 | |
| Pakistan | 1 | 1 | 1 | | | | 1 | | | | 1 | | 5 | |
| Papua New Guinea | | | | | | | | | | | | 1 | 1 | |
| Philippines | 1 | 1 | | | | | | | | 1 | | 1 | 4 | |
| Thailand | 1 | 1 | | | | | | | | 1 | | | 3 | |
| Vietnam | 1 | 1 | | | | 1 | | | | 1 | 1 | 1 | 6 | |
| Total | 21 | 25 | 17 | 5 | 0 | 5 | 3 | 1 | 7 | 10 | 23 | 18 | 130 | |
| Lead center | IRRI | | CIMMYT | | | ICRISAT | | | CIAT | | CIP/RTB | | | |
| Commitment from lead center | 21 | | 39 | | | 15 | | | 10 | | 41 | | | 127 |
| Gap * | | | | | | 3 | | | 0 | | | | | 3 |

*MSU will work directly with national programs or consultants to get information for the two data base for these 3 CCCs.

** Due to US Government's restrictions on 'working' with Iran, five CCCs have been removed from MSU's workplan and LOA.

SIAC Objective 3 (Impacts): Assessing the full range of impacts from CGIAR research

While work under Objectives 1 and 2 paves the way for future *ex post* impact assessment studies, Objective 3 activities are focused on carrying out a number of impact assessments of CGIAR research and development initiatives along the entire chain of causation - from research investments to the System-Level Outcomes. Since this causal chain is long and complex, SPIA is approaching it from a number of different perspectives: case studies that focus on measuring the impact of CGIAR research on health and nutrition (activity 3.0); long-term large-scale studies of impact for major areas of CGIAR investment (activity 3.1); sets of short-term micro-scale impact studies using experimental and quasi-experimental methods (activity 3.2) to provide evidence on the impact of CGIAR research-derived technologies to adopting households; studies of a number of under-evaluated areas of research (e.g. irrigation and water management; livestock and impact types (activity 3.3); a system-level meta-analysis of *ex post* IA of CGIAR research (activity 3.4).

Activity 3.0. Measuring the impact of CGIAR research on health and nutrition

This call for proposals was issued in July 2013, with the intention of broadening and deepening the evidence base regarding the potential for agriculture research and development to leverage health and nutrition benefits. The intention is to complement, not to duplicate, on-going work in the A4NH and other CGIAR research programs. Led by Erwin Bulte, an external review team identified an interesting portfolio of studies with different methods and focal technologies. A very successful inception workshop in July 2014 gave the proponents of the five studies some useful feedback on their plans. A brief report on the workshop is available here ([Nutrition impacts workshop Wageningen July 2014](#)).

Since September 2014, the main effort from SPIA on this activity has been bureaucratic in nature – negotiating the LOAs between FAO and the various universities / CGIAR centers that are the lead institutions for the five case studies. Four LoAs (with CIMMYT, CIAT, Innovations for Poverty Action, ILRI) have been signed. The LoA with Columbia University has been subject to multiple rounds of discussion, redrafting and negotiation between FAO and Columbia’s legal office. We remain optimistic that this will be resolved but it has taken an awful lot of communication and negotiation. Operationally, we are fortunate that there should be no significant knock-on effect of this delay in signing the Columbia LoA - the development project on establishing drip irrigation systems, that is at the center of the RCT we are funding, has been similarly slow to be finalized. The other four LoAs have started work and have provided a brief outline of how they have taken on-board the messages from the Wageningen workshop.

Next steps: All five LoAs will have fieldwork taking place in 2015 and we will have mid-term progress reports from all of them in the summer months of 2015. There is the possibility of holding a mid-term workshop, one year on from the inception workshop – this is to be confirmed, based on need and budget availability.

Activity 3.1. Documenting long-term, large scale impacts from CG research

The basic idea behind this work is to generate studies that credibly document the impacts of successful CGIAR research adopted at scale and over the long term using best available methods. Estimating the direct and indirect impacts from widely adopted technologies and policies is of special relevance to

CGIAR donors and other stakeholders, particularly in a climate of high accountability and expectation of linkages between agricultural research investments and socially desirable outcomes.

While experimental and quasi-experimental approaches potentially have much to offer in terms of rigorous estimation of causal effects during early stages of adoption and at limited scales within producer populations, other methods, often less quantitative and seemingly less rigorous but more comprehensive, are needed to estimate impact over longer time periods and larger spatial scales. In addition to measuring the effects on crop yields and total farm income (or nutritional improvements) of adopters, estimating the impact of widespread technological change requires consideration of effects on other groups. Widespread technological change often generates significant partial and general equilibrium effects on farm product prices and farm production resources, especially labor, but potentially land and other inputs that in turn have significant impacts on poverty, nutrition and other welfare measures affecting adopting farmers as well as other populations. Indeed, in many cases, it is believed these widespread indirect effects dwarf direct impacts in the adopting regions. The usual impact studies, which estimate producer and consumer surplus, take the first step of including effects on consumers of the product whose production efficiency has improved, and such studies undoubtedly have shortcomings that should be addressed. But in addition, they often do not in any way consider the indirect effects on farm input markets or on markets of production complements or substitutes. To what extent it is possible to demonstrate direct and indirect causal linkages from CGIAR-related technologies in these fairly complex pathways remains to be seen, but this is the goal of the present call.

In early September SPIA issued a call for expressions of interest (EOI) ([Call for Full Proposals for CGIAR Adoption Studies](#)) for proposals to document large scale adoption of CGIAR research outcomes. The call describes the aims and the various types of studies (deliberately left fairly open) that might be relevant here. SPIA received 22 EOIs and invited 9 to submit full adoption + impact study proposals and another 4 to submit adoption-only study proposals by mid January.

Next steps: Twelve full proposals (8 + 4) were submitted and have now been externally reviewed. SPIA member Bob Herdt is in the process of developing a short listed ranking of the proposals and preparing a recommendation to the PSC for funding 4-5 proposals (discussion and decision planned for early March). The studies are expected to run to the end of 2016 or early 2017.

Activity 3.2. Micro-scale impact studies using experimental and quasi-experimental methods

The experimental evaluations call led by Karen Macours has a funding envelope of approx. \$900K. *Process of selection:* In September 2014, 8 full proposals were received and reviewed externally (6 reviewers identified by KM, in addition to a portfolio review by two SPIA members/activity leaders). Based on these and internal reviews by SPIA (KM, DG, TK, JS, LK), two out of eight proposals (Corral et al., de Janvry et al.) were recommended to the PSC for funding, along with a potentially fundable third (Mobarak) and fourth (Ricker-Gilbert et al.) for discussion and consideration. Post a PSC meeting on 10th November 2014 and receiving clarifications from de Janvry and team, two of the proposals (Corral et al. \$357,608 and de Janvry et al. \$235,176) were approved for funding by the PSC. The second PSC meeting on this call was on 12th November 2014, and a third proposal (Mobarak, \$268,609) was approved for funding, with a decision that some of the non-funded proposals (including Ricker-Gilbert) would be invited to the first workshop to provide feedback on research design. The contract with QFD for Corral et al. has been executed, and the SPIA-funded part of the work is set to begin in January 2015. The

contracts for de Janvry et al. and Mobarak will be executed in March 2015 (still being reviewed by Yale and Berkeley), with activities funded by SPIA scheduled to begin in May 2015 and July 2015 respectively.

Inception and capacity building workshop: On February 8th and 9th 2015, a workshop ([Experimental evaluations call inception and capacity building workshop](#)), co-organized with the Agriculture Technology and Adoption Initiative (ATAI), was held at MIT Sloan. The agenda for the workshop, list of participants, and summary can be found here (link to be inserted). The first day was divided into two parts: (1) presentations and discussions on the three funded proposals, including inputs from on SPIA objectives and expectations as well some discussion around potential common outcome/impact indicators; and (2) presentations and discussions on four of the five non-funded proposals, setting the tone for the second day. ATAI had identified affiliated graduate students with interest in the research topics/area, and on the second day, one graduate student provided a commentary a non-funded proposal on the basis of which a detailed discussion was held (about 1.5 hours of discussion per proposal).

Next steps: Karen Macours (and Lakshmi) will follow-up with the researchers on the common indicators discussion over email. We will have progress reports for each of the funded proposals in 2015: Corral et al. progress report is due 31st October 2015; and it is likely that we will have 6-month progress reports from de Janvry et al. and Mobarak in December 2015. Potential dates/location for a mid-term workshop, if needed, will be proposed in late 2015. The unfunded proposals have been encouraged to conduct diagnostic studies to further develop their research questions and plan, and SPIA may provide some feedback on revised proposals if requested (timeline uncertain), and provide guidance and contacts to the researchers to explore alternative sources of funding.

Activity 3.3. Under-evaluated areas of CGIAR research

Many studies over the years have sought to document the impacts of agricultural research although the vast majority of these have focused on crop germplasm improvement, i.e., adoption and impact of improved crop varieties. As such there remain serious gaps in the extent to which impact assessment of other components of the CGIAR portfolio have been conducted. To fill this gap, one of the activities of the SIAC program targets what we consider to be under-evaluated areas of CGIAR research, such as livestock management, irrigation and water management, agroforestry, policy and social sciences, biodiversity and natural resource management.

As an initial step in our work on under-evaluated areas of CGIAR research, SPIA, in April 2014 commissioned Doug Merrey, an independent consultant with vast experience in water management research, to conduct a critical review of the impact assessment work to-date on irrigation and water management research. Merrey submitted his report ([Merrey report on irrigation and water management Dec 2014](#)) which was externally reviewed (quite positively) and has now been finalized and submitted to SPIA. This desk study includes IA work done within and outside the CGIAR, and evaluates how comprehensively and effectively these assessments cover the field of irrigation and water management research since 1990. Merrey's report analyzes the strengths and limitations of the existing IAs in irrigation and water management research - in terms of scale effects, rigor of causal relationships, or how close the impact indicators of the studies correspond to the System-Level Outcomes of the reformed CGIAR system. The review identifies the major constraints and limitations, e.g., methodological, data-related, resource-related, etc., of previous studies and offers guidance regarding some specific candidates for IA studies of CGIAR research on irrigation and water management that have

good potential for documentation. Some of the proposed new initiatives emphasize targeting intermediate impacts, e.g. estimates of the impact on water-use efficiency, changes in irrigation management policy or simply adoption of research outputs, rather than ultimate, CGIAR system-level outcomes and impacts.

For other under-evaluated areas still under consideration (livestock, crop management, agro-forestry, social science/policy, biodiversity, NRM), scoping studies are yet to be commissioned. This activity is behind schedule, and SPIA hopes to move aggressively on this in 2015. We are currently reformulating plans that may help to make the task more manageable.

Next steps: With the scoping study on irrigation and water management research impact assessment in the CGIAR completed, SPIA will move forward on a two-pronged strategy for this activity. Based on the recommendations emerging from the Merrey report, SPIA will issue a call for EOI for *ex post* IAs in the field of irrigation and water management research, with the intention of funding two or three large studies. At the same time, it will turn its attention to other under-evaluated areas of CG research. Early in 2015 SPIA plans to commission scoping studies to assess the coverage and quality of *ex post* impact assessments in at least three other under-evaluated areas of CGIAR research (most likely for livestock, NRM and agro-forestry). The draft TOR for the livestock study has been prepared ([TOR for study to evaluate the IA of livestock mgmt. research in the CGIAR](#)). These scoping study reports along with the assessments of best-bet outcomes in NRM research in the CGIAR (Activity 2.2) will form the basis for the SIAC PSC recommending to the Fund Council Committee on Evaluation and Impact Assessment specific areas for further IA work under the SIAC program that has good potential for generating large scale, long term economic, social and environmental impacts from under-evaluated CGIAR research.



SIAC Objective 4 (Building a community of practice): Support the development of communities of practice for ex post impact assessment

The CGIAR will benefit from a structured attempt to support the existing capacity and some emerging collaborations on *ex post* impact assessment. Information-sharing and regular interaction are important in enabling the kinds of dialogue that can raise standards of impact assessment in the CGIAR, as well as ensuring that individuals have the skills that they need to be successful in their work. Activities towards this objective include a small grants program (activity 4.1); a targeted program of capacity-building using competitive calls for collaborations with advanced research institutes / universities (activity 4.2); conferences and workshops on impact assessment (activity 4.3); support for independently reviewing and publishing quality ratings of impact assessment studies carried out by CRPs and Centers (activity 4.4); maintenance and enhancement of the impact website (<http://impact.cgiar.org>) (activity 4.5).

Activity 4.1. Small grants

In 2013, 4 projects were funded through the small grants program (a total of \$30k). The program is now closed (decision influenced by FAO's heavy bureaucratic requirements and the need to find savings in SIAC budget). Updates on each project are given below:

- *IWMI, electricity and water pump policy in India*: evaluation to assess impact of policy change – while IWMI has shared details of the survey and sampling frame for the survey supported by SPIA, analysis of data will only be done next year (2015).
- *ILRI, pastoral value chains in Senegal*: MSc Fellow to develop social sustainability/environmental sustainability indicators – in 2014, the team tested social sustainability indicators (hiring graduate fellow for the work). 2-page update on project shared with SPIA, in addition to the abstract of the article submitted to a scientific journal.
- *CIMMYT, agri. technology package in Malawi and Ethiopia*: applying endogenous regression switching model to a panel dataset – CIMMYT has shared the analysis (full report) based on the Ethiopia panel data, but have been delayed in analyzing the Malawi dataset because of delays in data entry. The final version of the Malawi paper will be available in March 2015.
- *Bioversity, Home Gardens evaluation in Nepal*: new approaches to measurement and evaluation of gender impacts – Bioversity completed the testing of qualitative tools and has submitted a 2-page report to SPIA (as well as a full report on the larger IA for any comments/review).

Next steps: Review reports already shared with SPIA and consider if any that is a part of a larger ePIA could be submitted to the Star Rating system. Continue following up (requires little time commitment) with IWMI and CIMMYT on the work that is pending, and provide feedback/encourage submission to the Star Rating system which should be accepting submissions by March 2015.

Activity 4.2. Strengthening IA capacity in the CGIAR through new partnerships

Virginia Tech (George W. Norton, Bradford F. Mills, Catherine Larochelle, Jeffrey Alwang) has been working with CIP (Guy Hareau, Willy Pradel) and CIFOR (Daniel Suryadarma; Herry Purnomo) since early 2014 on a SIAC funded sub-grant ([Capacity-building proposal Virginia Tech](#)) to strengthen ex post IA activities, focusing on these objectives:

- Classify CIFOR and CIP research according to whether and how impact assessment could be done
- Suggest potential IA methods and approaches for Center research themes

- Assess CRP-specific impact pathways and theories of change, and developing means of measuring intermediate and final outcomes and impacts
- Assess current impact-related data collection and archiving methods
- Jointly develop data collection protocols and management systems to meet IA needs and applying promising potential IA approaches
- Conduct two pilot IAs in each Center, jointly with IA officers and scientists
- Conduct learning workshops for project participants and other audiences

A brief overview of their activities since project inception:

- Center workshops: A workshop was held at each institution (CIP in May; CIFOR in July). Attendees included senior staff and management. The objectives of the workshop were to provide an overview of the IA strengthening project, present an overview of IA methods and their use, create broad understanding of data needs for assessment of impacts of the Center portfolio, and engage in consultations about specific impact assessment needs.
- Assessment of Center IA needs: During the first visits to the Centers, meetings were held with senior management and scientists to gain understanding of IA needs. Management provided its view of IA and how it fit into Center and CRP activities and scientists provided an overview of their research portfolio, expected impact pathways, project-related data, and particular IA needs. Findings from these activities are being used to classify research according to IA needs and methods.
- Identification of pilot IA: Center staff were engaged in a dialogue about the most appropriate themes for the pilot IAs. For CIP, the two projects are (a) an evaluation of impacts of Cooperation 88, an important and highly successful germplasm variety released and widely disseminated in China; and (b) an assessment of the impacts of the CIP gene bank. For CIFOR, we identified the following: (c) an assessment of the impact of the furniture value chain (a project conducted in Jepara, Indonesia to better articulate small-scale artisanal furniture producers to higher-value markets); and (d) an assessment impacts of CIFOR research on carbon sequestration in peat bogs and mangroves.
- Pilot IAs: Four Virginia Tech graduate students have been selected to participate the IAs mentioned above: Stephanie Myrick (a), Emma Shirey (b), Corinna Clements (c), and Nicole Flores (d). These students have been engaged in background reading and all have identified CIP/CIFOR counterparts for the studies.
- Leveraging funding: As the selected pilot IAs are somewhat ambitious, we are actively seeking supplementary funding to support field activities for the research. One form of leveraging is through student assistantships—none of the students mentioned above are currently being funded by the project, although they all will be beginning sometime in 2015. They are being funded through scholarships, TAs, and other means. A second form of leveraging is Center support: both CIP and CIFOR have agreed to provide some resources for data gathering and in-country costs. The third form is through additional grant support: Shirey received a Borlaug program grant (through Purdue University-- <http://www.purdue.edu/discoverypark/food/borlaugfellows/>) and Myrick applied to the NSF for the Summer Institute in China <http://www.nsf.gov/od/ia/ise/eapsi/2015/2015%20China%20EAPSI%20Handbook.pdf>.
- Project meetings: Guy Hareau (CIP) traveled to Blacksburg in mid-November 2014 to review progress and coordinate activities; he is returning to Blacksburg in March 2015. Daniel Suryadarma has held regular Skype conference calls with Virginia Tech Scientists.
- Mills will travel with Clements and Flores to CIFOR in May 2015 and complete the Center assessment of IA needs and data. Norton will travel to CIP in Spring 2015 to do the same.

- The graduate students are progressing in defining/focusing their research.

Although the ICRISAT/University of Illinois proposal for strengthening IA capacity in the CGIAR had been prepared by SPIA and ICRISAT and submitted by the Consortium Office (CO) to the BMGF in May, 2014, and approved in July 2014, there was considerable delay in implementation and signing of the LOA while protocols were clarified between the ISPC Secretariat and the CO. These have now been worked out and the LOA has been signed. ICRISAT has initiated a Partnership Agreement with Illinois, and colleagues there have identified a post doctorate fellow who will be splitting their time between ICRISAT and University of Illinois. Plans are underway to host a training workshop in the late summer that will be open to other CGIAR center scientists, in Nairobi or Bulawayo.

Activity 4.3: Biennial conference on ex post impact assessment results and methods

On July 26th 2014, SPIA organized a workshop entitled “Measuring poverty impacts of agricultural research” as a pre-conference workshop at the American Applied Economics meetings in Minneapolis. Seventy participants, approximately one third from the CGIAR and two thirds from academia, participated in full day of presentations and extended discussion on the potential and limits of the following families of studies: micro-level econometric studies; model-based approaches; randomized-control trials; meso, macro and cross-country studies. The invited speakers were of the highest caliber (e.g. Michael Carter, Tavneet Suri, Will Martin, Marc Bellemare, John Antle, and Julian Alston). The day concluded with a panel discussion on “Reducing rural poverty as a System-Level Outcome for the CGIAR”. The workshop was very successful in fostering open discussion across these specialists within the agricultural economics discipline ([Poverty impacts workshop, Minneapolis July 2014 report](#)).

Following the workshop, SPIA (Doug Gollin, with research assistance from Lilli Probst) took on the task of summarizing these findings and reviewing the related literature in a paper for a non-specialist audience. An outline of this paper ([Poverty impacts paper, Gollin Sept 2014](#)) was presented to the meeting of the CGIAR Independent Science and Partnership Council at the University of Copenhagen in September 2014, was drafted in October 2014 and is currently being revised following feedback from colleagues before being published in early 2015.

Immediately prior to the poverty impacts workshop, on July 25th 2014 in Minneapolis, SPIA hosted a meeting of the Impact Assessment Focal Points from across the CGIAR centers / CRPs. This was a full day of presentations from each of the 15 focal points, as well as from SPIA on progress with the SIAC program. This was a valuable opportunity for center scientists to exchange information on their current impact assessment projects and to benefit from advice from a number of high-quality resource people that SPIA had arranged to attend to provide feedback (Julian Alston, Jeff Alwang, George Norton, Greg Traxler, Bob Herdt, JV Meenakshi). Proceedings and presentations from the IAFP workshop can be found on the [Events page on SPIA website](#).

Activity 4.4. Enhancing quality and rigor: Introducing a Star Rating System for IA studies

SPIA intends to launch an online external review system as a key mechanism for ensuring high quality assessments of impacts by the CGIAR. The system differs from journal reviews (that focus on methodological approaches and innovative research) in that it also focuses on criteria such as scale and link to agricultural research outputs, responding to donor needs. It is not intended to replace journal publications, but is a systematic way of identifying and showcasing (thereby setting an example of) high-

quality work to the CGIAR and donors. The idea was presented at the Impact Assessment Focal Point (IAFP) meeting in Minneapolis in July 2014 and received with enthusiasm. This early draft document ([Criteria for quality rating](#)) outlines the vision for this system: a significant change in the management process outlined in the draft being that the SPIA Chair will function as the Chief Editor and supported in that role by SPIA members (as Associate Editors). For each manuscript submitted for rating, the Chief Editor or one of the Associate Editors will identify external reviewers and manage the review process with support of SPIA Secretariat staff.

Since September 2014, a contract with the vendor (Allen Press) has been executed; and based on new process flow and meta-data requirement guidelines, Allen Press launched a testable version of the review system online on 1st December 2014. TK, JS and LK have completed the introductory training in early December 2014, and provided feedback. SPIA Chair has provided comments on the workflow. A review of the test version website was completed in December 2014.

Next steps: In the 3rd week of February 2015, Allen Press confirmed that the website could be launched and is making the final set of changes requested. The plan is to launch this on or before 25th February 2015, and send an announcement to CRPs and Centers inviting submissions. In parallel, Associate Editors (SPIA members and activity leaders) who request training will be offered online training by Allen Press. While we are not certain about the number of submissions (on a voluntary basis) in 2015, the intention is to encourage CGIAR Centers and CRPs to submit their ePIAs for review and star rating.

Activity 4.5. CGIAR Impact Website

The CGIAR impact [website](#) was re-launched in May 2014. The entire front-end of the website has been redeveloped to enhance users' ability to find the information they need, and the visual identity has been brought up to date. New features such as an impact blog, a latest news section, a global publications map, and a dedicated section for the community of practitioners of IA, all add useful resources for helping to increase awareness of impact assessment activity in the CGIAR. The number of sessions on the website was down slightly overall in 2014 at 11,945 (compared to 12,452 in 2013), but increases were registered in the number of page-views (up by 15%), pages/session (up by 20%), and the average session duration (up by 23%). All of these latter figures likely reflect the greater navigability and improved user experience. In 2015, we need to focus on driving traffic to the site to increase user and session numbers.

Next steps: Initially, the plan was to identify a vendor to improve or re-create this publications map to make it more relevant. However, if the SIAC MTR decision is to focus efforts on a GIS (backend) database of adoption outcomes (spanning crop, NRM and policy outcomes, and multiple countries and time periods), this exercise will be put on hold. The search function for publications page could still use improvement. Keywords associated with publications require streamlining and updating – we will explore the possibility of hiring an intern to help update the keywords and verify citation data for ~300 publications in the database. This latter activity might in fact be important if the database of ePIAs on the website (through the Star Rating system) grows quickly.

M & E - Special survey of donor demands for impact assessment:

The SPIA Secretariat is conducting a 'Donor Demand for *ex post* IA' study as a follow-up to its earlier survey conducted in 2004-05. This study aims to better understand:

- a) How/whether use of ePIAs has changed/evolved over time; current perceptions of CGIAR ePIAs
- b) Are/how some of these changes in use/perceptions relate to actions (e.g. publication of impact briefs) taken by SPIA on the issues identified in 2005
- c) Additional actions required of SPIA, to feed into SPIA strategy. And use this opportunity to solicit feedback from donors on quality ratings of CGIAR ePIAs, methodology and parameters proposed

A brief draft report ([Donor demands summary](#)) - qualitative with data summaries, rather than quantitative given the small number of respondents - is available. (Thanks to SPIA member J V Meenakshi for assistance in interpreting results of the survey). The report classifies the survey questions into themes and identifies the key emergent messages. The initial plan was to conduct follow-up interviews via skype/telephone with individual donors to help clarify ambiguities (similar to the process used for 2004-05 study). However, after discussing with Rodney Cooke (who SPIA contacted to lead this component), SPIA decided against a follow-up at this point given the other priority concerns in the System (SRF, second CRP call etc.).

Next steps: Discussion during the Mid-term Review and SPIA strategy session on strategic implications and action points for SPIA/SIAC from key messages emerging, some of which are highlighted below:

- 1) Accountability i.e. demonstrating whether research outputs contribute to development goals is the most important purpose for an ePIA. Learning and critical self-analysis are of relatively less important (with the exception of some donors like Gates who rate this the highest).
- 2) While a few donors emphasize rigor and precision in impact estimates, and careful construction of a counterfactual, many others state that they are not looking for methodological perfection or purity. Given the long lags between completion of the research and ultimate impacts, they recognize the difficulty in constructing an appropriate counterfactual, and are of the view that 'the perfect should not get in the way of the good'. At the same time, many donors prefer SLO level/large scale impact and evidence. As one donor states, this is persuasive communication information. This demand is consistent with the donors' view about the important accountability function of ePIAs: at scale, such evidence enables donors to establish that these investments are worthwhile.
- 3) There is higher demand for ePIAs, even with its associated higher costs per study, than for adoption/uptake studies or for efficacy studies. Science quality/output assessments scores far lower than the other 3 study types. The Gates allocation was noteworthy in that adoption/uptake studies received the highest points allocation (60 out of 100 points) followed by efficacy studies (30) and science quality/output assessments (10). ePIAs received 0 points.
- 4) There is a slight preference for
 - ePIAs of recent investments, rather than earlier ones
 - a suite of ePIAs focusing on a small set of indicators, rather than one in-depth study with a rich, broader set of indicators
 - a number of cross-sectional studies (as opposed to a single panel) that may not be in-depth, but representative of full adoption domain

Donor Support for SIAC:

Window 1 funds for the SIAC project were received in June 2014. Despite these funds arriving 18 months after the funding from the BMGF (January 2013), we consider the project is making good progress overall. The funds SIAC hoped to receive from IFAD did not come through in 2013 and 2014, but the ISPC core allocation to SPIA and the supplemental grant from BMGF allows us to continue to support the key activities of SIAC.

Project Finance and Administrative Support:

Ira Vater, consultant hired in January 2014 to provide financial and administrative support to the SIAC program completed her contract in early December. In lieu of the outstanding service provided to the program, she has been asked to extend her consultancy with us until March 2015, by which time we hope to have on board a full time regular position SIAC Finance and Administrative Officer. The Secretariat is currently in the middle of the search process for this FAO-approved position.

Research support for SPIA Chair:

Two MS graduates of Oxford University under short-term contracts with the ISPC Secretariat have recently completed their assignments. They provided research and technical support to the Chair of SPIA under the SIAC program of work. Their primary tasks included:

- Reading and critiquing completed impact studies
- Preparing a literature review on poverty impacts of agricultural research²
- Managing routine administrative matters related to impact assessment studies
- Drafting /co-authoring blog posts
- Attending the workshop in Minneapolis (26th July 2014) on poverty impacts of agricultural research, taking notes, and summarizing presentations
- Contributing to the SPIA synthesis and presentation to ISPC at ISPC 10 in Copenhagen
- Assisting in putting in place a quality rating system for impact assessment studies in CGIAR
- Identifying and modifying software to use for the quality rating system

² A paper exploring methods and models for documenting the poverty impacts of agricultural research, drawing on relevant literature, recent case studies and discussions at the poverty impact workshop, is currently under revision by the SPIA Chair and research associate.

