SPIA Update on Progress on 2019-2021 Workplan

Purpose

The purpose of this report is to update System Council and other stakeholders on SPIA's activities and progress on its 2019-2021 workplan. The report describes studies in the pipeline, ongoing country-level data collection efforts, and details of initiatives at different levels to strengthen impact culture. This report does not replace SPIA regular annual reporting but rather seeks to provide a timely and relevant input into One CGIAR discussions.

Action Requested

The System Council is invited to review the document.

Prepared by: CGIAR Standing Panel on Impact Assessment (SPIA)

SPIA Update on Progress on 2019-2021 Workplan

November 2020

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Explanatory Note
The purpose of this report is to update System Council and other stakeholders on SPIA's activities and progress on its 2019-2021 workplan. The report describes studies in the pipeline, ongoing country-level data collection efforts, and details of initiatives at different levels to strengthen impact culture. This report does not replace SPIA regular annual reporting but rather seeks to provide a timely and relevant input into One CGIAR discussions. With that in mind, it is organized for logical flow and readability rather than by workplan objective.

Cover photo: Measuring rice, Myanmar. Credit: IWMI

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1 **SPIA in CGIAR**

2019 marked the beginning of a new phase for SPIA, with an updated mandate and a higher profile in the System reflecting the System's renewed commitment to rigorous, objective impact assessment and to embedding a culture of impact in CGIAR at all levels.[1] The updated mandate is in line with the strong focus on impact in the ongoing One CGIAR reforms and draws on the lessons from SPIA's long experience working with CGIAR centers and external experts on impact assessment of agricultural research.

It also comes, perhaps not coincidentally, at a time of profound change in standards for and expectations of impact assessment in the context of development investment. The award of the Nobel Prize in Economics in 2019 to Michael Kremer, Esther Duflo and Abhijit Banerjee for their work to pioneer the use of experimental methods in economics is emblematic of this shift. The work that SPIA, CGIAR centers, and partners did under the Strengthening Impact Assessment in the CGIAR (SIAC) Program (2013-2017) led to both a new body of evidence related to CGIAR's impact (SPIA, 2019; Stevenson and Vlek, 2019), and to important principles for strengthening impact assessment more generally in CGIAR (Stevenson, Macours, and Gollin, 2018). SPIA's 2019-2024 program of work seeks to operationalize those principles across the system both in how impact studies are conducted and how impact evidence is used in decision making.[2]

In some ways, the 'rigor revolution' in impact assessment is particularly challenging to CGIAR. As a research-for-development organization, CGIAR makes many investments today that, under the best of circumstances, will not yield tangible benefits at scale for years to come. The fact that impacts can ultimately happen at a very large scale and over long periods of time is an advantage for Agricultural Research for Development (AR4D) as compared to other types of development investments. However, rigorously documenting those impacts over time and space against a credible counterfactual is hard to do. This is especially the case when the expectations are that CGIAR will demonstrate evidence beyond documenting adoption, and show impacts on poverty, nutrition, health, environment, resilience, women's empowerment, and other development outcomes. While measuring the impact of research on development outcomes is difficult to do keeping a high standard of rigor, it is not impossible. Better data and methods are becoming available all the time that can expand the types of CGIAR innovations, outcomes, and impacts that can be rigorously assessed. SPIA works through interdisciplinary and interinstitutional partnerships to help provide independent evidence using the latest methods, leveraging outside expertise and resources, while assuring direct relevance and collaborations with CGIAR scientists.

The challenges related to measuring impact also have implications for how impact assessment evidence can, and cannot, be used to inform decisions. Supporting decision-makers at different levels in the System as they grapple with these challenges and make the best choices possible is an important part of SPIA's role in strengthening impact orientation. For example, as outlined in a recent technical note on SPIA's approach to Impact Assessment in CGIAR, the evidence of past impact at scale on development outcomes is essential for System-level accountability, even if it has limited value for informing decisions about new research investments. Learning-oriented impact assessments, on the other hand, can be an important source of evidence for key assumptions underlying theories of change (ToCs). New research programs or initiatives are based on ToCs that can help investors, research managers, and other stakeholders to assess the plausibility and likelihood of future impact from a research program or initiative. The ToC also provides the context in which to specify what type of results are needed to justify

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[1] Before 2019, SPIA was a sub-group of the Independent Science and Partnership Council. As part of the reform of the independent advisory services, the establishment of an independent panel on impact assessment was endorsed by the 6th System Council with a new terms of reference and a mandate to: 1) expand and deepen evidence of impact of CGIAR research investments on CGIAR Strategy and Results Framework (SRF) outcomes and associated Sustainable Development Goals (SDGs) and 2) support CGIAR's strong commitment to embed a culture of impact assessment into the System.

[2] The 2019-2021 SPIA Workplan and Budget is part of a six-year (3+3) plan and budget, endorsed at the 7th CGIAR System Council Meeting held on 15/16 November 2018.

continued investment, in other words, the basis for stage gating. When innovations are ready to be tested with users, impact assessment studies with rigorous counterfactuals allow to test the assumptions underlying the ToC and to estimate whether and to what extent the anticipated adoption or outcomes materialize in the real world. Impact assessment research can also help inform what scaling strategy to follow by testing different mechanisms. SPIA studies help to provide proof of concept of such approaches across a wide range of innovations in the CGIAR portfolio.

While SPIA's mandate and approach to impact assessment guide its workplan, SPIA is responsive to the needs of the system. The SPIA Chair's annual presentations to System Council provide updates and respond to specific requests (e.g., presentation on nutrition and climate change at the 9th meeting of the System Council). SPIA regularly engages with actors throughout the System (see also Section 4) and the SPIA Chair participates in ISDC as an ex-officio member. SPIA also has provided input into drafts of the One CGIAR strategy and the Performance and Results Management Framework in the areas corresponding to its mandate.

2 SPIA Portfolio of Studies

In 2019-2020, SPIA scoped a large set of potential study ideas through a combination of competitive and targeted calls, resulting (to date) in 16 new multi-year impact studies funded. While some studies have experienced Covid-19 related implementation delays, all are on track to deliver results by 2023. SPIA is also on track to deliver all its 2020 outputs related to generating impact evidence.

The following sections summarize the portfolio of studies, and describe how studies were identified, developed, reviewed, and, ultimately, funded. It is important to note that the fact that SPIA is an independent panel shaped the design of calls, the review processes (at Expressions of Interest (EoI) and proposal stage), and, in some cases, the partnerships formed to ensure that study teams had appropriate mix of skills. At the same time, SPIA's close links with CGIAR are reflected in efforts made to help individual study teams improve study design, to use lessons from the review process to design broader efforts strengthen capacity and the pipeline of future proposals from CGIAR, and to highlight opportunities where impact assessment evidence could meet an emerging demand for evidence at System level (One CGIAR).

2.1 Accountability Studies

Accountability studies document the impact of CGIAR research on development outcomes. Because of inherent uncertainties in both research and development processes, it is not expected that every research program would be the subject of such a study. Rather, the goal is to have a portfolio of studies that documents the System's 'big wins' with benefits that more than justify investment in the System as a whole (SPIA, 2020). The portfolio aims to include studies from different areas of research and, especially, different impact areas.

During 2019-2020, SPIA issued several calls for proposals for accountability impact studies resulting in 68 EoIs for possible studies across a wide range of research areas and outputs, including many that are currently under-evaluated (Figure 1).

SPIA engaged with 42 of the study teams in an effort to clarify and strengthen the study ideas. To date 13 EoIs received funding—six as full accountability studies and seven as scoping studies or through other

calls. In some cases, efforts are still ongoing to advance some of the remaining study ideas as, collectively, they represent important examples of potential CGIAR impact.

Figure 1. Accountability-oriented Expressions of Interests (EoIs) received, by type of research output and status of EoI
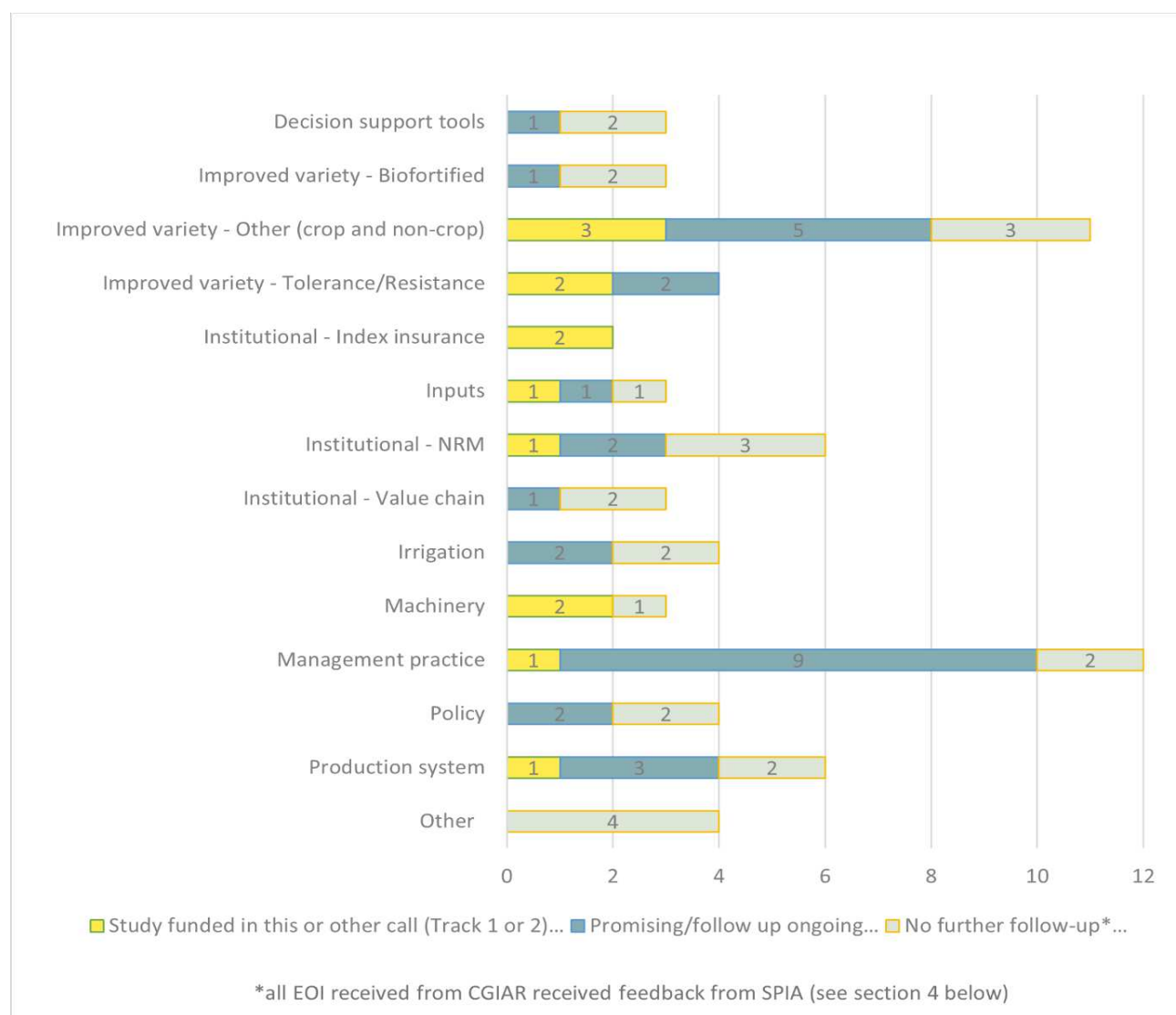
The six accountability studies that were funded (Figure 2 and Table 1) will, individually and as a set, go a long way towards filling gaps in the quantity and quality of evidence of the CGIAR's impact on development outcomes. The portfolio includes several studies focused on innovations from social sciences—an institutional innovation based on IFPRI's research on governance of common property and a livestock insurance product based on ILRI's research on how pastoralists manage risk in arid and semi-arid lands. The study on CIMMYT's Happy Seeder fills several gaps: labor-saving innovations and machinery. And while studies of the impacts of improved varieties of staple grains are relatively common, large-scale studies in dryland systems like ICRISAT's sorghum and millet scaling in Mali or of stress-tolerant varieties like IRRI's submergence tolerance rice in Bangladesh are rare.

Figure 2. Timelines for funded accountability-oriented studies

Q4 2019	Q1	Q2 2020 Q3	Q4	Q1	Q2 2021 Q3	Q4	Q1	Q2 2022 Q3	Q4	Q1	Q2 2023 Q3	Q4

Promise of Commons (Institutional innovation)

Index-Based Livestock Insurance (Rangeland health impacts)

Happy Seeder technology (Machinery)

Improved sorghum and millet varieties

Index-Based Livestock Insurance (Long-term)

Stress-Tolerant Rice Varieties
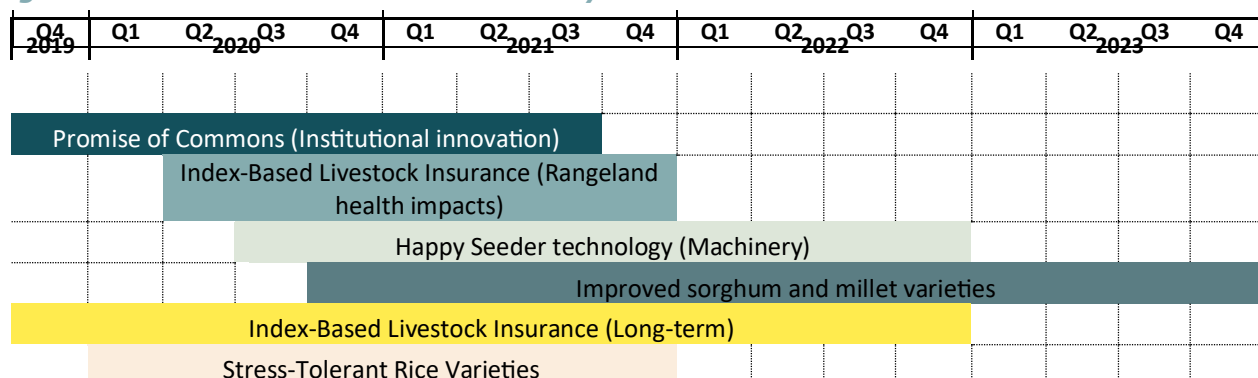
Four studies measure environmental impacts. In order to address the gaps in evidence on environmental impacts, SPIA brought in Kelsey Jack as Special Initiative member together with her interdisciplinary team at Environmental Market Solutions Lab (emLab), University of California Santa Barbara, to oversee a dedicated call on the impacts of agricultural intensification on the environment. To inform the call, SPIA commissioned a review of evidence which confirmed that the literature is currently inadequate to guide innovation and policy. In particular, few studies employ the necessary rigorous research designs, i.e., approaches that isolate causal relationships rather than correlational associations. A key element of the call was that studies needed to measure environmental outcomes using valid indicators. In past studies, environmental outcomes were either not measured, or were measured using subjective assessments of how resource quality had changed over time. The current portfolio includes studies anticipating both positive environmental impacts (Promise of Commons, Happy Seeder technology) as well as uncertain or potential negative environmental externalities (improved sorghum and millet varieties, Index-Based Livestock Insurance on rangeland health). An inception workshop for the studies identified through the environmental call for proposals was held in August 2020.

The accountability studies being supported by SPIA has brought a multi-disciplinary perspective for evaluating a variety of impacts of CGIAR technologies. These studies not only include PIs from agricultural/development economics, but study teams rely on contributions from PIs with background in environmental sciences, agronomy, geography and other disciplines (Figure 3). Another important feature of the portfolio of accountability studies is that they contribute with evidence to all five impact areas where One CGIAR is aiming to generate impacts at scale (Figure 4).

Dr Ying Sun, Assistant Professor of Geospatial Sciences
School of Integrative Plant Science
Cornell University

"A number of different satellite measurements have been used to assess land degradation at multiple temporal and spatial scales aiming to understand the underlying mechanisms driven by human activities or environmental changes that can be manifested at different temporal and spatial scales. This was my first time participating in such a workshop with researchers from the social sciences and I'm learning a lot from collaborating with economists in this process."

Dr Sun is a member of the research team on the study: 'Rangeland Health and Index-Based Livestock Insurance: Innovations in Measurement and Evaluation' led by Cornell University

Figure 3. PI fields of specialization in funded accountability-oriented projects
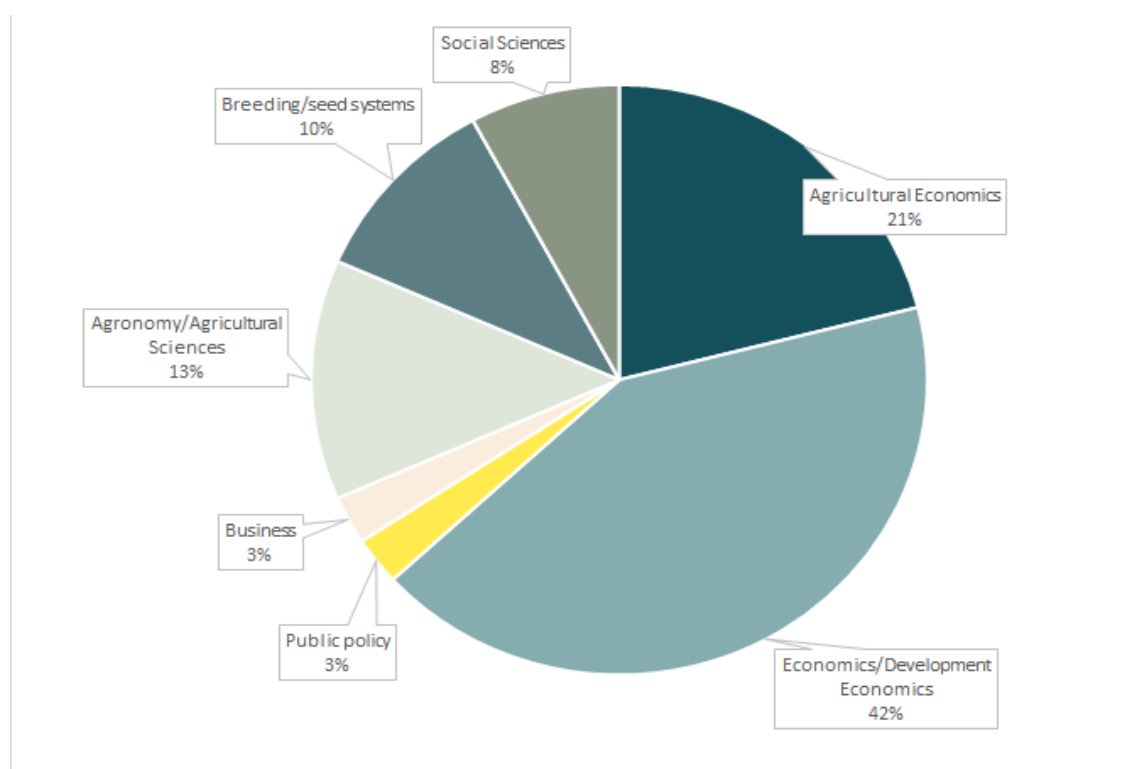

Figure 4. Impact areas addressed in funded accountability-oriented studies

For specific primary indicators please refer to Table 1
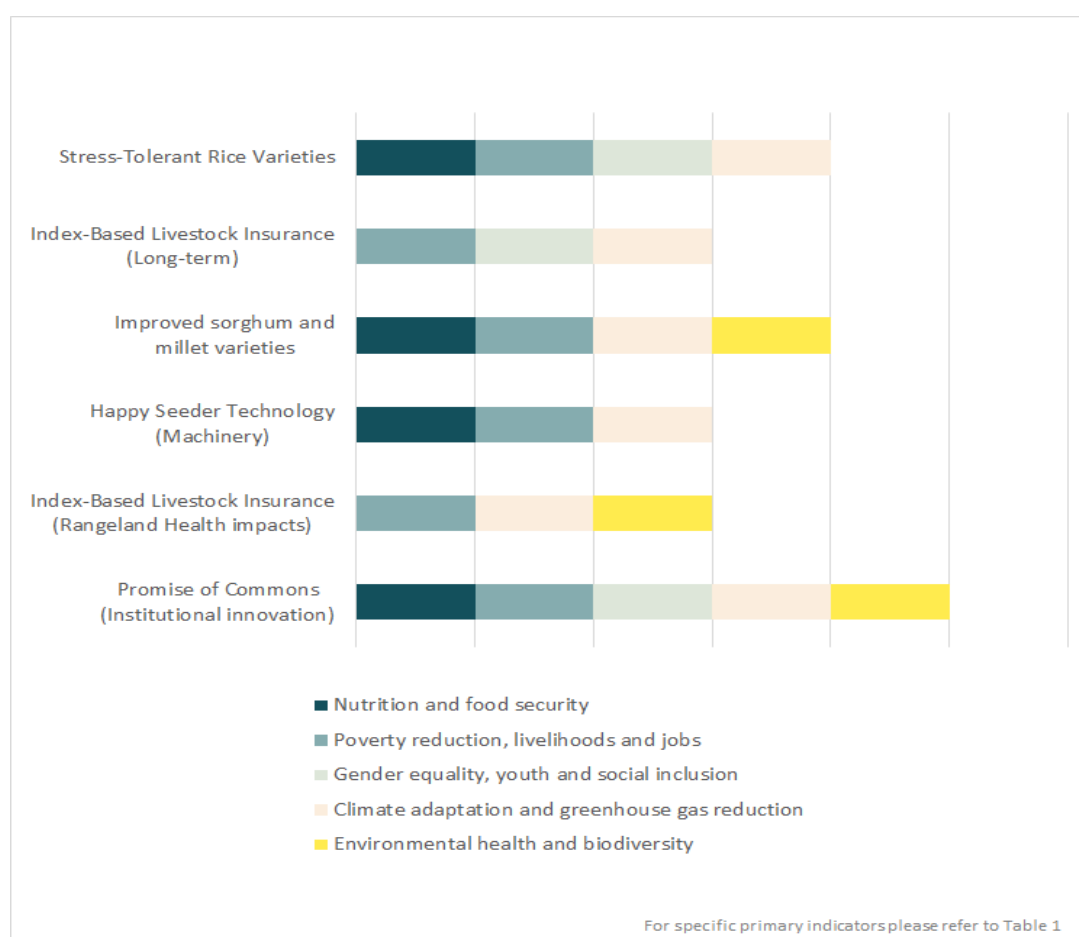
2.2 Learning Studies

Learning studies focus on innovations that have not yet experienced widespread uptake and impact. These could be recent innovations, or older ones that have not gone to scale despite solid evidence that they could provide substantial (net) benefits to users. Learning studies are designed to inform future research processes and scaling strategies and are closely linked to the ToC of the specific research programs. The results of learning studies can help make stage-gating decisions.

There are cases where learning studies in different programs address a common issue. In such cases, there is value in coordinating studies to enable generalizable lessons. One such case is where real-world diffusion of promising research outputs could, in the absence of a targeted scaling strategy, be hampered by specific characteristics of the innovation itself. There could, for instance, be a need to solve a coordination problem among various farmers (e.g. for the adoption of mechanization) or to reduce asymmetric information about a latent trait (e.g. about the nutritional value of an innovation). SPIA recognized this issue as an opportunity to generate an important body of work and, equally importantly, to raise awareness and build capacity and partnerships across the System for doing high-quality, learning studies. In general, such studies rely on experimental approaches for which capacity is primarily located in academic institutions. Strong partnerships between CGIAR and appropriate external experts will be an essential foundation for this work going forward, bringing capacity to teams and credibility to findings.

Figure 5. Timelines for funded learning-oriented opportunities
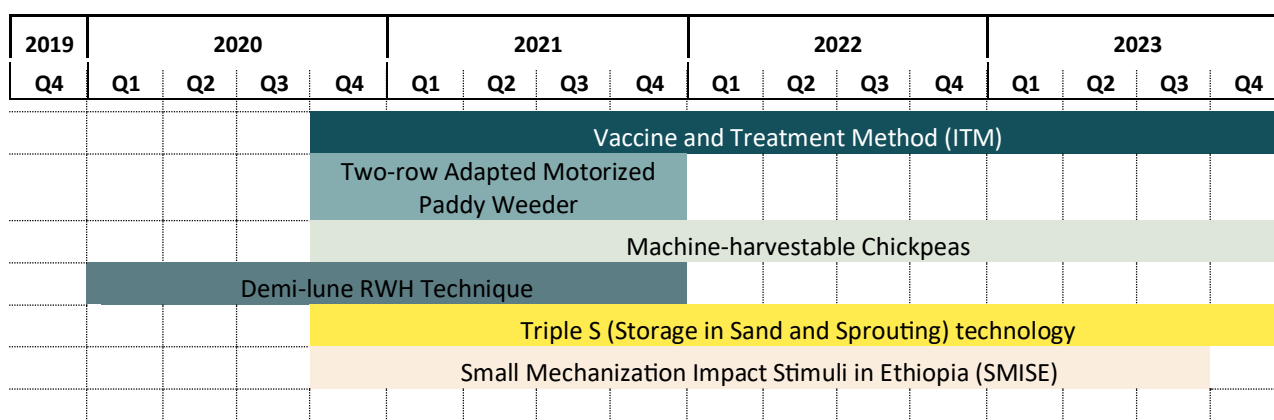
In 2019, SPIA launched a call for innovations that were promising but that had specific characteristics that could make adoption and scaling challenging, in the absence of carefully designed dissemination strategies. The objective of studies funded under this call, led by SPIA Special Initiative member Rachid Lajaaj of Universidad de Los Andes (Colombia), is to test whether targeted scaling strategies that address the identified constraints can lead to wide and sustained uptake.

The call for innovations was open to CGIAR centers, and 49 innovations were proposed. On the basis of follow up with centers, 10 innovations were identified as promising candidates. At this point, SPIA undertook matchmaking to pair the center study team with an IA researcher in an academic institution with appropriate interest and expertise. While SPIA had facilitated matchmaking in the past, this was the first time that SPIA directly engaged in systematic matching for a wide set of studies, based on pre-identification of innovations. The study teams—centers and academic partners—had to work together to prepare proposals to submit to SPIA to be assessed through SPIA's standard external peer review process. Eight teams submitted proposals, which were considered along with 3 additional proposals that did not result from the matchmaking (Table 2).

To date, funding decisions have been made for six learning-oriented studies, with two of them currently in the process of final revisions (Figure 5 and Table 3). Of the six studies, four address recent innovations and two address innovations that have been around for a long time but have not achieved large-scale uptake. The studies address a diverse set of innovations—a vaccine, a mechanical weeder, an improved chickpea variety with its machine harvester, a rain water harvesting practice, a root storage management practice, and a scheme to increase access to/use of small machinery—however they face some similar

constraints such as the coordination of purchases or practices, overcoming liquidity constraints, and provision of information about changes in practices that are required for effective use of the innovation.

The learning-oriented studies have also brought a variety of disciplines to contribute to the experimental impact evaluations. Although agricultural/development economists with experience on RCTs have a broad participation in these studies, the approved studies also bring PIs from agronomy, breeding, and other social sciences (Figure 6).

Figure 6. PI fields of specialization in funded learning-oriented projects
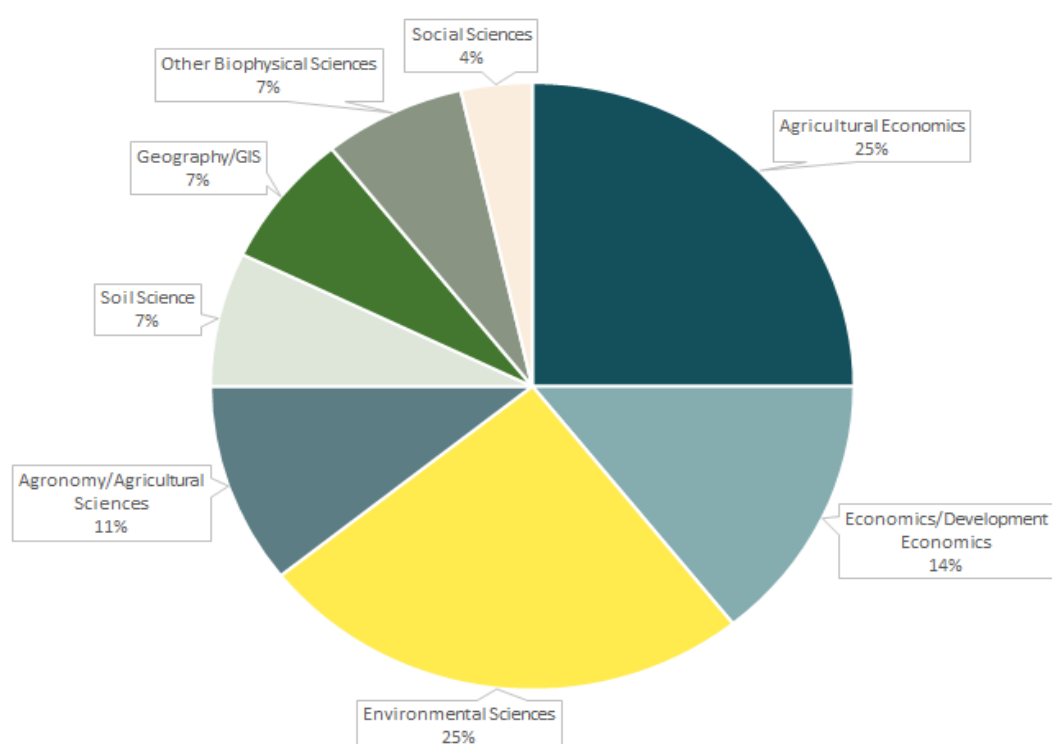
Three studies specifically look at gender issues in the context of innovations that save women's labor or target women's information constraints. Another will disaggregate results by sex of farmer, and one specifically targets youth inclusion. Four studies focus on overcoming constraints in the context of value chains, testing dissemination strategies that could be sustainable using market incentives. While the studies, all RCTs, primarily focus on adoption as the main outcome, one study, which is a full study based on a pilot SPIA funded in 2015, will also look at environmental outcomes (soil quality, land use changes) further down the impact pathway.

The portfolio of learning studies also responds to the three actions areas identified by the One CGIAR research strategy. In most of the cases the learning questions addressed will inform more than one action area (Figure 7)

Figure 7. Action areas and cross-cutting impact support areas addressed in funded learning-oriented studies

For more information on individual studies please refer to Table 3
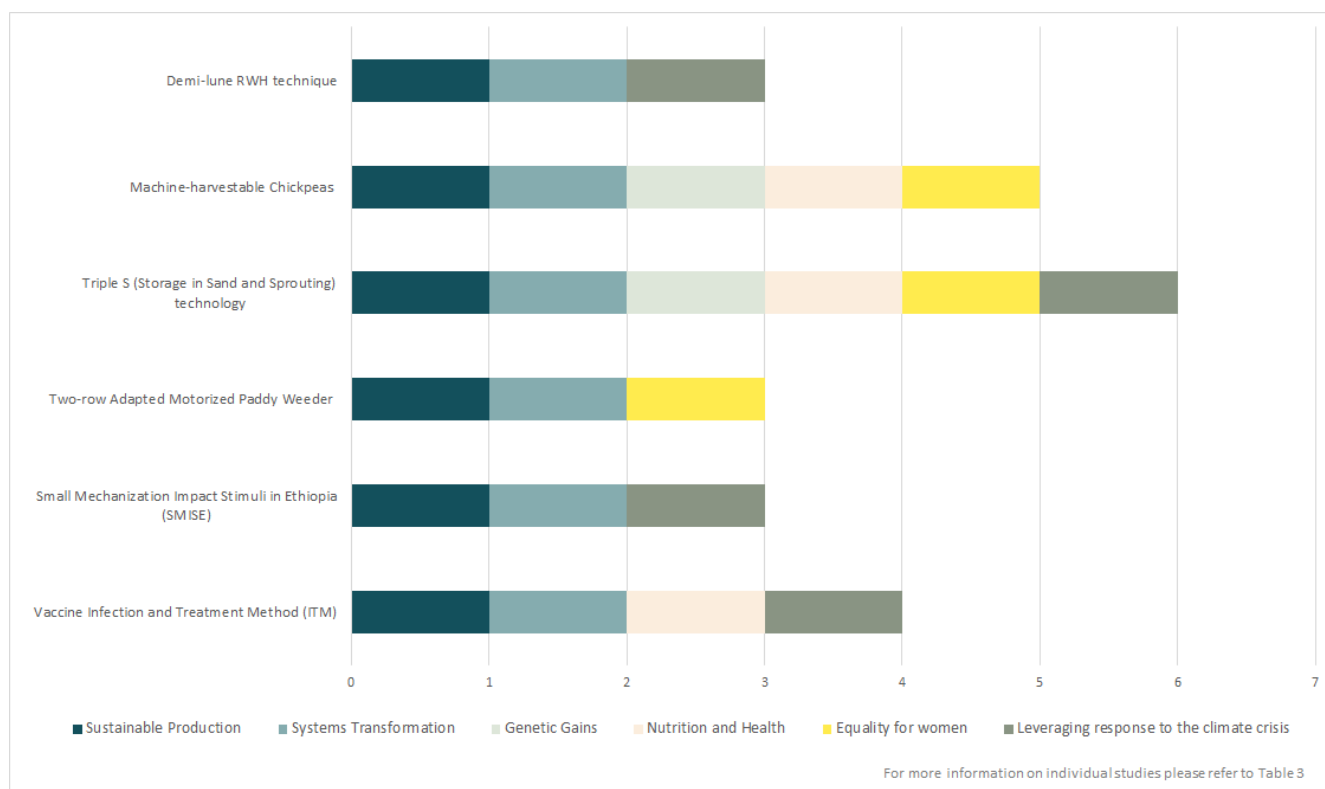
Among the large number of innovations initially identified for this call, nine were related to digital decision support tools. Some examples include the ISAT Climate Advisory Tool, the Rice Crop Manager and Akilimo agronomic recommendations for cassava growers. Given the growing number of these innovations across CGIAR centers, and the emphasis on the digital revolution in the One CGIAR research strategy, there is a need for evidence to inform research and scaling. SPIA, in collaboration with CGIAR centers and CRPs, is currently taking stock of the portfolio of digital decision tools in order to refine the terms of reference for a call for targeted proposals on this topic. SPIA also had early consultation on this topic with the NGO Precision Agriculture for Development, a leader in this field. The call, to be led by SPIA member Kyle Emerick, is envisioned for 2021. The aim of the call would be designing studies that carefully measure the impacts of tools such as mobile applications to support agricultural decisions, ICT-based agricultural extension, or hotlines for agriculture advice, with particular attention to their effectiveness in heterogeneous contexts and potential social inclusion trade-offs.

2.3 Methods Development

In addition to accountability and learning studies, SPIA also supports work on methods development in areas where lack of appropriate methods make it hard to measure impacts of important areas of CGIAR research.

One such area is the **rapid response to emerging crop diseases**,– in part reflecting a relative lack of understanding of the impacts of yield maintenance There are increasing calls for a global surveillance system for crop diseases to enhance preparedness to minimize the risk of synchronized crop failure and food insecurity. CGIAR has invested substantial physical and human capital for emergency responses. However, the economic gains from CGIAR's response are hard to quantify and often lack a counterfactual.

In 2020, SPIA funded a study on the impacts of blast resistant wheat in Bangladesh, implemented by CIMMYT, the Bangladesh Wheat and Maize Research Institute (BWMRI), and Tufts University. The study uses wheat blast in Bangladesh as a case, and CIMMYT's response in mitigating the problem by developing and disseminating new wheat, BARI Gom 33, with NARS partners. There are two novel methodological contributions of the proposed study. First, it will compare BARI Gom 33 to the entire crop portfolio – not just a farmer's other wheat varieties. This is important because gains from new seed varieties may include more than just varietal replacement. Second, the two-stage experiment will demonstrate a methodology for determining whether some farmers successfully adapt to abrupt environmental change by switching their crop portfolio. A related set of hypotheses is being investigated through a non-experimental study on Sweet Potato Virus Diseases (SPVD) in Uganda.

One of the limitations in the design of rigorous long-term and/or large-scale impact studies of CGIAR-related innovations is the lack of data/information on where, when and how innovations were diffused. In certain cases, such data can be used to construct plausible counterfactuals, but is not necessarily readily available, in part because dissemination of successful innovations can happen through a variety of mechanisms (through national partners, NGOs, markets, or public-private initiatives) and is often not well-documented. Without such prior information, impact study designs often end up underpowered (as researchers often assume larger diffusion than actually occurred). Under the guidance of SPIA Chair Karen Macours, **SPIA is looking at how availability of M&E data on scaling efforts can improve the design of impact assessments.**

Administrative data and M&E data of large scaling efforts can be used to document the geospatial and time variation of diffusion, which may be particularly important to design studies of innovations that are considered possible big wins. Further, where & when such data are available at large scale, they can provide opportunities for impact studies using large secondary data sources (DHS, LSMS, crop monitoring surveys, ….) and/or remote sensing data. A number of the new accountability studies use administrative data. The ILRI study relies on administrative data from the insurance company, for instance, while the IRRI study gathered administrative data on district-level seed distribution. Both the FES and the IAMO studies use data on the program's targeting criteria. SPIA has directly invested in gathering of information from existing M&E systems for specific innovations to help document possible diffusion at scale. Specifically, in Ethiopia, national roll-out data of Direct Seed Marketing (DSM), an important policy innovation, was obtained from the Agricultural Transformation Agency. And in Uganda, SPIA collaborated with Harvest Plus, CIP and CIAT to reconstruct the roll-out of planting material of biofortified crops and nutrition training at the subdistrict level between 2012 and 2019, starting from the M&E data of Harvest Plus, and complemented for biofortified crops in Uganda. These datasets are being used in proof-of-concept studies to pilot the use of such data for studying long-term, large-scale outcomes.

Finally, a methodological innovation in the set of studies considering environmental outcomes is the use of geospatial methods in impact assessment. Studies are using remote sensing to measure a range of environmental outcomes from tree cover, land use, to landscape composition. In addition to measuring outcomes, remote sensing also allows researchers to construct data sets with the spatial and temporal dimensions appropriate for their specific study design, including a counterfactual. Given their potential value addressing the data and methods challenges associated with long term, large scale impact studies, SPIA is emphasizing geospatial approaches as part of capacity strengthening agenda (see Section 4 below). This is particularly timely since measurement strategies centered on remote sensing not only offer the possibility of measurement at a large scale but also makes socially distant COVID-resilient data collection possible.

3 Data on Diffusion and Use of CGIAR Innovations in National Data Systems

Evidence of 'reach' of the use of CGIAR-related innovations by next users and end users, is an important outcome on the impact pathway and one that can often be documented more easily and widely than impact of that use. This is important as evidence of reach is often a necessary (if not sufficient) condition for impact at scale. Over time, availability of adoption data, especially as part of panel surveys where the same households are revisited in subsequent waves and in combination with other data sources, can also open possibilities for the design of impact assessments.

While CGIAR centers and programs increasingly invest in large-scale adoption surveys, in the long run, the most cost-effective way to ensure that data on adoption of a range of priority CGIAR innovations are regularly collected at policy-relevant scales is to embed it in ongoing national-level data collection efforts. SPIA's initial efforts in this area focused on the World Bank's Living Standards Measurement Study-Integrated Survey on Agriculture (LSMS-ISA) initiative, which has a track record of collecting high-quality panel data in eight countries in Africa. That effort has now become part of the larger 50x2030 initiative, a FAO-IFAD-World Bank collaboration to track progress on SDGs in 50 countries by 2030. By working with these partners, SPIA also helps assure that the data collected allow for independent (neutral) estimates of the reach of CGIAR across different domains of its portfolio.

SPIA has been working since 2013 to improve the accuracy and efficiency of collection of adoption data and to integrate collection of these data into large-scale surveys regularly implemented by national systems. By building a common work program with the World Bank LSMS team, we have experimented with new data collection approaches such as DNA fingerprinting for crop varieties (e.g. Kosmowski et al, 2019a; Poets et al, 2020) and visual-aid protocols for quantifying conservation agriculture adoption (e.g. Kosmowski et al, 2017). More recent methods work focusses on measurement of meso- and landscape-level adoption by improving community and service delivery surveys and remote sensing approaches (see below). To varying extents, we have explored scaling up what we have learned through structured engagement by SPIA team members with the statistics agencies and CGIAR centers present in Ethiopia, Uganda, Malawi, Tanzania and Nigeria (Kosmowski et al, 2019b).

3.1 Nationally-representative Data on CGIAR Innovations

3.1.1 Ethiopia

The approach was first taken to scale in Ethiopia, through a collaboration with the Ethiopian Central Statistical Agency and the World Bank, on a modest basis in 2015/16 with the third wave of the Ethiopian Socioeconomic Survey (ESS 3), and then in a more comprehensive manner in 2018/19 with the fourth wave (ESS 4). In 2020, SPIA released Shining a brighter light: Comprehensive evidence on adoption and diffusion of CGIAR-related innovations in Ethiopia, a synthesis from more than five years of work in Ethiopia. SPIA's prioritization to determine which agricultural innovations to integrate in the survey was informed by a comprehensive stocktaking exercise of 52 innovations and 26 policy influences resulting from research of the 11 CGIAR centers and 12 CRPs with work in Ethiopia. The stocktaking, involved the review of project documents and published literature, over 90 interviews with stakeholders in Ethiopia, and a consultation & validation workshop with CGIAR researchers and national partners in Addis Ababa in Feb 2020.[3]

Some key results include:

1. There are widely adopted innovations in each of the core CGIAR domains of livestock research, crop germplasm improvement, natural resource management and policy research. Figure 8[4] shows estimated number of rural households reached in 2019 (millions)

2. Scaling up of widely-adopted innovations—soil and water conservation practices; improved maize varieties; poultry cross-breeds; mango and avocado tree planting—can all be linked to supportive government policies, which in turn have been informed by policy research.

3. Analysis of the socioeconomic characteristics of the adopting households shows that innovations often do reach the types of households that CGIAR target, with substantial adoption among smallholders, poor households, and young and female farmers. Different innovations reach different types of farmers.

The complete stocktaking exercise for Ethiopia is available as a spreadsheet accompanying the report. The dataset for the entire ESS wave 4 is currently being prepared for publication on the World Bank LSMS website and will soon be available for all to use. In order to promote awareness and use of the Ethiopia data across the system, to build capacity in use of such data sets, and in alignment with making data Findable, Accessible, Interoperable and Re-useable (FAIR), SPIA organized a series of webinars about the data and will provide small grants to early-career researchers (both within CGIAR and outside) and provide mentorship to conduct research using the datasets.

The report shows that the strategy of bringing improved measurement of agricultural innovations into national surveys can help document the scale and scope of CGIAR's research. With future waves of this panel survey, it will become possible to study adoption dynamics – to document the 'who, where, and how quickly' of adoption and diffusion of innovation, apart from incorporating additional innovations.

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[3] Some important innovations (most notably related to wheat and bean varieties) were not included to avoid duplication of contemporaneous efforts by CGIAR centers.
[4] Note: This figure includes only innovations measured within the ESS surveys. It does not include wheat or beans, for which adoption estimates from other sources are available. ZT = zero tillage; MT = minimum tillage. Y axis in millions of households. (Estimates based on ESS4, except Kabuli chickpea and Broad Bed Maker, measured in ESS3).

Figure 8. Number of rural households (in millions of households) adopting each CGIAR-related innovation in Ethiopia in 2019
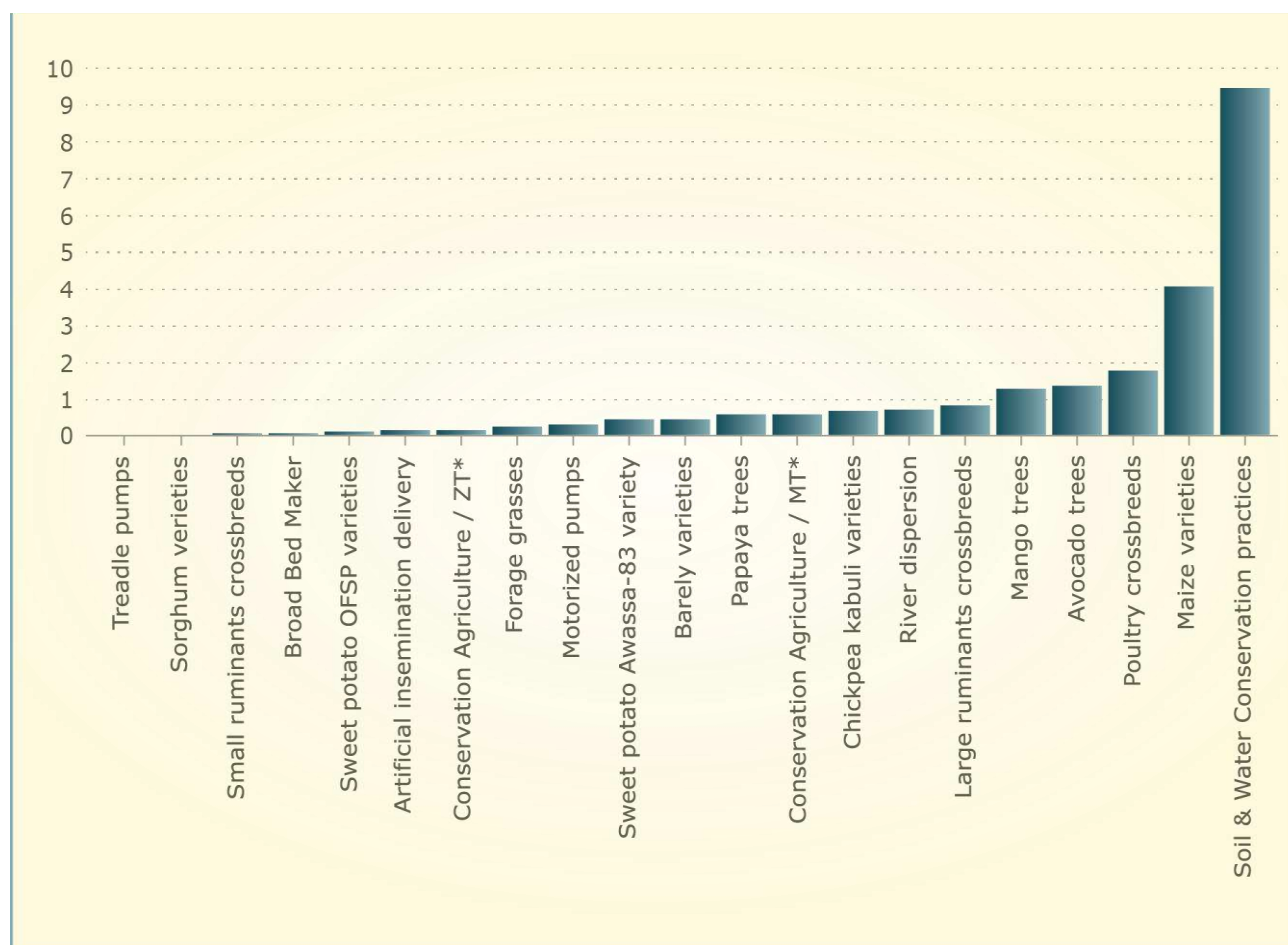
Partnerships for better data

The Ethiopia experience also has many lessons for how CGIAR can work with national and international partners to achieve common objectives.

"The long-standing partnership between the LSMS team and SPIA, working closely with local counterparts, is a powerful example of how to leverage our respective strengths to generate policy impact at the country level by improving underlying data through methodological innovation and research."

Gero Carletto, World Bank Lead Economist and Manager of the LSMS team

"The CGIAR SPIA synthesis report… is timely, exhaustive, and enlightening about agricultural research efforts carried out in Ethiopia in recent decades…. With such a long history of partnership in Ethiopia and 11 centers already working closely together, One CGIAR is well placed to quickly mobilize and support agriculture transformation in the country and beyond. The country can also act as a model for how CGIAR might work and coordinate its efforts in other countries."

Siboniso Moyo, ILRI Director General's Representative in Ethiopia

"The collaborative pilots that were experimented in the Ethiopian Socioeconomic Survey created enormous learning opportunities for CSA that resulted in a rigorous and informed scale-up of more accurate measures of farmers' adoption of improved seed varieties."

Biratu Yigezu, Director General of the Ethiopian Central Statistical Agency

3.1.2 Uganda

Data on priority CGIAR innovations will be integrated into the Uganda National Panel Survey (UNPS) in 2021, with survey work pushed back from 2020 due to the COVID-19 pandemic. In October 2019, Uganda hosted SPIA's first country consultation workshop. The workshop, jointly organized with our colleagues at the World Bank Living Standards Measurement Study, the Ugandan Bureau of Statistics (UBOS) and the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF), helped SPIA prioritize data collection needs for Uganda from both research and policy perspectives.

The UNPS in 2021 will allow SPIA to obtain national-level adoption data for innovations across the CGIAR portfolio (covering livestock, NRM, crop, and policy work), including the first survey in which national-level DNA fingerprinting data for five different crops (maize, beans, sweet potato, banana and cassava) varieties will be collected. The survey is planned to be conducted over three separate visits to the same households throughout the year, with the collection of plant material spread out over these visits to capture the crops at the appropriate time. Innovations to measure CGIAR-related innovations related to pest and disease management (crop and livestock), forages and trees, climate smart agriculture, and innovation platforms are also being incorporated.

In the October 2019 consultation in Uganda, seed systems were flagged as a major priority by stakeholders. Subsequently, SPIA brokered a collaboration between CGIAR researchers, the Department of Crop Inspection and Certification (DCIC) within MAAIF, and NaCRRI (National Crop Resources Research Institute), and a UC Davis research team led by Travis Lybbert (who is also a SPIA Special Initiative member). The project to study the seed system successfully bid for funding from the USAID Innovation Lab on Markets, Risk and Resilience.

Altogether, we are aiming for a Uganda country-level synthesis report, following the same model as the recent Ethiopia report, to be released in 2022.
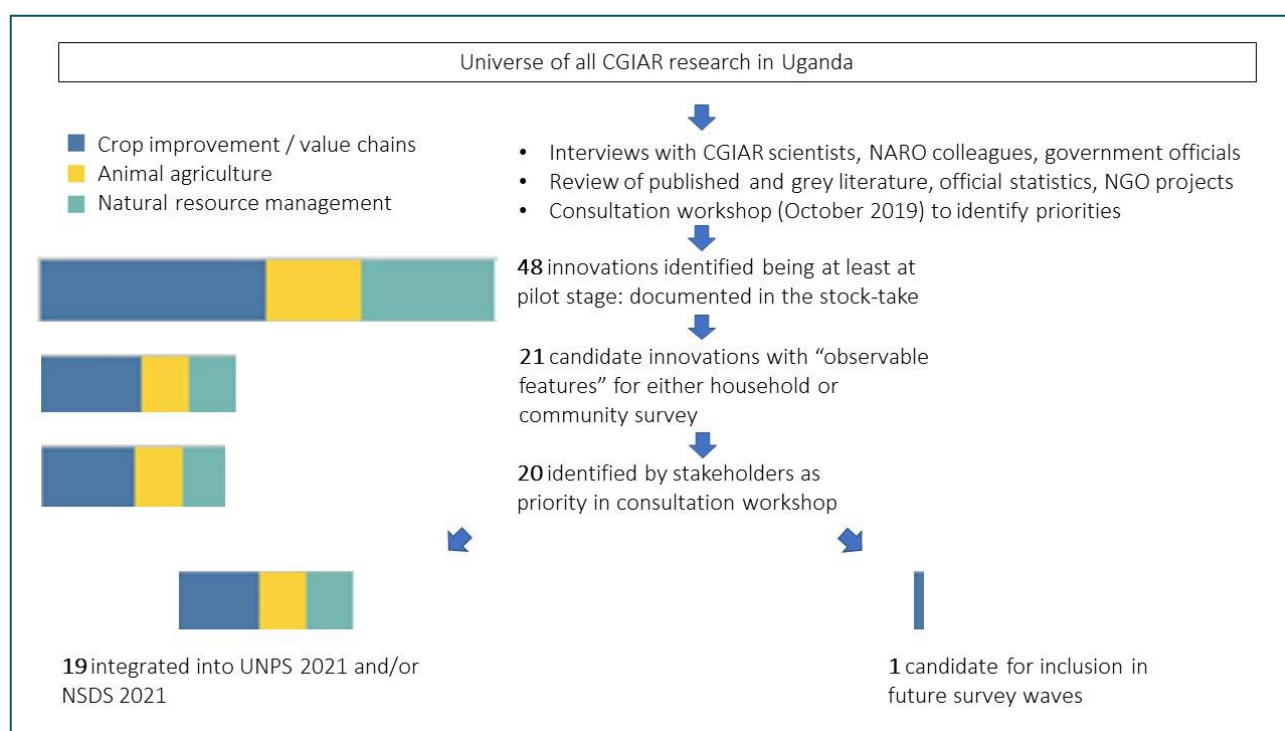
Dr Emily Hogue
Program Manager for Data Use, Research and Impact
Assessment Division IFAD

"SPIA has done exactly what we, in the development sector, have been hoping could be done for many years and in a more sustainable way than we'd hoped, by building into the national survey system. This new methodology enables national and development partners to track the success of their research investments in agricultural technologies developed through the CGIAR system at their broadest scale. The approach SPIA has used would have real benefits for numerous development partners, particularly in terms of better measuring investments in agricultural research while offering a sustainable, country-led solution that builds into the national system."

Dr John Ilukor
Economist, Development Data Group
World Bank – Kampala

"SPIA, together with the Ugandan Bureau of Statistics (UBOS) and the World Bank Living Standards Measurement Study (LSMS) team, has implemented different methods on varietal identification (DNA fingerprinting, self-reported, remote sensing) and yield estimation. Through this partnership, UBOS' capacity to implement these methods has been, as is still being, built. As a result, UBOS is happy to integrate DNA fingerprinting analysis of cassava, sweet potatoes, bananas, maize and beans in their survey program for 2021.

SPIA has also invested effort into both the community questionnaire (critical in capturing data on climate change, NRM, farmer organizations, innovation platforms, crop and livestock pests and diseases) and supporting the National Service Delivery Survey (data on promotion of innovations and delivery of extension services). Through these efforts, SPIA has helped bring the Ministry of Agriculture to interact with UBOS and allowed the statisticians to understand CGIAR and our data needs. This is critical in promoting use of the data being generated and ensuring that the data produced is of interest to scientists and policymakers."

3.1.3 Vietnam

When scoping the CGIAR portfolio in Asia, Vietnam stood out as a strong candidate as a focus for SPIA's country-level approach. As a middle-income country undergoing structural transformation, CGIAR's research and related innovations in the country will allow to document other parts of the overall CGIAR portfolio that are less relevant in either Ethiopia or Uganda. Examples include landscape-level policy research on management of natural resources and water; salt and stress-tolerant rice varieties and crop management improvement; and aquaculture-related innovations. Work in Vietnam started in 2020 with an initial one-year scoping study, beginning with consultations for a stocktaking exercise as carried out in Ethiopia and Uganda.

3.1.4 Other Countries and Mainstreaming

As part of the SPIA 3+3 year workplan, we are looking to identify, through wide consultations, one (or possibly two, depending on the findings from the Vietnam scoping study) further country that has seen sustained research effort from a range of CGIAR centers and research programs, and which remains a high priority under One CGIAR.

Through the collaboration with the WB, and contacts at IFAD and FAO, SPIA also aims to help integrate lessons learned regarding the measurement of agricultural innovations as part of national-level surveys into a wider set of countries as part of the 50x2030 initiative.

3.2 Improving Methods for Collecting Accurate Adoption Data

3.2.1 DNA fingerprinting

Guidelines and protocols derived from the lessons from SPIA's experiencing collecting data in farmers' fields for DNA fingerprinting are being developed and shared in three ways. First, the recent report by Poets et al (2020) provides guidance to agricultural researchers wanting to integrate DNA fingerprinting of crop varieties into their field research. The authors draw on experience from several pilot studies from the past six years, and a technical workshop on DNA fingerprinting methodology convened by SPIA in 2018. There are many possible methodological variations of DNA fingerprinting, and this guide helps researchers match their data needs to the specific protocols that they can use to meet them. Second, a companion non-technical guidebook for social scientists is in preparation, in partnership with the World Bank LSMS team. Third, SPIA is helping to mainstream the insights from the DNA fingerprinting methodological work by advising the Bill and Melinda Gates Foundation program "Institutionalizing monitoring of crop variety adoption using genotyping".SPIA also organized and facilitated participation of a team of social scientists from various CGIAR centers in this initiative, which targets data collection in Ethiopia, Nigeria, and Tanzania.

3.2.2 Community Surveys

Many CGIAR-related innovations target communities rather than individual farmers, or may more generally be better measured at the community level. This includes a wide range of innovations from water management schemes, food safety, value chains, innovation platforms, community nurseries or seed banks, pest and disease management, small machinery renting schemes, climate adaptation practices, and many others. Community surveys can also offer an opportunity to anchor remote sensing data. In contrast to the advances in measurement for household survey, there is however little methodological work on community surveys to date.

SPIA is working with UBOS in Uganda on upgrading the community questionnaire in both the UNPS and a companion survey the National Service Delivery Survey (NSDS) in order to obtain better and more complete data on a number of innovations and outcomes. The process of ongoing consultation with UBOS and MAAIF has succeeded in bringing statisticians from these respective national institutions together in a spirit of collaboration – a significant achievement in terms of building local capacity. Based on experiences in Ethiopia and on the stocktaking exercises in both Ethiopia and Uganda, SPIA is collaborating with community surveys experts from Oregon State University and Lead Analytics and Ugandan researchers to conduct experimental tests of alternative modes of administration of community survey instruments in Uganda in early 2021, with the aim to define standards and protocols.

4 Strengthening Culture of Impact Assessment in CGIAR

4.1 Impact Assessment Community of Practice

A strong culture of impact assessments means that generating and using impact evidence is relevant to researchers, managers, MEL specialists and others in centers and CRPs. Therefore, SPIA has expanded the impact assessment community of practice beyond impact assessment (IA) specialists. In 2019 and 2020, SPIA organized or participated in nine events across the system designed to build awareness and capacity related to IA evidence and its use (Table 4). The events targeted different audiences in CGIAR, and in nearly all cases they also included experts from outside CGIAR to bring in new ideas and perspectives and expand networks.

4.2 Strengthening Capacity to Conduct Rigorous Impact Assessments.

SPIA has focused capacity strengthening activities around detailed feedback and engagement on the design of possible impact assessment studies, and on match making with external researchers for both accountability and learning studies. In response to COVID-19 SPIA adapted its capacity strengthening activities to move ahead virtually on several fronts, learning from and building on the lessons learned and data collected under Objectives 2 and 3.

Strengthening the Pipeline for Accountability Studies

During the call for proposal process, SPIA identified a number of specific areas where capacity strengthening could lead to stronger proposals in the future.

Two of the studies that are already funded, on stress-tolerant rice varieties(STRVs) in Bangladesh (IRRI/UA) and Promise of the Commons in India (ICRAF/IFPRI/FES), first received substantial input from SPIA during proposal development in order to strengthen their study designs, in particular on how to make better use of data on how the innovations were disseminated to define a credible counterfactual. The IRRI/UA team used district-level time-series data on seed distribution as a proxy measure to define in which districts and when farmers had exposure to STRVs. The ICRAF/IFPRI/FES team compared the original FES roll out criteria with census and remote sensing data to identify sites that would have qualified for the program, to use as part of a matching exercise to identify counterfactual sites. Webinars are being organized for other study teams to learn lessons from these examples.

Not all the study teams that SPIA worked with to strengthen potential study designs were able to compile the necessary data in time to re-submit a proposal. In some cases, SPIA funded proposal development grants to support compiling and analyzing dissemination data, as a necessary first step to determine whether it would allow for a credible research design for measuring long term and/or large-scale impacts. In 2020, SPIA funded three proposal development grants so that study teams could explore the availability of suitable data on diffusion of the innovations that they had proposed for impact studies (Table 5), with the objective of supporting the development of a full proposal for a subsequent accountability study if data from these development grants point to its feasibility. AfricaRice is gathering data on historical production and dissemination of ASI threshers in Senegal (since 1997) and Nigeria (since 2015). ICARDA is collecting annual data on the historical dissemination of early-maturing lentil varieties in Bangladesh and India over the period 1993-2019. WorldFish is mapping the dissemination system for genetically improved farmed tilapia (GIFT) in Bangladesh, from breeding hatcheries to commercial hatcheries to farmers, focusing on the period 2017-2020. The objective is to analyze whether

it is possible to define a catchment area around a hatchery, so that knowing which hatcheries received GIFT broodstock in which year could allow researchers to estimate which farmers had potential exposure to GIFT and how that varied over time.

SPIA matched CIFOR with remote sensing and impact assessment specialists at the University of British Columbia and the University of Illinois to develop a proposal for assessing the impact of CIFOR's research on Vietnam's National Payment for Forest Environmental Services policy. While the partnership decided not to proceed with a proposal in 2020, there may be opportunities in the future, including as part of the Vietnam country work. SPIA is also engaged with CCAFS and digital-services company ESOKO to explore the integration of a rigorous impact assessment into the large-scale roll out of a climate services program in northern Ghana implemented using a public-private partnership model and building on a CCAFS supported pilot. Separately, it explored the possibility to analyze the impact of CCAFS advice to countries' commitments to the Paris climate agreements, through text analysis methods, in a possible collaboration with political scientists from Stanford University. While it has so far not been possible to implement these studies, the advances made during discussions may provide a base for possible study designs in the future.

Under the guidance of SPIA member JV Meenakshi of Delhi School of Economics, SPIA is continuing to review the EoIs submitted to the accountability calls to identify other potential cases where it may be possible to identify appropriate approaches, methods, and data sources for rigorous impact assessment studies. This would include working with study teams, their centers and partners to put in place systems to compile administrative and/or M&E data going forward so that they have the relevant information to design strong studies in the future and to develop more general standards and protocols. This complements the methods work on using M&E data in impact assessment (as described in Section 2)

Remote-Sensing and Geospatial Methods in Impact Assessment

SPIA convened a virtual workshop on 30th October 2020 on *Remote Sensing for Impact Evaluation* in partnership with the Environmental Markets Solutions Lab (emLab) at UC Santa Barbara, under the leadership of SPIA special initiative member Kelsey Jack. Seven academic panelists with specialties in remote sensing across various disciplines (geological and environmental sciences, geospatial sciences, hydrology, ecology, environmental economics), presented followed by discussions, including providing detailed feedback on remote sensing work planned for the SPIA-funded studies measuring environmental outcomes. The event was attended by over 100 participants with the majority from across CGIAR with presentations posted online for wider access in CGIAR community and beyond.

SPIA recently engaged an expert remote sensing consultant (Dr Johanne Pelletier, PhD biology/ecology), who will work with SPIA to support and provide technical assistance on remote sensing work across the portfolio of studies being supported by SPIA and to help derive more general lessons and guidelines, standards and protocols for future impact assessments. This work will also aim to leverage synergies with related initiatives at emlab, AidData, and Stanford's Center on Food Security and the Environment.

Dr Meha Jain
School for Environment and Sustainability
University of Michigan

"This is an exciting time to use satellite data to map field-level characteristics of smallholder farmers. Historically it has been challenging... given the small size of fields compared to readily-available imagery. However, with new higher-resolution data products, we can start to see not only field-level but maybe even sub-field characteristics. The biggest remaining challenge is to get high-quality and easily accessible training and validation data at scale so that we can create the remote sensing products we are interested in."

Dr Jain is a member of the research team on the study: "Impact of a second-generation conservation agriculture technology (Happy Seeder) on crop residue burning and air quality in Northwestern Indo-Gangetic Plains" led by CIMMYT.

Creative Ways to Support Fellowships During COVID-19 as Part of Learning Studies

Building on the close ties that SPIA fostered between CGIAR centers and academic institutions during the development of the learning-oriented studies proposals, fellowships will take the form of enabling early-career scientists to be actively involved in study design and implementation. Three have been identified so far and others will be identified in 2021.Taking advantage of the two-stage design of some of the learning studies, the fellowship supports active participation of the early career CGIAR researchers in the pilot stages of the studies and for them to directly participate in the experimental design of each project, working closely with the PIs from the academic partner institutions. Each fellowship granted requires a clear definition of the role of the early career researcher in the project, specific capacity building activities link to the academic institution, and a research output led by this researcher.

Ad hoc support to centers and CRPs on their impact assessments.
In addition to formal activities outlined in its work plan and regular feedback sessions with impact assessment focal points, SPIA also invites and responds to requests from centers, CRPs, and individual researchers. Not counting feedback provided in response to various calls for EoIs and proposals, between 2019 and 2020, SPIA panel members responded to requests from 11 centers and 9 CRPs to review proposals, provide input on study design, provide guidance on implementation challenges, or set up match making with external impact specialists.

Dr Bruce Campbell
Director
CGIAR Research Program on Climate Change, Agriculture
and Food Security (CCAFS)

"CCAFS planned on 6 ex-post impact evaluations to be initiated in 2020, and for this we asked SPIA to please comment on the proposals coming in and to make suggestions for improvements.

SPIA offered many comments on how to improve the methods proposed and these were taken up by the different implementing teams. Because of COVID-19, field work was delayed, so the studies will not be completed in 2020, but have instead been allowed to be finalised in 2021."
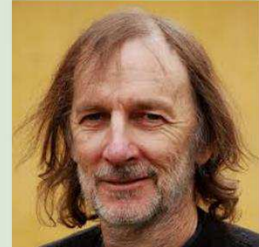
Soumya Balasubramanya
Former Impact Assessment Focal Point
IWMI

"IWMI submitted a concept note "Long term impacts of electrified irrigation: is there a trade-off between development and environmental outcomes?" in response to SPIA's call for proposals for estimating the long-term, large-scale impacts of CGIAR research on development outcomes. IWMI proposed to estimate the effects of the adoption of electric pumps, which were brought about as a consequence of a policy change. However, SPIA suggested to focus on the impact of the policy change that was brought about due to IWMI's research.

IWMI explained that evaluating the policy change was not possible due to paucity of primary and secondary data, but SPIA concluded that this would not allow a convincing identification strategy and was unable to fund the proposal. IWMI used the discussions with SPIA to make a stronger case for funding its proposed idea and was successful in raising a modest grant from ACIAR. Additionally, IWMI used the discussions with SPIA to revise a paper that was being written on this topic, which is now in a revise and resubmit stage at Journal of Development Studies."

Annex: Tables

Table 1. Accountability studies funded to date

Study title and country	Research/ Innovation	Partners	Primary Indicators and how they will be measured	Approach to causal inference	Estimated Scale of Impact	Timeline (start/end date)
Evaluating the Restoration of the Commons: A quasi-experimental impact assessment of a large-scale land restoration initiative in India founded on the tenets of collective action and property rights (INDIA)	Promise of Commons Institutional innovation-NRM IFPRI research on the importance of property rights and collective action for managing natural resource	ICRAF, IFPRI, Foundation for Ecological Security (FES)	Ecological: Extent and diversity of tree and vegetative cover, Socioeconomic: Commons livelihood score; Institutional: Commons restorative action index	Difference-in-differences approach, with propensity score matching based on FES official targeting criteria	20,000 villages to date, comprising over 5.5 million acres of land and 6.25 million people. Plans to extend to 62,000 other villages, with a total of 21.75 million people expected to be reached across eight Indian states by 2023	15.12.2019 - 31.07.2021
Rangeland health and Index-Based Livestock Insurance: Innovations in measurement and evaluation (KENYA, ETHIOPIA)	Index-Based Livestock insurance ILRI research on pastoralist risk management that led to the development of index-based livestock insurance	Cornell, USDA, ILRI	Rangeland health (including developing novel remote-sensing index)	1. Exploits initial randomization of discount coupon distributions 2. Fuzzy regression discontinuity design using spatial discontinuities across index insurance unit	18,000 households across 8 arid and semi-arid counties in north and east Kenya Rolled out across 110 distinct spatial index insurance units over the period 2010-19	Phase 1: 01.05.2020-31.12.2020 Phase 2: 01.01.2021-31.12.2021
Impact of a Second-Generation Conservation Agriculture Technology (Happy Seeder) on Crop Residue Burning and Air Quality in Northwestern Indo-Gangetic Plains (INDIA)	Happy Seeder technology Machinery	CIMMYT IISER (India) U Michigan	Air quality (O, NO, CH4 and particulate matter, quantity per year) Health: reduction in DALY	Instrumental variables using soil suitability and ratio of government subsidies to happy seeder to all tillage machinery. Panel HH and village survey data; remote sensing of zero tillage diffusion & residue burning	12,000 machines currently in use in the western IGP, mostly in Punjab state of India	01.08.2020-31.12.2022
Land-use land-cover change (LULCC) impacts of sorghum and millet upscaling project in Mali (MALI)	Improved variety-crop Improved sorghum and millet varieties	IAMO (Germany), UC Louvain, UCSB, ICRISAT	Tree cover density and landscape measures captured with remote sensing	Geospatial impact evaluation techniques combining matching and panel methods	Project trained 261,197 farmers in the regions of Sikasso, Mopti, and Timbuktu, and reached 68,299 ha.	01.10.2020-31.12.2023
Long-term diffusion and impacts of Index-Based Livestock Insurance (KENYA)	Index-Based Livestock insurance ILRI research on pastoralist risk management that led to the development of index-based livestock insurance	ILRI	Resilience and livelihoods: (i) food consumption score, (ii) reduced coping strategy index (rCSI), and (iii) income per adult equivalent in the household	Instrumental variables approach, using randomly distributed discount coupons as instrument	18,000 households across 8 arid and semi-arid counties in north and east Kenya Rolled out across 110 distinct spatial index insurance units over the period 2010-19	25.10.2019-24.10.2022
Evaluating the Impact of Stress-Tolerant Rice Varieties Through Remote Sensing and Econometric Methods (BANGLADESH)	Improved variety – Stress-Tolerant Rice Varieties Submergence tolerant rice	IRRI and University of Arizona	Resilience and livelihoods: Household food consumption, Household income, food security (hunger index, dietary diversity):	Meso-level analysis: Difference-in-differences strategy Micro-level analysis: Instrumental variables strategy, using the historic probability of crop failure combined with experienced flooding	1.5 million farmers in four years on 430,000 hectares	01.02.2020-31.12.2021

Table 2. Proposals for learning studies

No	Title	Academic PIs	Type of Study	Institutions
1	Demand and Liquidity Coordination to Foster the Adoption for Livestock Vaccinations: An Experiment with Small-Holder Dairy Cooperatives in Kenya	Jonathan Robinson (UCSC) Shilpa Agarwal (Indian School of Business) Alan Spearot (UCSC)	Full	ILRI, UC Santa Cruz, Indian School of Business
2	Credit, Uncertainty, and Monitoring for Technology Adoption: The Case of Aflasafe in Senegal	Tanguy Bernard (University of Bordeaux) Joshua Deutschmann (U of Wisconsin in Madison) Laura Schechter (U of Wisconsin in Madison)	Full	Univ. Bordeaux, Univ. Wisconsin, IITA
3	Bringing Plot-specific Soil Management Recommendations to Scale: Demand and Supply Side Interventions in Uganda	Erwin Bulte (Wageningen Univ)	Full	Wageningen Univ., AgroCares, CIAT, ICRAF
4	Small Mechanization Impact Stimuli in Ethiopia (SMISE)	Susan Godlonton (Williams College) Mesay Gebresilasse (Amherst College)	Full	Williams College, Amherst College, CIMMYT
5	Evaluating Diffusion Options for Alleviating Constraints to the Adoption of Integrated Soil Fertility Management Practices (ISFM) in Ethiopia	Leah Bevis (Ohio State University)	Full	IITA, Ohio State Univ.
6	Diffusion and Adoption of Labor-saving Technology in the Presence of Complementarity with other Inputs, Intra-household Frictions, and Coordination Costs	Lori Beaman (Northwestern U) Jeremy Magruder (UC Berkeley) Emilia Tjernstrom (University of Sydney)	Pilot	IPA, AfricaRice, Northwestern U, UC Berkeley, U Sydney.
7	Scaling Pathways for Accelerating Adoption of the Sweetpotato Triple S (Storage in Sand and Sprouting) Technology in Dry areas of Mozambique	Ariel BenYishay (William and Mary)	Full	William and Mary CIP
8	Diffusion of Machine-harvestable Chickpeas and Implications for Labor Markets in India	Aprajit Mahajan (UC Berkeley)	Full	UC Berkeley, J-PAL, ICRISAT
9	Understanding the Role of Information, Skills, and Aspiration Constraints in Technology Adoption	Selim Gulesci (Bocconi/Trinity College Dublin) Andreas Madestam (Stockholm U) Munshi Sulaiman (BRAC)	Full	Bocconi/Trinity College Dublin, Stockholm University, BRAC Alliance Bioversity-CIAT
10	Cost-effective Scalable Measures for Rehabilitating Degraded Communal Grazing Lands	Juan Camilo Cardenas (Universidad de Los Andes, Bogota)	Pilot	Universidad de Los Andes ILRI
11	Sustained Adoption of Environmentally Sustainable Practices: Spillovers and Long-run Impacts in Mali[5]	Jenny Aker (Tufts) Kelsey Jack (UCSB)	Full	Tufts, UCSB, ICRISAT

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[5] This study was not part of the call on adapted strategies, but the environmental impacts call. However, it has a clear learning component and we decided to put this together with the other learning-oriented studies.

Table 3. Studies funded under the adapted strategies learning call

Title	Innovation	Expected outcome challenges	Scaling mechanism in ToC to be tested	Timeline (start/end date)
Demand and Liquidity Coordination to Foster the Adoption for Livestock Vaccinations: An Experiment with Small-Holder Dairy Cooperatives in Kenya	Vaccine Infection and Treatment Method - ECF-ITM, developed 40 years ago and regularly improved but still not widely adopted.	Collective action problem (minimum straw size) Overcome liquidity constraints (vaccination is a somewhat lumpy investment)	Demand aggregation to solve collective action problem Check-off system to address the liquidity barrier	15.11.2020 - 14.11.2023
Diffusion and adoption of labor-saving technology in the presence of complementarity with other inputs, intra-household frictions, and coordination costs, Uganda (Pilot)	Two-row Adapted Motorized Paddy Weeder (AMW) developed in TZ as part of SARD-DC	Complementarity with other inputs (learning problem), intra-household frictions, and coordination costs	Overcoming learning problem by offering farmers subsidized, high quality & complementary inputs Coordination by saturating an area with intensive one-time subsidies	01.12.2020 - 30.11.2021
Diffusion of Machine-harvestable Chickpeas and Implications for Labor Markets in India	Machine-harvestable Chickpeas (MHCP) Erect to semi-erect growth habit and the first pod height is at least 25 cm above the soil surface	Availability of machines, knowledge about plot preparation, confidence in yields, labor saving (women's labor)	Ensuring guaranteed access to machine harvesters as well as improved extension outreach for plot preparation	01.12.2020-31.12.2023
Sustained Adoption of Environmentally Sustainable Practices: Spillovers and Long-Run Impacts in Niger (full study based on 2015 pilot funded by SPIA)	Demi-lune RWH technique	Information and credit constraints	Training and one-time cash transfers.	01.03.2020-31.12.2021
Scaling Pathways for Accelerating Adoption of the Sweetpotato Triple S Technology in Dry areas of Mozambique	Triple S (Storage in Sand and Sprouting) technology	Understanding gender norms around information flows & communication channels. Integrating education on nutritional benefit.	Video-enabled Triple S training Nutritional education outreach through community-based approach	01.12.2020-30.11.2023
Small Mechanization Impact Stimuli in Ethiopia (SMISE)	Small mechanization hire service business models	Negative investor sentiment about rural businesses	Demand side: address knowledge constraints Supply side: training to address constrains related to finance; lack of marketing skills and market knowledge.	01.12.2020-31.07.2023

Table 4. Impact assessment Community of Practice events 2019-2020

When	Where	Activity
Apr-May 2019	IFPRI, Washington	SPIA team participated & presented on IA methods in the workshop organized by HarvestPlus and CIP on harmonizing indicators and approaches to impact assessment of biofortification
May 2019	ILRI, Nairobi	The SPIA chair visited ILRI and ICRAF to meet with science leaders and impact assessment researchers, present on impact assessment methods and SPIA approach, and identify possible opportunities for new impact studies.[6]
June 2019	Virtual	The SPIA chair presented (virtually) in a session in the annual Science Leader Meeting on foresight, impact assessment and evaluation.
19-21 June 2019	FAO, Rome	SPIA co-organized *Inclusive Agriculture and Rural Transformation: Building a Shared Research Agenda*, an event organized by FAO, IFAD, the World Bank, SPIA of CGIAR, the Bill & Melinda Gates Foundation and the UK's Department for International Development. Several CGIAR science leaders presented at the meeting. The meeting also served as a matchmaking opportunity for select CGIAR researchers and IA specialists and external experts and to inform the agenda of the Agricultural Technology Adoption Initiative (ATAI), under which several CGIAR-related studies are funded.
2-4 Oct 2019	Amsterdam	SPIA co-organized the annual meeting of the MEL and IA communities of practice on the topic of *Scaling, Impact, and Benefits of CGIAR Research—Towards 2021* in Amsterdam. A total of 57 people participated, representing all 12 CRPs, 2 Platforms, 11 Centers, SMO, SPIA, CAS Secretariat (Evaluation workstream) and several external organizations
Dec 2019	Paris	To help define the research and capacity development agenda in the area of better measurement of the adoption of agricultural innovations, SPIA held a workshop in Paris. Recent work has shown that measurement error is a significant problem in a lot of agricultural survey data typically used in impact assessments. This workshop brought together early career social scientist from CGIAR and external academic researcher who are actively contributing to this literature to discuss the research agenda forward, resulting in new research collaborations.
Jul-Aug 2020	Virtual	SPIA organized the annual Impact Assessment Focal Point (IAFP) meeting with participation for all CGIAR centers. The first meeting updated new ideas for impact assessment studies for CGIAR innovations/policy influence, asked for centers/CRPs' input on how SPIA could facilitate or support these ideas and took stock on how COVID-19 has affected the ability of CGIAR to implement IA studies. A month later, a follow up meeting updated the same group on the progress of the SPIA work plan implementation and facilitated a discussion on how the CGIAR CoP on impact assessment could support the One CGIAR reform.
18 & 25 Nov 2020	Virtual	SPIA convened a broader CGIAR CoP on impact assessment on November 18, 2020 and a webinar with CGIAR research leaders and impact assessment researchers on November 25. These events focused on the results of the Ethiopia synthesis report that brings estimates of adoption of CGIAR innovations from a nationally representative dataset, and the implications for CGIAR research.
Nov 2020		Starting Nov 2019, PIM and SPIA (with panel member J.V. Meenakshi in the lead) are organizing a series of webinars for CGIAR social scientists on 'getting published' with editors of high-impact journals

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[6] This followed visits in late 2018 to CIMMYT and CIAT. Plans for similar visits by SPIA panel members in 2020 to other centers were postponed due to COVID-19.

Table 5. Proposal development grants

Study title and country	Center	Secondary data to be collected	Level of data collection	Timeline (start/end date)
Data collection on the historical dissemination of ASI threshers in Senegal and Nigeria	AfricaRice	Annual data on the historical dissemination of ASI threshers. Since 1997 in Senegal and since 2015 in Nigeria	Region/state level: Teams will visit 5 regions in Senegal (Dakar, Saint-Louis, Matam, Fatik, and Kaolak regions) and 6 states in Nigeria (Abuja, Kaduna, Kano, Kastina, Jigawa and Kebbi states)	01.10.2020-28.02.2021
Data collection on the GIFT dissemination process from hatcheries to farmers in Bangladesh	WorldFish	1. Data identifying GIFT cohort breeding and tilapia breeding hatcheries 2. A comprehensive list of all tilapia (GIFT and non-GIFT) hatcheries in Bangladesh 3. Survey data on demographic characteristics, sources of tilapia seed (2017-2020) and amount of tilapia seed bought	National level All tilapia hatcheries in Bangladesh to be listed organized by Division, District, Upazila, and village	15.09.2020-31.12.2020
Data collection on the historical dissemination of early-maturing lentil varieties in Bangladesh and India	ICARDA	Seed distribution data for lentil growing areas in Bangladesh, India, and Nepal	Bangladesh: 5 major lentil-growing districts Nepal: 10 major lentil-growing districts in 3 provinces India: 12 districts in 3 states (Madehya Pradesh, Uttar Pradesh and West Bengal)	15.05.2020-31.12.2020