



RESEARCH  
PROGRAM ON  
Policies,  
Institutions,  
and Markets

Led by IFPRI



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# Annual Report 2019

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The [CGIAR Research Program on Policies, Institutions, and Markets \(PIM\)](#) is led by the International Food Policy Research Institute (IFPRI) and brings together [15 CGIAR Centers](#) and many partners. External managing partners include KIT Royal Tropical Institute, Michigan State University (MSU), University of Oxford, Wageningen University and Research (WUR), and World Vision International.

Leadership of the program's flagships is as follows:

- Flagship 1: [Technological Innovation and Sustainable Intensification](#): CIAT, IFPRI, MSU
- Flagship 2: [Economywide Factors Affecting Agricultural Growth and Rural Transformation](#): IFPRI, MSU
- Flagship 3: [Inclusive and Efficient Value Chains](#): CIMMYT, IFPRI, WUR
- Flagship 4: [Social Protection for Agriculture and Resilience](#): IFPRI
- Flagship 5: [Governance of Natural Resources](#): CIFOR, IFPRI
- Flagship 6: [Cross-cutting Gender Research and Coordination](#): IFPRI, KIT, University of Oxford



Africa Rice Center



Bioversity International



Center for International Forestry Research (CIFOR)



International Center for Agricultural Research in the Dry Areas (ICARDA)



International Center for Tropical Agriculture (CIAT)



International Crops Research Institute for the Semi-Arid Tropics (ICRISAT)



International Food Policy Research Institute (IFPRI)



International Institute of Tropical Agriculture (IITA)



International Livestock Research Institute (ILRI)



International Maize and Wheat Improvement Center (CIMMYT)



International Potato Center (CIP)



International Rice Research Institute (IRRI)



International Water Management Institute (IWMI)



World Agroforestry Centre (ICRAF)



WorldFish

**External managing partners:**



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## EXECUTIVE SUMMARY

In 2019, research conducted under the CGIAR Research Program on Policies, Institutions, and Markets (PIM) informed policies and investments of governments, development agencies, non-governmental organizations and private companies in Africa, Asia and Latin America.

PIM contributed to investment plans and policies in Afghanistan, Ghana, Kenya, Nigeria, Pakistan, the Philippines and Rwanda; scaling up of digital advisory services in Ethiopia and of payments for agrobiodiversity conservation in Peru; biotechnology advances in Nigeria; renewal of community forest concessions in Guatemala; and improved rangeland governance in Ethiopia and Tanzania.

At the global level, PIM research was used to shape the European Union biofuel policy as well as strategic decisions of several organizations such as the Asian Development Bank, the Bill & Melinda Gates Foundation, CGIAR, UK's Department for International Development, the Inter-American Development Bank, the International Fund for Agricultural Development, USAID and the World Health Organization. An external review of the outcomes of PIM-supported foresight modeling work was completed.

PIM findings were disseminated through various tools and fora. The Global Foresight for Food and Agriculture Tool was launched to allow decision makers to explore the impact of agricultural investment scenarios on human well-being through 2050. PIM teamed up with USAID to organize an event to chart a course for future agricultural extension. The partnership with the Food and Agriculture Organization of the United Nations (FAO) on data and methodologies for measuring food losses expanded. A synthesis of research on gender-differentiated outcomes from safety net programs in Africa was released. Findings on intimate partner violence were disseminated by the research consortium on this topic. Key findings from the upcoming CGIAR publication on gender and agriculture were shared in a policy seminar.

PIM researchers engaged with implementation partners to pilot various innovations, including platforms for improving food and nutrition security in the Middle East and North Africa, value chain interventions in twelve countries, bundling of several risk management tools (drought-tolerant seeds, weather insurance and advisory services) to create a viable business model for the private sector in Kenya, and learning games on collective action for better governance of natural resources in India and Southeast Asia.

PIM invested in improving global and national models for analyzing effects of and responses to short-term shocks and long-term trends. Following the program's 2019-2021 priorities, efforts expanded in the areas of seed systems, climate change, employment, youth and gender, and new research started on promoting food quality through certification and standards and on reducing the costs of nutritious food.

In accordance with its integrative function, PIM continued to support existing CGIAR communities of practice on foresight, value chains, natural resource governance and gender and initiated a new one on the political economy of agri-food systems. PIM co-organized the "Seeds of Change" conference on gender and sponsored side events and presentations by CGIAR scientists at the International Association of the Study of the Commons conference.

In 2019 PIM produced about 450 publications, including 115 journal articles and six books. PIM's trainings increased the capacity of 10,400 people in over 40 countries.

## Part A: NARRATIVE SECTION

### 1. Key results

#### 1.1 Progress towards SDGs and SLOs

*a) Overall contribution of the CGIAR towards the SRF targets in the relevant area of work for the CRP, based on rigorous adoption and/or impact data*

No formal *ex post* impact assessment was completed in 2019. Results of PIM 2019 studies that are useful for reporting on PIM's contributions towards SLOs are presented below.

#### **Improving extension delivery methods (SLO targets related to adoption and productivity):**

PIM collaborated with [Digital Green](#) to test its video-mediated extension delivery approach. Research results [published](#) in 2019 [informed](#) the scaling up of the approach in Ethiopia. The results also provide insights into the effects of the approach on technology adoption and yield increase. The approach was found to increase adoption of several practices by between 3 and 10 percentage points for maize, teff and wheat. Yields of teff increased by 15-20 %. The approach also enabled extension staff to reach more farmers.

#### **Improving social protection programs (SLO targets related to nutrition, poverty and gender):**

Several 2019 studies on the effectiveness of social protection programs contribute to understanding the impact of social protection research on poverty reduction and nutrition. PIM has engaged for several years with the governments of Bangladesh, Egypt, Ethiopia and Mali to strengthen their safety net programs by providing evidence about the outcomes of different program modalities.

A [review](#) of the effects of safety net programs on outcomes for women in Africa reveals that few studies provide specific information about nutritional outcomes for women, which are specifically targeted by several CGIAR system level outcomes. In 43% of cases, implementation of safety nets resulted in an improved dietary diversity score. The review found positive effects of safety net programs on several indicators related to the economic well-being of women in participating households, such as increased savings, assets, and consumption expenditures. A [study](#) in Bangladesh highlights the importance of including behavioral change communication in transfer programs to boost consumption and asset building. An [RCT evaluation](#) in Bangladesh shows that a program providing women with cash or food transfers alongside behavioral change communication on nutrition led to sustained reductions of 6-7 percentage points in intimate partner violence.

*b) Any areas of learning from impact assessments which have influenced the direction of the program (see [Table 11](#))*

A 2018 survey of users of the Statistics on Public Expenditures for Economic Development ([SPEED](#)) tool revealed a high level of appreciation for the compilation of public expenditure data for the examination of historical trends and cross-country comparisons and suggested that SPEED should include more recent years' expenditures and additional countries. These [updates](#) were funded by PIM in 2019 (coverage expanded from 147 to 164 countries and expenditure information was updated through 2017).

## 1.2 Progress towards outputs and outcomes

### 1.2.1 Overall CRP progress

Progress towards PIM's 2022 outcomes remains on track, as evidenced by the achievement of nearly all 2019 milestones ([Table 5](#)) and the description of 22 outcome cases ([Table 3](#)). PIM research informed agricultural policies or investment plans in [Afghanistan](#), [Ghana](#), [Kenya](#), [Nigeria](#), [Pakistan](#), [the Philippines](#) and [Rwanda](#). PIM innovations are being used by partners at scale in Ethiopia ([digital advisory services](#) and [participatory land use planning](#)), [India](#) (experimental games for collective action), [Peru](#) (payments for agrobiodiversity conservation), [Tanzania](#) (joint village land use planning) and [Yemen](#) (online repository of country-level information on food security). PIM results are influencing decisions on community forest concessions in [Guatemala](#). At the global level, PIM research has been used to shape the [EU biofuel policy](#), the World Health Organization's [RESPECT Women](#) framework and strategic decisions of several funding agencies. Numerous partnerships with governments, non-governmental organizations and private companies are ongoing in the areas of seed systems, extension delivery methods, prioritization of investments, value chain strengthening, crop insurance, social protection, natural resource governance and women's empowerment.

PIM continues to support CGIAR communities of practice on [foresight](#), [value chains](#), natural resource governance and [gender](#) and began building a new one on the [political economy of agri-food systems](#). PIM co-organized the "[Seeds of Change](#)" conference on gender. Books on [youth and jobs in rural Africa](#), [agricultural transformation in Ghana](#) and [transformation of aquaculture in Bangladesh](#) were published. PIM published 115 journal articles ([Evidence D](#)) and PIM's trainings increased the capacity of 10,400 people in over 40 countries ([Evidence G](#)).

### 1.2.2 Progress by flagship

#### **Flagship 1 "Technological Innovation and Sustainable Intensification"**

PIM foresight research [published](#) in several high-impact journals was used by donors (Bill & Melinda Gates Foundation, USAID), international organizations ([Asian Development Bank](#), CGIAR, Global Commission on Adaptation, Inter-American Development Bank, International Fund for Agricultural Development), and national partners (Philippines, South Africa) as a source of evidence on the challenges and opportunities facing food systems at global, regional and national levels. Preparations continued for the CGIAR foresight report on the future of agri-food systems in developing countries.

PIM research informed the efforts of national partners and their donors to increase farmer access to improved varieties, quality seed and extension services in [Afghanistan](#), [Ethiopia](#), Ghana, [Kenya](#), Nepal, [Nigeria](#), [Uganda](#), and [Vietnam](#), with emphasis on gender dimensions. PIM-supported capacity strengthening and socioeconomic assessments contributed to the [approval](#) for release of the genetically engineered insect-resistant cowpea in Nigeria. PIM-supported work [informed](#) the creation of a new digital extension system in Ethiopia. Evidence produced by the flagship teams contributed to decision making on priorities for agricultural research, plant genetic resource conservation and new technological opportunities such as gene editing. PIM and the USAID Feed the Future Developing Local Extension Capacity project organized a [knowledge event](#) to chart a course for future agricultural extension.

#### **Flagship 2 "Economywide Factors Affecting Agricultural Growth and Rural Transformation"**

The Rural Investment and Policy Analysis [model](#) was used to inform [Kenya's](#) National Agricultural Investment Plan and Agricultural Sector Transformation and Growth Strategy, [Rwanda's](#) National Strategy for Transformation, USAID's Global Food Security Strategy, and

investment priorities of the Bill & Melinda Gates Foundation. Guidance from [IFPRI's Nigeria program](#) was [incorporated](#) in Nigeria's National Gender Policy in Agriculture (with Flagship 6). The Government of Punjab [received](#) support from [IFPRI's Pakistan program](#) for the Punjab Agriculture Marketing Regulatory Authority Act (with Flagship 3). The [Kaleidoscope Model](#) was [included](#) in the curriculum of a biannual USAID training event for staff. PIM organized a cross-CGIAR [workshop](#) and launched a [call for proposals](#) to foster collaborative research on the political economy of food systems.

Flagship 2 researchers contributed to AGRA's [2019 Africa Agriculture Status Report](#) – which focuses on agri-food systems and the private sector – and to the [Oxford Handbook of the Ethiopian Economy](#). Five books were produced, including [Youth and Jobs in Rural Africa](#), [Ghana's Economic and Agricultural Transformation](#), and [The Making of a Blue Revolution in Bangladesh](#). [Migration](#) was another key area of research, with a [background paper](#) for the IFAD 2019 Rural Development Report, five articles, two book chapters and a [webinar](#).

### **Flagship 3 “Inclusive and Efficient Value Chains”**

The team supported FAO's [technical platform](#) on measurement and reduction of food losses and contributed to FAO's [State of Food and Agriculture 2019 report](#). Analysis progressed on multiple value chains, including in Bangladesh ([dairy](#)), Ethiopia (chickpea, [dairy](#), maize, wheat), [Ghana](#) (chicken, fish, rice), [India](#) (dairy), [Honduras](#) (cashew, dairy, fruit), Malawi (groundnut, [maize](#)), Mali (cattle), [Mozambique](#) (groundnut, maize, pigeon pea, sesame, soybean), [Niger](#) (livestock), Nigeria (fish), Senegal (groundnut), and Uganda (cooking banana, [sugarcane](#)). A focus area on promoting food quality in value chains was initiated, with a study in Ethiopia and a set of comparable studies on certification and standards. A [workshop](#) was held to share value chains research tools across CGIAR and with partners. A [method](#) to improve measurement of employment in agri-food systems was piloted in Ghana, Niger, Tanzania, and Uganda. PIM continued to analyze the feasibility of picture-based insurance in [India](#) and [Kenya](#).

The adoption of the Renewable Energy Directive by the European Commission was [informed](#) by PIM evidence. The [Ag-Incentives](#) database was used to shed light on the negative environmental outcomes generated by farm support; data provided by PIM experts were included in the [Food and Land Use Coalition report](#) and triggered policy discussions and [media coverage](#).

### **Flagship 4 “Social Protection for Agriculture and Resilience”**

The team continued to work with national governments and partners in Bangladesh, Egypt, Ethiopia and Mali to evaluate the impacts of national safety net programs on agriculture, nutrition, women's empowerment and other dimensions of well-being. In Bangladesh, the Transfer Modality Research Initiative – a pilot transfer program combined with nutrition behavior change communication (BCC) – was [found](#) to have positive impacts on economic well-being; impacts of transfers + BCC were higher than impacts of transfers alone. A journal article [showed](#) that India's National Rural Employment Guarantee Scheme increases non-financial asset holdings and improves diets, partly by inducing higher income from casual labor. Researchers showed the impact of school meals in [poverty alleviation](#) in Armenia and [increased equity](#) in Mexico, and provided rare experimental evidence of their [nutritional impacts](#) in Uganda.

Research in fragile settings expanded and social protection was found to improve outcomes in these settings. In [war-torn Yemen](#), nutrition-sensitive cash transfers improved child nutritional status, while a youth employment program [built trust and social capital](#). Work in [conflict-affected Mali](#) found that school feeding leads to increases in school enrollment and to

an additional half-year of completed schooling on average compared to general food distribution.

### Flagship 5 “Governance of Natural Resources”

PIM contributed to several outcomes in natural resource governance and tenure security. Participatory land use planning approaches developed by PIM and LIVESTOCK helped secure pastoralists’ rights on rangelands in [Ethiopia](#) and [Tanzania](#). Other work contributed to improving rangeland governance in [Tunisia](#). Research informed the development of regulations to renew [community forest concessions](#) in the Maya Reserve Biosphere, Guatemala and the scaling up of [payments for agrobiodiversity conservation services](#) in Peru. In Madagascar, findings highlighting the importance of customary collective forest rights influenced development projects. Working with indigenous peoples and the Peruvian National Service of Protected Areas, PIM created an [evaluation tool for co-management areas](#). Experimental games were disseminated to build institutional capacity for managing common water resources in [India](#) and strengthen landscape governance in [Lao PDR](#). Collaboration with the [Foundation for Ecological Security](#) included efforts to increase community rights to the commons and improved landscape-level governance in several Indian states. Within the frame of the [Multistakeholder Platform Community of Practice initiative](#) promoted by International Land Coalition in partnership with [Collaborating for Resilience](#), representatives from 18 institutions gathered to share progress and explore partnerships on the role of multistakeholder platforms in improving land and natural resource governance.

### Flagship 6 “Cross-cutting Gender Research and Coordination”

The team continued to improve the measurement and understanding of women’s empowerment in agriculture, support gender analysis in other flagships and manage the [Gender Platform](#). PIM research [informed](#) Nigeria’s National Gender Policy in Agriculture (with Flagship 2). By the end of 2019, 103 organizations in 54 countries had [used](#) a version of the [Women’s Empowerment in Agriculture Index](#). Evidence disseminated by the [Cash Transfer and Intimate Partner Violence Collaborative](#) [informed](#) policies of United Nations organizations and DFID. Results on women’s employment and land ownership in [Egypt](#) and [Morocco](#) were shared at a [workshop](#), a presentation was given to ministers of different countries on the [gendered impacts of income shocks](#) in Central Asia, and flagship leader Cheryl Doss gave the Memorial Lecture, on [understanding rural household behavior](#), at the [African Conference of Agricultural Economists](#). A survey-based [module](#) to measure women’s freedom of movement in agricultural value chains and a [guide](#) on participatory methods to collect data on gender dynamics and empowerment in agriculture were piloted. The Gender Platform co-convened the “[Seeds of Change](#)” conference and coordinated studies on the [feminization of agriculture](#). A CGIAR report on gender and agriculture was prepared for publication in 2020 and featured in a [policy seminar](#).

#### 1.2.3 Variance from planned program

*(a) Have any promising research areas been significantly expanded? If so, for each example, please explain clearly where the demand came from (promising research results, demand from partners etc.). Where has the money for expansion come from?*

The outputs of the participatory exercise to [identify priorities for 2019-2021](#) called for increased focus on nutrition, employment, climate change, gender and food system transformation in the portfolio, mostly because these areas are of key interest to policy makers, funding agencies and CGIAR and because they are addressed in multiple flagships of PIM and will benefit from more coordinated investments.

*(b) Have any research lines been dropped or significantly cut back? If so, please give specific examples and brief reasons. If funding was reallocated to other work, where did the money go?*

The Gender Platform hosted in PIM's gender flagship issued a call for collaborative studies on gender dynamics in value chains. After the [winning proposals](#) were selected, the PMU was informed that the Gender Platform would not receive the full Window 1-2 amount noted in the 2019 CGIAR Financing Plan. As a consequence, the approved grants were put on hold in 2019.

The planned collaboration between the World Bank and the PIM teams working on foresight, strengthening national agricultural research and development and tracking technology adoption and impact on the West Africa Agricultural Transformation Project did not materialize since this project was dropped by the World Bank.

*(c) Have any flagship or specific research areas changed direction? If so, please describe how, and the reason*

Following the results of the 2019-2021 priority-setting process, increased attention has been given to nutrition and employment in PIM's value chains flagship. Five new grants were allocated to test innovations in nutritious commodities (e.g. fish) and enhance food quality in staple foods, with links to other CRPs. Several of these studies delve into employment along value chains. One study focuses on how to reduce the costs of nutritious foods in Ethiopia, in collaboration with A4NH.

As of January 2020, the Gender Platform is moving out of PIM. The PIM Management Committee agreed that the cluster of work in PIM's gender flagship previously focused on coordinating the Platform's activities will transition to providing increased support to integrative gender research in other PIM flagships and coordination of cross-CRP research started under the Platform. Planning for this transition took place end 2019.

#### 1.2.4 Altmetric and publication highlights

Altmetric scores were provided by IFPRI's Knowledge Management team for 439 PIM 2019 publications. Altmetric data were downloaded on April 8, 2020.

Six PIM papers reached an Altmetric score above 100.

The four highest scores pertain to outputs of IFPRI's modeling work. "[Pakistan: Getting more from water](#)", a World Bank report based on work by IWMI with economic modeling by IFPRI, received the highest attention of all PIM publications, reaching a score of [516](#) and attracting very high attention on Twitter (1,220 tweets from 1,049 users with an upper bound of 4,324,631 followers). "[Gaps between fruit and vegetable production, demand, and recommended consumption at global and national levels: an integrated modelling study](#)" (in *Lancet Planetary Health*, a journal still not included in the ISI list) was the most cited and shared journal article, with an Altmetric score of [414](#); this included mentions by 36 news outlets, 9 blog posts and 135 tweets from 118 users. Another paper in the same journal, which analyzed [the combined effects of increased atmospheric carbon dioxide on protein, iron, and zinc availability and projected climate change on global diets](#), reached a score of [305](#), including 25 news stories from 22 outlets, 18 posts from 11 blogs and 101 tweets. Finally, an [article](#) in *Climatic Change* which used biophysical and economic modeling to highlight the interests of most developing countries in effective global mitigation policies – with much larger benefits post-2050 – reached a score of [150](#).

An [article](#) authored by ICRAF and ICRISAT researchers in *Outlook on Agriculture*, which argues for more differentiated policies for agricultural development in Africa based on farm

size and other characteristics, garnered a score of [141](#), including 16 news stories from prominent international and African outlets such as AllAfrica, The Conversation and ReliefWeb. The article "[Transgenic cotton and farmers' health in Pakistan](#)" (*Plos One*) attained a score of [106](#).

Among the six books supported by PIM, a [book](#) offering empirical analysis and key takeaways on how policymakers and practitioners can harness Ghana's agricultural potential (IFPRI & Oxford University Press) garnered the highest attention (Altmetric score: [83](#)). Altmetric lists 4 news stories from 4 outlets (including China's Xinhua and AllAfrica) featuring the book, which was also mentioned in 10 blog posts.

Because many publications are still being shared publicly using links other than the DOI, many mentions remain unrecorded by Altmetric, suggesting that the attention metrics above are likely underestimated.

### **1.3 Cross-cutting dimensions (at CRP level)**

#### **1.3.1 Gender**

*a) List any important CRP research findings, methods or tools, capacity development, policy changes or outcomes in the reporting year related to gender issues*

In [Uganda](#), a study showed that targeting women as recipients of video-based extension enhances their knowledge of management practices for maize, improves their participation in agricultural decision making and the adoption of recommended practices and inputs, and increases production and marketing of maize by women.

A study in [Malawi](#) found that in dual-headed households, in which women are frequently tasked with attending trainings but have little power to implement lessons, joint access to agricultural and nutritional information has a stronger impact on food security than women's access alone.

In [Ghana](#), secondary schooling is higher among children whose mothers engage in nonfarm entrepreneurship. This link is equally strong for high- and low-educated mothers and stronger for poorer households, showing that empowering women entrepreneurs can reduce inequality in rural education.

Another study in [Ghana](#) showed that women have a stronger preference than men for investing in nonfarm diversification.

A [tool](#) to facilitate gender and social inclusion strategies for agricultural value chains in Honduras was developed.

A [review](#) on the impact of social safety nets on women's well-being in Africa summarizing findings on 28 safety net programs in 17 countries found substantial evidence that safety nets decrease intimate partner violence and increase psychological well-being for women, and moderate evidence that safety nets increase economic standing of households and dietary diversity. It found minimal evidence that safety nets improve women's food security and nutrition; however, few studies measure these outcomes specifically for women.

A study in [Egypt](#) showed that participation in the Takaful and Karama cash transfer program reduces women's ability to influence household decisions (particularly regarding child healthcare).

Food for education programs provide food transfers to encourage children to attend school but also aim to improve school performance by providing nutritious meals to children. In

[Uganda](#), food for education programs were found to reduce anemia in adolescent girls and adult women.

A synthesis [chapter](#) on women's land rights in Africa highlighted that many recent land governance reforms striving to ensure gender equality with respect to land rights fail to achieve this outcome owing to a lack of proper enforcement mechanisms.

In [Indonesia, Peru and Uganda](#), women's forest tenure security is affected by community social norms in addition to national law and household norms, and women often do not have the same decision-making power as men in forest governance. Lessons about the challenges of securing women's rights to forests in Kenya were disseminated in a "[how to](#)" [note](#), [podcasts and radio programs](#) in local languages.

A report on [gender-transformative approaches](#) in agriculture informed several European Commission-funded projects .

Initial findings of a 2020 publication on CGIAR gender research were shared at an IFPRI policy seminar on [crafting the next generation of CGIAR gender research](#).

*b) Mention any important findings that have influenced the direction of the CRP's work, and how things have changed*

Previous work on [seed systems](#) and [extension](#) methods showed that men and women have different challenges and preferences and often require different [approaches](#) to meet their needs. Thus, in 2019, all new Window 1-2-funded activities on these topics included gender components.

[Previous research](#) showing that cash transfers may reduce intimate partner violence led to the formation of a [Cash Transfer and Intimate Partner Violence Research Collaborative](#). As a consequence, research on this topic expanded in 2019, with stronger links to major development partners (DFID, World Health Organization).

[Previous analysis](#) of sex-disaggregated data from surveys revealed that men and women often provide different answers to the same question. New research is trying to understand how best to handle these different responses in analyses.

*c) Have any problems arisen in relation to gender issues or integrating gender into the CRP's research?*

Owing to an unexpected deviation from the 2019 CGIAR Financing Plan for PIM, [six grants for work on gender dimensions in value chains](#) awarded through the Gender Platform in August 2019 were put on hold, with a final decision to be taken in 2020.

Although integration of gender into national economywide models made progress (e.g. analysis of women's participation in structural transformation), data limitations remain a constraint on this topic.

### 1.3.2 Youth and other aspects of social inclusion / "Leaving no-one behind"

*a) List any important CRP research findings, methods or tools, capacity development, policy changes or outcomes in the reporting year related to youth issues*

Youth employment is an area of emphasis for 2019-2021. Using surveys, population censuses and historical data, authors of the 2019 book [Youth and Jobs in Rural Africa](#) find that Africa's youth bulge, which peaked in 2003, is similar to youth bulges experienced by other regions between 1976 and 1985. The book challenges the prevailing view that because young people

in Africa are better educated and more familiar with information technology than older adults, they more frequently adopt advanced farm technologies and practices. In Ethiopia, youth-headed households are less likely to follow advice from extension officers and to use improved seeds and fertilizers, while in Malawi older farmers use more modern inputs than younger ones. Regarding non-farm activities, while youth are more likely than older adults to be engaged in rural nonfarm employment, the number of remunerative nonfarm jobs in rural areas is often limited. Governments have adopted youth employment as a priority, but policies often do not address the specific needs of rural populations. Authors conclude that rather than focusing on the youth, African policy makers should promote inclusive growth policies that benefit both young and older people.

A 2019 paper provides evidence on the current state of [employment opportunities](#) in agri-food systems in Africa south of the Sahara with a focus on the youth, and finds that nationally representative surveys do not adequately capture information on employment, limiting our understanding of patterns and trends. A [background paper](#) which PIM contributed to the IFAD 2019 Rural Development Report shows that young women and men experience the transition to adulthood differently according to the level of structural transformation of the country they live in. Across all transformation levels, young women are more likely than young men to be married and living with their spouses or in-laws, less likely to be in school or employed, and less likely to be the sole owners of land.

An [evaluation](#) of a youth employment program in Yemen which employed university graduates to promote community-led development projects found that participants perceived increases in their future employability and economic situation.

A [tool](#) was developed to help practitioners ensure that agricultural projects in Africa effectively engage with the youth, with a focus on root, tuber and banana crops.

With respect to social inclusion, PIM-supported participatory rangeland management approaches in [Ethiopia](#) and [Tanzania](#) provide mechanisms for inclusion of [pastoralists](#), who often belong to marginalized ethnic groups. PIM action research in the [Maya Biosphere Reserve in Guatemala](#) helps indigenous and local communities secure the renewal of community forest concessions. An [analysis](#) of India's National Rural Employment Guarantee Scheme [found](#) that the benefits of the program are most pronounced for scheduled castes/scheduled tribes, especially households including family members with disabilities.

*b) Mention any important findings that have influenced the direction of the CRP's work, and how things have changed*

[Previous research](#) related to employment of rural youth and other members of rural households pointed to variable results on the proportion working off farm and the types of paid work they were engaged in. This was found to be due in part to differences in the way information is collected in surveys (e.g. some surveys only ask for primary occupation, as opposed to all occupations). Thus, in 2019 PIM embarked on a review of nationally representative surveys and began to pilot alternative questions that could be incorporated into surveys.

*c) Have any problems arisen in relation to youth issues or integrating youth into the CRP's research?*

Integrating age dimensions into global and national models remains a challenge.

### 1.3.3 Capacity development

A total of 10,414 people were trained by PIM in 2019 (6,878 men and 3,536 women) ([Table 7](#), [Evidence G](#)).

The Program for Biosafety Systems' team continued to develop the capacity of governments to implement science-based biosafety systems in Ethiopia, Ghana, Kenya, Malawi, [Nigeria](#), Tanzania and Uganda. The [IFPRI Nigeria Country program](#) team provided training to Federal Ministry of Agriculture and Rural Development staff in [monitoring and evaluation](#), [policy communications](#) and national and regional agricultural policies. Government partners in Bangladesh, Egypt, Jordan and Rwanda were trained on economywide modelling tools.

[The Kaleidoscope Model](#) was [incorporated](#) into a training for USAID's Bureau for Resilience and Food Security staff.

Four fellows were selected for the Structural Transformation of African Agriculture and Rural Spaces ([STAARS](#)) program. In partnership with Westminster International University in Tashkent, Uzbekistan, 24 students received [training](#) in advanced econometric analysis. Ten participants attended a one-week workshop on using Living Standards Measurement Studies data for research on rural youth in Africa.

In India, [Collaborating for Resilience](#) contributed to the Foundation for Ecological Security (FES)'s capacity to implement inclusive multiactor platforms through a [workshop](#) complemented by coaching sessions, resulting in implementation of more inclusive planning processes. International Land Coalition launched a [community of practice on multistakeholder platforms](#), with participating practitioners from over 30 countries; [Collaborating for Resilience](#) facilitated this process and co-convened the [launch workshop](#).

The Gender Platform co-convened the "[Seeds of Change](#)" conference (PIM sponsored 60 CGIAR participants). The Platform completed a synthesis on [gender transformative approaches](#) to inform policy dialogues and programs of the United Nations Rome-based agencies; the [product](#) was presented at an inception workshop. The eight [webinars](#) held by the Platform were attended by 350 people. Approximately the same number of people attended the seven [webinars](#) organized by the PIM Program Management Unit.

#### 1.3.4 Climate change

A [study](#) of the impact of climate change on diets found that the net effect of increasing concentrations of atmospheric CO<sub>2</sub> will [reduce the availability of nutrients](#) worldwide. Other achievements include the release of evidence on climate impacts and adaptation options in the [Latin America and Caribbean region](#), impacts of climate change on [crop yields in Ethiopia](#), and impacts of climate change on [growth in Malawi, Mozambique and Zambia](#). A PIM [webinar](#) explored the relationships between climate resilience and job prospects for rural youth in developing countries.

Modeling of climate change impacts informed the work of the [Global Commission on Adaption](#), [IFAD's 2019 Rural Development Report](#), [the Crops to End Hunger Initiative and a learning session for Bill Gates and senior leadership of the Bill & Melinda Gates Foundation](#). PIM research is extensively cited in the Intergovernmental Panel on Climate Change 2019 [Special Report](#) on climate change and land.

Smallholder farmers are increasingly exposed to weather extremes but lack access to affordable crop insurance products. In 2019, PIM continued to analyze the feasibility of picture-based insurance in [India](#) and Kenya. A new [project](#) in Kenya is testing the potential for bundling several risk management innovations (drought-tolerant seeds, weather insurance and advisory services) to create a viable business model for the private sector.

A global [study](#) of multistakeholder platforms targeted landscape changes to support climate mitigation as part of [Norway's International Climate and Forest Initiative](#).

A study in Vietnam funded through the Gender Platform is exploring how men's and women's roles in agriculture are evolving in response to climate change and implications for adoption of gender-inclusive climate-resilient technologies.

## 2. Effectiveness and efficiency

### 2.1 Management and governance

The program's 2019-2021 participatory priority-setting [exercise](#) was completed.

The TORs of all PIM entities (Independent Steering Committee, Management Committee, flagship leaders, Center representatives, etc.) were [updated](#) and the program's policies and procedures were improved. Guidelines for the annual Window 1-2 budget allocation process were created and received positive feedback from partners. The carryover policy (established at the end of 2018 to allow carryover of selected Window 1-2 allocations from one year to the next) was [broadened](#) to include other financial management guidelines, and rules were added to account for the multiplicity of cases. The PIM policy regarding ethical review for research involving human subjects was [updated](#) to enforce Institutional Review Board compliance of all Window 1-2-funded activities beginning in 2020.

The results of the CGIAR Performance Standards pilot assessment show that PIM is in full compliance with the Standards (the only "failed" mark assigned by the assessors is linked to the minutes of Management Committee meetings not being available online, which is due to the confidential nature of some of the information they contain).

At the end of 2019, two members of the ISC stepped down from the committee owing to conflicts of interest arising from their new positions, and a process started to replace them.

In February 2019, the position of Center representative on the Management Committee rotated from CIMMYT to Bioversity International.

The value chains flagship's leadership team was reconfigured to streamline flagship management. A change occurred in the leadership of the natural resource governance flagship due to retirement of one of the flagship's co-leaders.

PIM made plans for the transition of the CGIAR Gender Platform (hosted in [PIM's Flagship 6](#) from 2017-2019) to a self-standing Platform.

Significant turnover occurred in the flagship manager positions; the PMU trained new staff to ensure continuity in this key role.

### 2.2 Partnerships

#### 2.2.1. Highlights of external partnerships (see [Table 8](#))

PIM continued to nurture strong partnerships with the Governments of Bangladesh, China, Egypt, Ethiopia, Ghana, India, Kenya, Malawi, Myanmar, Nigeria, Papua New Guinea, Pakistan, the Philippines, Rwanda and Uganda to support their policy development processes.

A partnership [started](#) with the [Energy Research Centre](#) on [regional responses to climate change in Southern Africa](#). PIM and USAID's Feed the Future [Developing Local Extension Capacity](#) project led by Digital Green organized a [knowledge event](#) to chart a course for future agricultural extension. PIM and the Gender Platform partnered with [Integrated Seed Sector Development-Africa](#) on leadership of its components on [seed policies](#) and [gender](#).

Studies to strengthen value chains involve several private sector partners such as the Ethiopian Millers Association, Albay private firm (Guatemala), the industry-led Global Aquaculture Alliance, the COOPEDELSI and COORDID cooperatives in Senegal and 100 food retailers in Uganda. Efforts to use ICTs to improve agricultural insurance options expanded into [Kenya](#) with Agricultural Climate Risk Enterprise Africa ([ACRE Africa](#)), Wageningen University and Research and the Kenyan Agricultural and Livestock Research Organization; [African Risk Capacity](#) and [R4 Rural Resilience Initiative](#) also came on board as new partners in the work on insurance.

The team continued to support FAO's [Technical Platform](#) on measurement and reduction of food losses and contributed to FAO's [State of Food and Agriculture 2019 report](#) "Moving Forward on Food Loss and Waste Reduction". The [collaborative research program on cash transfers and intimate partner violence](#) comprising IFPRI, the University of North Carolina, the London School of Hygiene and Tropical Medicine, the UNICEF Office of Research and Johns Hopkins Bloomberg School of Public Health disseminated evidence that informed United Nations organizations and DFID.

PIM's engagement with the [Foundation for Ecological Security](#) involves the University of Colorado and Arizona State University as learning partners, respectively on M&E and design of experimental games.

#### 2.2.2. Cross-CGIAR partnerships (see [Table 9](#))

The [CGIAR-wide initiative](#) coordinated by PIM to inform strategic decision making about future food systems made progress; the publication of the CGIAR foresight report is on track for 2020.

PIM continued to collaborate with RTB and the Gender Platform on analysis of regulations on [vegetatively propagated planting material in Kenya](#) to help the government facilitate farmers' access to better seed.

PIM organized a cross-CGIAR [workshop](#) and launched a [call for proposals](#) to foster collaborative research on the political economy of food systems.

The PIM-supported CGIAR community of practice on value chains met for a second [workshop](#) to share innovative methods. Work was launched in partnership with FISH, MAIZE and WHEAT to understand how certification can enhance food quality and a collaboration started with A4NH on value chain interventions to reduce the cost of nutritious food including vegetables in Ethiopia.

The FTA-PIM-WLE collaboration with the Foundation for Ecological Security in India [advanced](#), with integration of CGIAR scientists into several pillars of the Promise of the Commons initiative and awarding of grants to scale up CGIAR innovations.

With coordination from the Gender Platform, CGIAR gender researchers prepared chapters of a 2020 book which synthesizes recent research and sets an agenda for future [gender research in agriculture and natural resource management](#).

Collaboration between the Gender and Big Data Platforms [expanded](#), with an investigation of how gender is described, analyzed and reported in datasets and a study which assesses whether mobile phone data can be used as predictors of women's empowerment in Uganda.

Ten Centers and the CGIAR System Management Office (SMO) participated in a CGIAR [workshop](#) on scaling co-organized by PIM to enhance collaboration around this key cross-cutting topic.

PIM joined forces with the SMO and the CGIAR Standing Panel on Impact Assessment to assess CGIAR's policy influence and innovations.

### **2.3 Intellectual assets**

*a) Have any intellectual assets been strategically managed by the CRP (together with the relevant Center) this year? E.g. taking out intellectual property rights, licensing, new innovative practices.*

N/A

*(b) If relevant, indicate any published patents and/or plant variety right applications (or equivalent) associated with intellectual assets developed in the CRP and filed by Centers and/or partners involved in the CRP, giving a name or number or link to identify them.*

N/A

*(c) List any critical issues or challenges encountered in the management of intellectual assets in the context of the CRP (or put N/A).*

N/A

### **2.4 Monitoring, evaluation, impact assessment and learning (MELIA) (see [Table 10](#))**

The study [Assessment of Outcomes Based on the Use of PIM-Supported Foresight Modeling Work, 2012-2018](#) finds that PIM's foresight work has informed decisions of multilateral organizations (e.g. World Bank, Inter-American Development Bank), donors (e.g. USAID) and national governments (e.g. Colombia and the Philippines) as well as the CGIAR 2017-2022 portfolio – with inclusion of outputs of the PIM modeling in the Phase 2 proposals for the FISH, GLDC, LIVESTOCK, RTB and WHEAT CGIAR Research Programs. Foresight research contributed significantly to the global debate on food system futures and sustainable diets (11 of the team's publications ranked in the top 5% of all outputs scored by Altmetric). In addition, the numerous trainings carried out by PIM's foresight team have expanded the community of foresight modelers.

The study on "Contributions of the PIM-supported Social Accounting Matrices' Databases, Tools, and Outputs to Policy and Program Decision Making" was delayed due to personal circumstances and will be published in 2020.

A study was launched in collaboration with the SMO to analyze CGIAR's policy contributions and innovations. A study on "Impact Assessment of the Ethiopia Direct Seed Marketing Program" was designed, to be implemented in 2020.

### **2.5 Efficiency**

The implementation of the program's revised financial management policy resulted in increased transaction costs, and in 2020 the PMU and Management Committee will re-evaluate the carryover policy.

The data available in the MARLO information system informed the 2018 reporting process, the 2020 planning process and the implementation of the carryover policy from 2019 to 2020, allowing the PMU to more closely monitor progress on delivery in support of PIM management's decisions. The PMU continues to interact with the MARLO group to enhance the tool's functionalities and user-friendliness. Significant efficiency gains could be achieved for all MARLO-using CRPs by 1) adding a business intelligence module to MARLO, and 2) improving the way cross-CRP activities and funding sources are recorded in MARLO.

## 2.6 Management of risks

- *Institutional risks*

The risk of research involving human subjects not meeting ethical standards was addressed by the [update](#) of the PIM policy on Institutional Review Board review.

To address the risk of inadequate research quality, the planning documents for Window 1-2-funded activities include detailed information about research methods and the Director and PMU carry out a technical review of this documentation before approving the activity plans.

Risks related to financial accountability are addressed through compliance with the CGIAR Performance Standards.

- *Programmatic risks*

With the Gender Platform moving to a separate entity in 2020, attention was given to the need for continued online presence of the Platform's 2017-2019 activities as well as to the branding of forthcoming outputs initiated under PIM. PIM management has initiated discussions with the new GENDER\_Platform's interim leadership about this.

- *Contextual risks*

In the context of the CGIAR reform, there is a risk that policy research be less prominently included in the post-2021 portfolio. To address this risk, PIM management will strive to demonstrate how PIM's research has led to outcomes and impact and proactively engage with partners in the development of the new CGIAR portfolio.

## 2.7 Use of Window 1-2 funding

PIM invested in two major publications involving all CGIAR Centers: a CGIAR foresight report on food system futures and a [forward-looking synthesis of CGIAR's contribution to gender equality](#). Both are scheduled for release in 2020. Other syntheses were prepared on CGIAR value chains research, scaling through value chains within CGIAR, causes and consequences of migration, [effects of safety net programs on women in Africa](#), effectiveness of multistakeholder platforms, and experimental games for natural resource management. W1-2 funds supported collaborative research on seed systems, extension methods, value chain interventions, landscape restoration, and the [feminization of agriculture](#).

W1-2 funding also contributed to strengthening CGIAR social science research through supporting participation of CGIAR researchers in the [Seeds of Change conference](#), in the [International Association for the Study of the Commons conference](#), and in a [workshop](#) on CGIAR collaboration on political economy of food systems research. PIM organized a session on [the Role of Institutional Capacity Development in Africa's Agricultural Transformation](#) at the African Association of Agricultural Economists conference and a [session](#) on Restoring Forests, Restoring Communities at the Global Landscapes Forum meeting.

Research was launched to study how value chain interventions can enhance food quality (with several other CRPs). Research to better understand opportunities to expand employment was broadened. PIM teams continued to update and upgrade foresight and other *ex ante* impact assessment tools, which value to governments and other users has been [demonstrated](#).

### 3. Financial summary

The CGIAR 2019 Financing Plan communicated to Centers on December 21, 2018 showed an indicative amount of \$15.1M W1-2 funds for PIM. On January 17, 2019 the System Management Office (SMO) confirmed an additional W1-2 allocation of \$2M to the CGIAR Gender Platform housed in PIM, for a total of \$17.1M. PIM was requested to submit a revised Plan of Work and Budget showing that updated amount. PIM initially programmed close to \$20M through adding \$2.2M from prior years' unallocated/unspent funding and allowing \$0.6M carryover from 2018 unspent funds. Out of these \$20M, it was agreed by the PIM Management Committee that up to \$1.8 million would be available for the Gender Platform's activities.

PIM received a final W1-2 total allocation of \$15.8M (92% of the indicative Financing Plan amount including the Gender Platform allocation). In August 2019, the SMO informed PIM management that two Window 2 funders would not allocate funds to the Gender Platform in 2019. The corresponding reduction by \$1.4M in the funding available for the Gender Platform prompted PIM management to reassess the 2019 plans for gender activities. The Management Committee agreed to draw on unspent amounts from previous years to cover all of the Gender Platform's commitments (i.e. coordination by KIT; support for CGIAR communities of practice: gender and big data, gender and water, gender and breeding; contributions for participation of CGIAR scientists in the [Seeds of Change conference](#); coordination of CGIAR publication on gender and agriculture). Allocations to six proposals selected in August 2019 through a call for collaborative research on gender dynamics in value chains – a major expenditure item not yet officially committed – were put on hold. Taking into account these adjustments, the total W1-2 amount programmed by PIM through the 2019 Program Participant Agreements is \$19.3M.

W1-2 expenditures total \$17.11M (108% of the realized Financing Plan and 89% of the amount programmed through the Program Participants Agreements). Window 3/bilateral expenditures were \$4M lower than the projected \$45M. In terms of actual expenses, W1-2 accounted for 29% of the portfolio and W3/bilateral for 71%.

See [Table 13](#) for information about budgets and expenditures by flagship. The major variance between planned and actual W1-2 expenditure is in Flagship 6, reflecting the unanticipated reduction in W2 funds for the Gender Platform.

## Part B. TABLES

Table 1: Evidence on progress towards SRF targets

| SLO target (2022)  | Brief summary of new evidence of CGIAR contribution | Expected additional contribution before end of 2022   |
|--|---|---|
| 100 million more farm households have adopted improved varieties, breeds, trees, and/or management practices | No new evidence in 2019                             | PIM is undertaking an assessment of the adoption of improved maize and wheat varieties as a result of the expansion of the Direct Seed Marketing program in Ethiopia. This study was designed in 2019 and implementation started in 2020. PIM research has <a href="#">informed</a> the scaling up of the program, which the government reports reached over 1.4 million farming households in 2018. In addition, in 2020-2021, PIM teams will investigate the adoption of innovative extension approaches tested by PIM. |
| 30 million people, of which 50% are women, assisted to exit poverty  | No new evidence in 2019                             | PIM plans to conduct <i>ex post</i> impact assessment studies to estimate the poverty-reducing effects of safety net programs in countries where PIM has assisted decision makers in improving these programs. Several synthesis reviews and randomized control trial studies completed in 2019 will contribute to this.  |
| Improve the rate of yield increase for major food staples from current <1% to 1.2-1.5% per year              | No new evidence in 2019                             | PIM has launched a study of the productivity impacts of the Direct Seed Marketing program on maize and wheat (Ethiopia). PIM studies on the use of improved extension methods will address productivity as well as adoption.  |
| 30 million more people, of which 50% are women, meeting minimum dietary energy requirements                  | No new evidence in 2019                             | PIM plans to conduct <i>ex post</i> impact assessment studies to estimate the effects of safety net programs on food consumption in countries where PIM has assisted decision makers in improving these programs. Several synthesis reviews and randomized control trial studies completed in 2019 will contribute to this.   |
| 150 million more people, of which 50% women, without deficiencies in one or more essential micronutrients    | No new evidence in 2019                             |   |
| 10% reduction in women of reproductive age who are consuming less than the adequate number of food groups    | No new evidence in 2019                             |   |
| 5% increase in water and nutrient efficiency in agroecosystems   | N/A   |   |

| SLO target (2022)   | Brief summary of new evidence | Expected additional contribution before end of 2022  |
|---|-------------------------------|--|
| 5% reduction in 'agriculturally'-related greenhouse gas emissions | No new evidence in 2019       |  |
| 55 M ha degraded land area restored                               | No new evidence in 2019       | PIM will undertake a study to assess its contribution to restoration of degraded land in India and East Africa in 2020-2021. |
| 2.5 M ha forest saved from deforestation                          | No new evidence in 2019       |  |

Table 2: List of policy contributions

\*Stage 1: Research taken up by next user \* Stage 2: Policy/law etc. enacted \* Stage 3: Evidence of impact on people and/or natural environment of the changed policy

| Title of policy, legal instrument, investment or curriculum                                     | Description of policy, legal instrument, investment or curriculum  | Stage of maturity | Link to sub-IDOs  | Cross-cutting marker scores |                  |                 |                  | Link to OICR             |
|---|--|-------------------|---|-----------------------------|------------------|-----------------|------------------|--------------------------|
|   |  |                   |   | Gender                      | Youth            | Capdev          | Climate change   |                          |
| <b>Flagship 1 – Technological Innovation and Sustainable Intensification</b>                    |  |                   |   |                             |                  |                 |                  |                          |
| 455 - Rice Farmer Financial Assistance in the Philippines                                       | The Rice Farmer Financial Assistance is an unconditional cash transfer to 600,000 small rice farmers adversely affected by the 2019 Rice Tariffication Act, which was implemented following PIM recommendations. | Stage 1           | <ul style="list-style-type: none"> <li>Conducive agricultural policy environment (<i>primary</i>)</li> </ul>  | 0 - Not Targeted            | 0 - Not Targeted | 1 - Significant | 1 - Significant  | <a href="#">OICR2652</a> |
| 456 - Crop Diversification Strategy in the Philippines  | With PIM support, the Department of Agriculture is crafting a policy to help farmers with low rice productivity either diversify their production or completely shift to more profitable, high-value crops.      | Stage 1           | <ul style="list-style-type: none"> <li>Conducive agricultural policy environment (<i>primary</i>)</li> <li>Diversified enterprise opportunities</li> </ul>  | 0 - Not Targeted            | 0 - Not Targeted | 1 - Significant | 1 - Significant  | <a href="#">OICR2652</a> |
| 453 - Regulations, guidelines and procedures for seed certification system in Afghanistan       | Collaboration with Afghanistan's Ministry of Agriculture, Irrigation and Livestock led to the release of National Seed Quality Control Standards and General Guidelines for Seed Certification.                  | Stage 2           | <ul style="list-style-type: none"> <li>Increased conservation and use of genetic resources (<i>primary</i>)</li> <li>Conducive agricultural policy environment</li> </ul>   | 0 - Not Targeted            | 0 - Not Targeted | 1 - Significant | 0 - Not Targeted | <a href="#">OICR3311</a> |
| 457 - Investment from the Government of Ethiopia in digitalizing agricultural advisory services | In 2019, the Government of Ethiopia decided to invest USD 17.5 million in the digitalization of agricultural advisory services. This investment was influenced by PIM research.                                  | Stage 2           | <ul style="list-style-type: none"> <li>Closed yield gaps through improved agronomic and animal husbandry practices (<i>primary</i>)</li> <li>Improved access to financial and other services</li> <li>Increase capacity of beneficiaries to adopt research outputs</li> </ul> | 1 - Significant             | 0 - Not Targeted | 2 - Principal   | 0 - Not Targeted | <a href="#">OICR3261</a> |

| Title of policy, legal instrument, investment or curriculum   | Description of policy, legal instrument, investment or curriculum  | Stage of maturity | Link to sub-IDOs  | Cross-cutting marker scores |                  |                  |                  | Link to OICR             |
|---|--|-------------------|---|-----------------------------|------------------|------------------|------------------|--------------------------|
|   |  |                   |   | Gender                      | Youth            | Capdev           | Climate change   |                          |
| 440 - General release of the first genetically-engineered crop in Nigeria (pod borer resistant cowpea) approved by the Nigerian authorities | The first genetically-engineered crop in Nigeria (insect-resistant cowpea) was approved for general release following an ex ante assessment and capacity building on regulatory issues by the Program for Biosafety Systems. | Stage 2           | <ul style="list-style-type: none"> <li>Adoption of CGIAR materials with enhanced genetic gains (<i>primary</i>)</li> </ul>  | 0 - Not Targeted            | 0 - Not Targeted | 2 - Principal    | 0 - Not Targeted | <a href="#">OICR3276</a> |
| <b>Flagship 2 – Economywide Factors Affecting Agricultural Growth and Rural Transformation</b>  |  |                   |   |                             |                  |                  |                  |                          |
| 119 - USAID Feed the Future Target Country Graduation Policy  | This policy guides the selection of countries to be included in USAID's Feed the Future initiative. IFPRI developed the three main indicators used for assessing country progress.   | Stage 2           | <ul style="list-style-type: none"> <li>Conducive agricultural policy environment (<i>primary</i>)</li> <li>Increased capacity for innovation in partner development organizations and in poor and vulnerable communities</li> </ul> | 0 - Not Targeted            | 0 - Not Targeted | 1 - Significant  | 0 - Not Targeted | <a href="#">OICR2675</a> |
| 382 - Kenya's National Agricultural Investment Plan for 2019-2024   | PIM's <i>ex ante</i> economywide analyses informed Kenya's National Agricultural Investment Plan (i.e. the main planning document for the agricultural sector) for 2019-2024.  | Stage 2           | <ul style="list-style-type: none"> <li>Conducive agricultural policy environment (<i>primary</i>)</li> </ul>  | 0 - Not Targeted            | 0 - Not Targeted | 0 - Not Targeted | 0 - Not Targeted | <a href="#">OICR3212</a> |
| 383 - Kenya's Agricultural Sector Transformation and Growth Strategy for 2019-2029  | PIM's <i>ex ante</i> economywide analyses informed Kenya's Agricultural Sector Transformation and Growth Strategy for 2019-2029. This strategy conveys the country's new vision for agriculture.                             | Stage 2           | <ul style="list-style-type: none"> <li>Conducive agricultural policy environment (<i>primary</i>)</li> </ul>  | 0 - Not Targeted            | 0 - Not Targeted | 0 - Not Targeted | 0 - Not Targeted | <a href="#">OICR3212</a> |
| 422 - Rwanda's National Strategy for Transformation   | PIM data, models and analysis informed Rwanda's National Strategy for Transformation, which covers all economic sectors including agriculture.   | Stage 2           | <ul style="list-style-type: none"> <li>Conducive agricultural policy environment (<i>primary</i>)</li> </ul>  | 0 - Not Targeted            | 0 - Not Targeted | 1 - Significant  | 0 - Not Targeted | <a href="#">OICR3260</a> |

| Title of policy, legal instrument, investment or curriculum   | Description of policy, legal instrument, investment or curriculum  | Stage of maturity | Link to sub-IDOs  | Cross-cutting marker scores |                  |                  |                  | Link to OICR             |
|---|--|-------------------|---|-----------------------------|------------------|------------------|------------------|--------------------------|
|   |  |                   |   | Gender                      | Youth            | Capdev           | Climate change   |                          |
| 19 – Reform of Agricultural Mechanisation Services Enterprise Centers program in Ghana  | Recommendations from PIM were adopted to make Ghana’s main agricultural mechanization program (Ghana’s Agricultural Mechanization Service Enterprise Centers) more efficient and inclusive.                                    | Stage 2           | <ul style="list-style-type: none"> <li>Conducive agricultural policy environment (<i>primary</i>)</li> </ul>  | 0 - Not Targeted            | 0 - Not Targeted | 1 - Significant  | 0 - Not Targeted | <a href="#">OICR2189</a> |
| <b>Flagship 3 – Inclusive and Efficient Value Chains</b>  |  |                   |   |                             |                  |                  |                  |                          |
| 454 - Renewable Energy Directive (EU) 2018/2001 on the promotion of the use of energy from renewable sources  | This Directive, adopted in December 2018 by the European Parliament and the Council of Ministers of the European Union, included provisions that were informed by IFPRI’s research and technical support.                      | Stage 2           | <ul style="list-style-type: none"> <li>Enabled environment for climate resilience (<i>primary</i>)</li> <li>Conducive agricultural policy environment</li> </ul>  | 0 - Not Targeted            | 0 - Not Targeted | 0 - Not Targeted | 2 - Principal    | <a href="#">OICR3320</a> |
| 445 - Punjab Agriculture Marketing Regulatory Authority Act and Ordinance (with Flagship 2)   | The Government received support from IFPRI’s Pakistan program for issuing the Punjab Agriculture Marketing Regulatory Authority Act (2018) and Ordinance (2019), which aim to create a competitive agricultural market sector. | Stage 2           | <ul style="list-style-type: none"> <li>Increased value capture by producers (<i>primary</i>)</li> <li>Reduced market barriers</li> <li>Conducive agricultural policy environment</li> </ul>   | 0 - Not Targeted            | 0 - Not Targeted | 0 - Not Targeted | 0 - Not Targeted | <a href="#">OICR3282</a> |
| <b>Flagship 5 – Governance of Natural Resources</b>   |  |                   |   |                             |                  |                  |                  |                          |
| 460 - Investment of USD 7.15 million by the Government of Tanzania (through Global Environment Facility) including expansion of joint village land use planning in five districts | PIM supported the piloting of joint village land use planning. The Government of Tanzania is expanding the approach in agro-pastoral areas of five districts through a Global Environment Facility investment.                 | Stage 2           | <ul style="list-style-type: none"> <li>Increased capacity for innovation in partner development (<i>primary</i>) organizations and in poor and vulnerable communities</li> <li>Conducive agricultural policy environment</li> <li>Enhanced individual capacity in partner research organizations through training and exchange</li> </ul> | 1 - Significant             | 0 - Not Targeted | 1 - Significant  | 0 - Not Targeted | <a href="#">OICR2631</a> |

| Title of policy, legal instrument, investment or curriculum  | Description of policy, legal instrument, investment or curriculum   | Stage of maturity | Link to sub-IDOs  | Cross-cutting marker scores |                  |                  |                  | Link to OICR             |
|--|---|-------------------|---|-----------------------------|------------------|------------------|------------------|--------------------------|
|  |   |                   |   | Gender                      | Youth            | Capdev           | Climate change   |                          |
| 461 - Adoption by the Government of Ethiopia of woreda/district participatory land use planning for pastoral areas   | In 2019 the Government of Ethiopia launched manuals on woreda participatory land use planning for pastoral areas, an approach developed by ILRI and partners with support from PIM and LIVESTOCK.                   | Stage 1           | <ul style="list-style-type: none"> <li>Increased resilience of agro-ecosystems and communities, especially those including smallholder (<i>primary</i>)</li> <li>More productive and equitable management of natural resources</li> <li>Increased access to productive assets, including natural resources</li> </ul>                     | 0 - Not Targeted            | 0 - Not Targeted | 1 - Significant  | 0 - Not Targeted | <a href="#">OICR3301</a> |
| 458 - Technical norms for renewal of forest concessions in the Maya Biosphere Reserve, Guatemala   | Evidence of the socioeconomic performance of community forest concessions in the Maya Biosphere Reserve informed the revision of technical norms for concession renewal by Guatemala's Council for Protected Areas. | Stage 2           | <ul style="list-style-type: none"> <li>More productive and equitable management of natural resources (<i>primary</i>)</li> <li>Increased access to productive assets, including natural resources</li> <li>Gender-equitable control of productive assets and resource</li> </ul>  | 1 - Significant             | 1 - Significant  | 0 - Not Targeted | 0 - Not Targeted | <a href="#">OICR3302</a> |
| 459 - Rural game incorporated in courses on natural resource governance at Wageningen University and Research (Netherlands) and Ubon Ratchathani University (Thailand) | The Rulal board game developed by IWMI with PIM support was incorporated in courses on natural resource governance at Wageningen University and Research (Netherlands) and Ubon Ratchathani University (Thailand).  | Stage 1           | <ul style="list-style-type: none"> <li>Enhanced individual capacity in partner research organizations through training and exchange (<i>primary</i>)</li> <li>Conducive agricultural policy environment</li> <li>Increased capacity for innovation in partner development organizations and in poor and vulnerable communities</li> </ul> | 0 - Not Targeted            | 0 - Not Targeted | 2 - Principal    | 0 - Not Targeted | <a href="#">OICR3312</a> |

| Title of policy, legal instrument, investment or curriculum                     | Description of policy, legal instrument, investment or curriculum   | Stage of maturity | Link to sub-IDOs   | Cross-cutting marker scores |                  |                 |                  | Link to OICR             |
|---|---|-------------------|--|-----------------------------|------------------|-----------------|------------------|--------------------------|
|   |   |                   |  | Gender                      | Youth            | Capdev          | Climate change   |                          |
| 463 - Scaling up of payments for agrobiodiversity conservation services in Peru | Based on PIM's pilot work on payments for agrobiodiversity conservation services, Peru's Ministry of Environment is scaling up the approach into four regions through a Global Environment Facility grant.              | Stage 2           | <ul style="list-style-type: none"> <li>Increased genetic diversity of agricultural and associated landscapes (<i>primary</i>)</li> <li>Gender-equitable control of productive assets and resources</li> <li>More productive and equitable management of natural resources</li> </ul> | 1 - Significant             | 0 - Not Targeted | 1 - Significant | 0 - Not Targeted | <a href="#">OICR3325</a> |
| <b>Flagship 6 – Cross-cutting Gender Research and Coordination</b>              |   |                   |  |                             |                  |                 |                  |                          |
| 437 - Nigeria's National Gender Policy in Agriculture (with Flagship 2)         | Outputs of IFPRI's Nigeria Country Program informed Nigeria's National Gender Policy in Agriculture, which promotes the use of gender-sensitive and responsive approaches and equitable access to productive resources. | Stage 2           | <ul style="list-style-type: none"> <li>Gender-equitable control of productive assets and resources (<i>primary</i>)</li> <li>Conducive agricultural policy environment</li> <li>Improved capacity of women and young people to participate in decision-making</li> </ul>             | 2 - Principal               | 1 - Significant  | 1 - Significant | 0 - Not Targeted | <a href="#">OICR3191</a> |

Table 3: List of outcome/impact case reports

\*Stage 1: CGIAR research has contributed to changed discourse and/or behavior among key actors

\*Stage 2: CGIAR research has contributed to documented policy and practice change by key actors

\*Stage 3: Policy and/or practice changes influenced by CGIAR research has led to impacts at scale or beyond the direct CGIAR sphere of influence

| Title of outcome/Impact case report (OICR)   | Link to full OICR    | Stage of maturity | Status  |
|--|----------------------|-------------------|---|
| <b>Flagship 1 – Technological Innovation and Sustainable Intensification</b>   |                      |                   |   |
| OICR3205 - Foresight analysis informs strategic decision making of countries, CGIAR and the donor community  | <a href="#">Link</a> | Stage 1           | New outcome/impact case                               |
| OICR2652 - PIM research informs agricultural policies aimed at ensuring the long-term success of the 2018 Rice Tariffication Act in the Philippines  | <a href="#">Link</a> | Stage 2           | Updated outcome/impact case at same stage of maturity |
| OICR3311 - Seed regulations and certification system strengthened in Afghanistan   | <a href="#">Link</a> | Stage 2           | New outcome/impact case                               |
| OICR3261 - A digital agricultural extension platform to boost adoption of improved technologies and practices in Ethiopia  | <a href="#">Link</a> | Stage 2           | New outcome/impact case                               |
| OICR3276 - Commercial release of genetically engineered insect resistant cowpea in Nigeria informed by <i>ex ante</i> modelling and capacity building conducted by IFPRI's Program for Biosafety Systems | <a href="#">Link</a> | Stage 2           | New outcome/impact case                               |
| <b>Flagship 2 – Economywide Factors Affecting Agricultural Growth and Rural Transformation</b>   |                      |                   |   |
| OICR2675 - High-level indicators developed by PIM assist USAID in targeting food security investments and tracking progress of the Global Food Security Strategy in focal countries                      | <a href="#">Link</a> | Stage 2           | Updated outcome/impact case at new stage of maturity  |
| OICR3208 - USAID Bureau for Resilience and Food Security staff trained to use to the Kaleidoscope Model for Food Security Policy Change  | <a href="#">Link</a> | Stage 2           | New outcome/impact case                               |
| OICR3212 - Improved evidence-base for Kenya's Agricultural Sector Transformation and Growth Strategy and National Agricultural Investment Plan   | <a href="#">Link</a> | Stage 2           | New outcome/impact case                               |
| OICR3260 - Improved evidence-base for Rwanda's National Strategy for Transformation and Vision 2050  | <a href="#">Link</a> | Stage 2           | New outcome/impact case                               |
| OICR2189 - Reform of Ghana's main agricultural mechanization program to better meet the needs of smallholder farmers   | <a href="#">Link</a> | Stage 2           | Updated outcome/impact case at new stage of maturity  |
| OICR3303 - Use of MAP Yemen by the government, development partners and academics: towards more effective allocation of development funding  | <a href="#">Link</a> | Stage 1           | New outcome/impact case                               |
| <b>Flagship 3 – Inclusive and Efficient Value Chains</b>   |                      |                   |   |
| OICR3320 - Reforms of European Union biofuel policies  | <a href="#">Link</a> | Stage 2           | New outcome/impact case                               |
| OICR3282 - PIM studies inform the Punjab Agriculture Marketing Regulatory Authority Act and Ordinance (Pakistan) (with Flagship 2)   | <a href="#">Link</a> | Stage 2           | New outcome/impact case                               |

| Title of Outcome/Impact Case Report (OICR)  | Link to full OICR    | Stage of maturity | Status  |
|---|----------------------|-------------------|---|
| <b>Flagship 5 – Governance of Natural Resources</b>   |                      |                   |   |
| OICR2631 - Adoption of joint village land use planning by the Government of Tanzania to increase tenure security for livestock keepers                        | <a href="#">Link</a> | Stage 2           | Updated outcome/impact case at new stage of maturity  |
| OICR3301 - Adoption of woreda participatory land use planning in pastoral areas by the Government of Ethiopia   | <a href="#">Link</a> | Stage 1           | New outcome/impact case                               |
| OICR3302 - PIM research informs the renewal of community forest concessions in the Maya Biosphere Reserve (Guatemala)   | <a href="#">Link</a> | Stage 2           | New outcome/impact case                               |
| OICR3312 - The Rulal game is used to facilitate natural resource governance in Southeast Asia and to train students in natural resource management            | <a href="#">Link</a> | Stage 1           | New outcome/impact case                               |
| OICR3335 - Experimental games scaled out to 250,000 households to improve ground and surface water governance in India  | <a href="#">Link</a> | Stage 2           | New outcome/impact case                               |
| OICR3325 - Payments for agrobiodiversity conservation scaled up in Peru   | <a href="#">Link</a> | Stage 2           | New outcome/impact case                               |
| <b>Flagship 6 – Cross-cutting Gender Research and Coordination</b>  |                      |                   |   |
| OICR2687 - Cash Transfer and Intimate Partner Violence Research Collaborative contributes to strategies of global development organizations (with Flagship 4) | <a href="#">Link</a> | Stage 1           | Updated outcome/impact case at same stage of maturity |
| OICR3192 The Women's Empowerment in Agriculture Index is used by development organizations to improve women's empowerment                                     | <a href="#">Link</a> | Stage 2           | New outcome/impact case                               |
| OICR3191 - PIM studies inform Nigeria's National Gender Policy in Agriculture (with Flagship 2)   | <a href="#">Link</a> | Stage 2           | New outcome/impact case                               |

Table 4: List of innovations

| Title of innovation, with link  | Innovation type                                    | Innovation stage   | Geographic scope  |
|---|--|--|---|
| <b>Flagship 1 – Technological Innovation and Sustainable Intensification</b>  |  |  |   |
| <a href="#">461 - Global Foresight for Food and Agriculture Tool</a>  | Research and communication methodologies and tools | Stage 3: available/ ready for uptake (AV)                        | Global  |
| <a href="#">1266 - Super Simple Land Accounting Model</a>   | Biophysical research                               | Stage 1: discovery/proof of concept (PC - end of research phase) | Global  |
| <a href="#">1267 - Expansion of FarmDESIGN, a model to examine farm household trade-offs and synergies</a>  | Social science                                     | Stage 1: discovery/proof of concept (PC - end of research phase) | Global  |
| <a href="#">52 - An approach to promote the uptake of evidence on agricultural research using strengthened relationships with national institutes and data systems</a>      | Social science                                     | Stage 2: successful piloting (PIL - end of piloting phase)       | Multinational: Ethiopia, Nigeria, Tanzania                                      |
| <a href="#">711 - Digital platform for video-based agricultural extension in Ethiopia</a>   | Research and communication methodologies and tools | Stage 4: uptake by next user (USE)                               | National: Ethiopia  |
| <b>Flagship 2 – Economywide Factors Affecting Agricultural Growth and Rural Transformation</b>  |  |  |   |
| <a href="#">1214 - Empirical assessment of the effects of investments in mechanization technologies on economies of scope (economies of diversification) at farm-level</a>  | Production systems and management practices        | Stage 1: discovery/proof of concept (PC - end of research phase) | National: Nigeria   |
| <a href="#">431 - Agricultural Investment for Development Analyzer tool designed to help governments and analysts in Northern Africa draw agricultural investment plans</a> | Social science                                     | Stage 2: successful piloting (PIL - end of piloting phase)       | Regional: Northern Africa, Western Asia   |
| <a href="#">1396 - Measures of agri-food system gross domestic product (AgGDP+) and employment (AgEMP+)</a>   | Social science                                     | Stage 4: uptake by next user (USE)                               | Global  |
| <a href="#">1074 - The Kaleidoscope Model, a practical framework for analyzing food security policy change</a>  | Social science                                     | Stage 4: uptake by next user (USE)                               | Multi-national: Ghana, Malawi, Myanmar, Nigeria, South Africa, Tanzania, Zambia |
| <a href="#">721 - Map Yemen: An online database for improving food and nutrition security in Yemen</a>  | Research and communication methodologies and tools | Stage 4: uptake by next user (USE)                               | National: Yemen   |

| Title of innovation, with link  | Innovation type | Innovation stage   | Geographic scope                         |
|---|-----------------|--|--|
| <b>Flagship 3 – Inclusive and Efficient Value Chains</b>  |                 |  |  |
| <a href="#">1451 – Effects of policy distortions on small ruminant value chains of Ethiopia</a>   | Social science  | Stage 1: discovery/proof of concept (PC - end of research phase) | National: Ethiopia                       |
| <a href="#">1189 - Methodological guide for participatory collection of gender indicators in agriculture in Latin America</a> (with Flagship 6)   | Social science  | Stage 3: available/ ready for uptake (AV)                        | Global                                   |
| <a href="#">1126 - Methods to measure and classify employment in the agri-food system in Africa south of the Sahara</a> (with Flagship 6)   | Social science  | Stage 2: successful piloting (PIL - end of piloting phase)       | Regional: Sub-Saharan Africa             |
| <a href="#">114 - Novel insurance linked credit model contingent on drought risk for Kenyan smallholders</a>  | Social science  | Stage 2: successful piloting (PIL - end of piloting phase)       | National: Kenya                          |
| <b>Flagship 4 – Social Protection for Agriculture and Resilience</b>  |                 |  |  |
| <a href="#">1221 - Evidence that school feeding reduces anemia prevalence in adolescent girls and other vulnerable household members in Uganda</a>  | Social science  | Stage 1: discovery/proof of concept (PC - end of research phase) | Sub-national: Uganda                     |
| <a href="#">110 - Research Collaborative on Cash Transfers and Intimate Partner Violence</a> (with Flagship 6)  | Social science  | Stage 4: uptake by next user (USE)                               | Multinational: Bangladesh, Ecuador, Mali |
| <a href="#">308 - Evidence that Yemen's Social Fund for Development Cash for Nutrition Program has multiple positive effects on nutrition and health of young children</a>                  | Social science  | Stage 2: successful piloting (PIL - end of piloting phase)       | National: Yemen                          |
| <a href="#">1417 - Evidence that trust and social capital are strengthened through a youth employment program in Yemen</a>  | Social science  | Stage 1: discovery/proof of concept (PC - end of research phase) | National: Yemen                          |
| <b>Flagship 5 – Governance of Natural Resources</b>   |                 |  |  |
| <a href="#">791 - Demonstrated economic benefits of community forest concessions make the case for continued community stewardship of 400,000 hectares of tropical forests in Guatemala</a> | Social science  | Stage 4: uptake by next user (USE)                               | Sub-national: Guatemala                  |
| <a href="#">1421 - Women's Land Rights Conceptual Framework</a>   | Social science  | Stage 3: available/ ready for uptake (AV)                        | Global                                   |
| <a href="#">1456 - Woreda-level participatory land use planning for pastoral areas in Ethiopia</a>  | Social science  | Stage 4: uptake by next user (USE)                               | National: Ethiopia                       |

| Title of innovation, with link   | Innovation type                                    | Innovation stage   | Geographic scope                               |
|--|--|--|--|
| <a href="#">1462 - The Rulal board game: Enabling policy practitioners and students to experience how natural resource management decisions are shaped by power relations and power dynamics</a> | Research and communication methodologies and tools | Stage 4: uptake by next user (USE)                               | Global   |
| <a href="#">97 - Collective action games to strengthen resource governance in India</a>  | Social science                                     | Stage 4: uptake by next user (USE)                               | National: India                                |
| <a href="#">319 - Contribution of community seed banks to socio-ecological resilience</a>  | Production systems and management practices        | Stage 3: available/ ready for uptake (AV)                        | Sub-national: Guatemala                        |
| <a href="#">1455 - Institutional design guide for multiactor platforms addressing natural resource governance at landscape scale</a>   | Social science                                     | Stage 2: successful piloting (PIL - end of piloting phase)       | Multinational: Cambodia, India, Uganda, Zambia |
| <a href="#">1458 - Interactive map of Participatory Models for Biodiversity Conservation</a>   | Research and communication methodologies and tools | Stage 1: discovery/proof of concept (PC - end of research phase) | Global   |
| <a href="#">1459 - JAL SUTRA: a mobile application to support facilitation of learning games on water management in India</a>  | Research and communication methodologies and tools | Stage 3: available/ ready for uptake (AV)                        | Sub-national: India                            |
| <a href="#">1470 - Payments for agrobiodiversity conservation services in Peru</a>   | Production systems and management practices        | Stage 4: uptake by next user (USE)                               | Sub-national: Peru                             |
| <b>Flagship 6 – Cross-cutting Gender Research and Coordination</b>   |  |  |  |
| <a href="#">1187 - Survey-based approaches for measuring gendered freedom of movement</a>  | Social science                                     | Stage 2: successful piloting (PIL - end of piloting phase)       | Global   |
| <a href="#">1359 - Recommendations to implement policy reforms that encourage women's participation in irrigation management in Egypt</a>  | Social science                                     | Stage 3: available/ ready for uptake (AV)                        | Sub-national: Egypt                            |

Table 5: Summary of status of planned outcomes and milestones

| FP | 2022 outcome   | Sub-IDOs  | Progress against 2022 outcome in 2019   | 2019 milestone   | Status of 2019 milestone | Justification for status of 2019 milestone   | Links to evidence of milestone completion; explanation for extended milestones   |
|----|--|---|---|--|--------------------------|--|--|
| 1  | Foresight models and results are used by 12 regional and national research organizations or government agencies in Africa, Asia and Latin America and global development organizations as inputs to their priority-setting | <ul style="list-style-type: none"> <li>• {primary} CC Improved forecasting of impacts of climate change and targeted technology development</li> <li>• CC Enhanced individual capacity in partner research organizations through training and exchange</li> </ul> | PIM-supported foresight modeling feeds into the production of reports that have been used by many stakeholders, such as multilateral organizations and donors (Asian Development Bank, Bill & Melinda Gates Foundation, Central America Council, Food and Agriculture Organisation, Inter-American Development Bank, International Fund for Agricultural Development, Organisation for Economic Cooperation and Development, United Nations Environmental Program, World Bank) and national governments, including in Cambodia, Colombia, Dominican Republic, Indonesia, Philippines, South Africa, United Kingdom, the United States, Uzbekistan and Vietnam (Lowder and Regmi, 2019). | Decision makers at global level use foresight knowledge products and findings in their strategies and priorities | Complete                 | The multiple outcomes from the PIM foresight work collected by Sara Lowder and Anita Regmi in their 2019 report present a strong case for the completion of the 2019 milestone. Early or mature outcomes have been documented across multilateral organizations and donors (Asian Development Bank, Bill & Melinda Gates Foundation, Central America Council, Food and Agriculture Organisation, Inter-American Development Bank, International Fund for Agricultural Development, Organisation for Economic Cooperation and Development, United Nations Environmental Program, World Bank). Analysis provided to a multidonor group in 2018 informed donor understanding and decision making in 2019 about crop breeding in the context of climate change through the Crops to End Hunger Initiative. | Lowder and Regmi report: <a href="http://ebrary.ifpri.org/cdm/ref/col/lection/p15738coll2/id/133608">http://ebrary.ifpri.org/cdm/ref/col/lection/p15738coll2/id/133608</a><br>Crops to End Hunger initiative ( <a href="https://www.cgiar.org/excellence-breeding-platform/crops-to-end-hunger/">https://www.cgiar.org/excellence-breeding-platform/crops-to-end-hunger/</a> ): the CGIAR System Council strategy document ( <a href="https://storage.googleapis.com/cgiarorg/2018/11/SC7-B_Breeding-Initiative-1.pdf">https://storage.googleapis.com/cgiarorg/2018/11/SC7-B_Breeding-Initiative-1.pdf</a> ) draws heavily on an IFPRI report to USAID (see Annex 2 pages 10-14 and 26-41) (the IFPRI report to USAID is confidential at this stage)<br>Informing strategic decision making across CGIAR and the donor community through foresight analysis, OICR 3205 in 2019 AR: <a href="https://marlo.cgiar.org/projects/PI/M/studySummary.do?studyID=3205&amp;cycle=Reporting&amp;year=2019">https://marlo.cgiar.org/projects/PI/M/studySummary.do?studyID=3205&amp;cycle=Reporting&amp;year=2019</a><br>Philippines, OICR 2652 in 2019 AR: <a href="https://marlo.cgiar.org/projects/PI/M/studySummary.do?studyID=2652&amp;cycle=Reporting&amp;year=2019">https://marlo.cgiar.org/projects/PI/M/studySummary.do?studyID=2652&amp;cycle=Reporting&amp;year=2019</a> |

| FP | 2022 outcome  | Sub-IDOs   | Progress against 2022 outcome in 2019  | 2019 milestone   | Status of 2019 milestone | Justification for status of 2019 milestone  | Links to evidence of milestone completion; explanation for extended milestones  |
|----|---|--|--|--|--------------------------|---|---|
| 1  | Studies on policies, regulations, and investment in support of agricultural science, technology, and innovation are used by key government entities in 3 CGIAR countries of collaboration | <ul style="list-style-type: none"> <li>• {primary} CC Conducive agricultural policy environment</li> <li>• CC Enhanced institutional capacity of partner research organizations</li> </ul> | The Government of Ethiopia used evidence generated by PIM to launch the Digital Agricultural Advisory Services initiative to introduce digitalized delivery and content throughout the national extension system, with support from the Bill & Melinda Gates Foundation and UK Department for International Development. The Government of Uganda, Uganda Forum for Agricultural Advisory Services and USAID have used PIM-supported studies and been active participants in PIM's efforts to strengthen extension systems in Uganda. The Program on Biosafety Systems team has continued supporting countries in improving regulatory environments and capacity for managing biotechnology, including in Ethiopia, Ghana, Nigeria, Tanzania and Uganda. | Country policy analysts use new tools for economic analysis of GM crops in 4 countries | Complete                 | The Biotechnology and Biosafety Rapid Assessment and Policy Platform team completed <i>ex ante</i> economic assessments of selected genetically engineered crops in Ethiopia, Ghana, Nigeria, Tanzania and Uganda. As an integral part of the project, IFPRI trained and assisted senior local economists in the use of the DREAM model, thus contributing to building in-country capacity in <i>ex ante</i> assessments. | <p>Infographics for Ethiopia, Ghana, Nigeria, Tanzania and Uganda: <a href="https://www.dropbox.com/sh/4qZh8r9mqyl2qur/AADmzIYhmsh0Z-LPIDErOgNia?dl=0">https://www.dropbox.com/sh/4qZh8r9mqyl2qur/AADmzIYhmsh0Z-LPIDErOgNia?dl=0</a></p> <p>Ghana: <a href="http://ebrary.ifpri.org/cdm/singleitem/collection/p15738coll2/id/133007">http://ebrary.ifpri.org/cdm/singleitem/collection/p15738coll2/id/133007</a></p> <p>Nigeria: <a href="https://doi.org/10.2499/p15738coll2.133541">https://doi.org/10.2499/p15738coll2.133541</a></p> <p>Tanzania: <a href="https://doi.org/10.2499/p15738coll2.133636">https://doi.org/10.2499/p15738coll2.133636</a></p> |

| FP | 2022 outcome   | Sub-IDOs   | Progress against 2022 outcome in 2019   | 2019 milestone  | Status of 2019 milestone | Justification for status of 2019 milestone   | Links to evidence of milestone completion; explanation for extended milestones  |
|----|--|--|---|---|--------------------------|--|---|
| 1  | Budget allocations for agricultural research exceed projections of the 2012-2016 trend in 5 CGIAR countries of collaboration | <ul style="list-style-type: none"> <li>• {primary} CC Increased capacity of partner organizations, as evidenced by rate of investments in agricultural research</li> <li>• CC Conducive agricultural policy environment</li> </ul> | As noted in the 2018 external assessment of ASTI, a number of countries have used ASTI data and analyses to support budgetary discussions. More recently, Myanmar began the design of a new master plan for the modernization of the country's research and extension system. In India ASTI has been integrated into the national science and technology information management system. In Southeast Asia and the Pacific, NARS and other national institutions are using ASTI-type data collection and analysis. Vietnam's agriculture and rural development strategy for 2020–2030 and Laos' Agriculture Development Strategy 2025 are using ASTI analyses. | Studies on impacts from increased investment and capacity in national agricultural research are used in budget planning by governments in 2 countries | Complete                 | As noted in the 2018 external assessment of the Agricultural Science and Technology Indicators (ASTI) initiative, ASTI, ASTI partners in Brazil, Mauritania, Nepal and Nigeria have used ASTI data and analyses to successfully advocate for higher agricultural R&D spending. | External assessment of the Agricultural Science and Technology Indicators (ASTI) initiative (2018): <a href="http://ebrary.ifpri.org/cdm/ref/collection/p15738coll2/id/133207">http://ebrary.ifpri.org/cdm/ref/collection/p15738coll2/id/133207</a> |

| FP | 2022 outcome   | Sub-IDOs   | Progress against 2022 outcome in 2019   | 2019 milestone  | Status of 2019 milestone | Justification for status of 2019 milestone   | Links to evidence of milestone completion; explanation for extended milestones   |
|----|--|--|---|---|--------------------------|--|--|
| 2  | Governments in at least 3 countries use tools and evidence on the economy-wide factors affecting rural transformation to develop policies that are better targeted towards raising agricultural growth and rural incomes | <ul style="list-style-type: none"> <li>• {primary} CC Conducive agricultural policy environment</li> <li>• CC Gender-equitable control of productive assets and resources</li> <li>• CC Enhanced institutional capacity of partner research organizations</li> </ul> | <p>Bangladesh: Training course for university/government on economywide analysis using social accounting matrices (SAMs) and computable general equilibrium (CGE) models.</p> <p>Egypt: Online modeling course for university/government.</p> <p>Ethiopia: Discussions with the Planning Commission for training in early 2020.</p> <p>Jordan: Technical workshop on the Agriculture Investment Data Analyzer and the regional integration assessment system of indexes.</p> <p>Kenya: use of PIM evidence for a national strategy document.</p> <p>Malawi: The World Bank's public sector governance group has used the Kaleidoscope Model in its study of drivers of agricultural policy reforms.</p> <p>Rwanda: Model training for the Ministry of Finance and use of PIM evidence for a national strategy document.</p> | Research organizations and/or universities in 4 countries use state of the art tools to evaluate economy-wide factors affecting agricultural and rural policies | Complete                 | <p>Bangladesh: Training course for university/government on economywide analysis using SAMs and CGE models.</p> <p>Egypt: Online modeling course for university/government.</p> <p>Jordan: Technical workshop on the Agriculture Investment Data Analyzer and the regional integration assessment system of indexes.</p> <p>Rwanda: Model training for the Ministry of Finance (2 of 5 workshops in 2019).</p> | <p>Bangladesh:<br/> <a href="https://www.facebook.com/event/s/gulsan-2-hotel-amari/introduction-to-economywide-analysis-using-sams-and-cge-models/327360041521997/">https://www.facebook.com/event/s/gulsan-2-hotel-amari/introduction-to-economywide-analysis-using-sams-and-cge-models/327360041521997/</a></p> <p>Egypt:<br/> <a href="https://www.dropbox.com/sh/2pipqh1wisq0v7u/AAA-9bOh81nIkV9ivDRM0aKsa?dl=0">https://www.dropbox.com/sh/2pipqh1wisq0v7u/AAA-9bOh81nIkV9ivDRM0aKsa?dl=0</a></p> <p>Jordan:<br/> <a href="http://egyptssp.ifpri.info/2019/12/01/workshop-building-tools-for-evidence-based-decision-making-in-jordan-aida-and-the-regional-integration-assessment-system-of-indexes/">http://egyptssp.ifpri.info/2019/12/01/workshop-building-tools-for-evidence-based-decision-making-in-jordan-aida-and-the-regional-integration-assessment-system-of-indexes/</a></p> <p>Rwanda:<br/> <a href="https://www.dropbox.com/sh/3bcg52re736jfyb/AAyt9lBemyfC9rFBtmYq6OSa?dl=0">https://www.dropbox.com/sh/3bcg52re736jfyb/AAyt9lBemyfC9rFBtmYq6OSa?dl=0</a></p> |

| FP | 2022 outcome   | Sub-DOs  | Progress against 2022 outcome in 2019  | 2019 milestone   | Status of 2019 milestone | Justification for status of 2019 milestone   | Links to evidence of milestone completion; explanation for extended milestones   |
|----|--|--|--|--|--------------------------|--|--|
| 2  | Governments in at least 3 CGIAR countries of collaboration use empirical evidence and quantitative methods to modify their allocation of public resource towards better targeted investments favoring inclusive agricultural growth and rural transformation | <ul style="list-style-type: none"> <li>• {primary} CC Conducive agricultural policy environment</li> <li>• CC Increased capacity of partner organizations, as evidenced by rate of investments in agricultural research</li> </ul> | <p>Ghana: The 2018 study on the agricultural mechanization service enterprise program informed program design; this is likely to make the program more inclusive, efficient, demand-driven and complementary to the private sector.</p> <p>Nigeria: Studies on public expenditures and investments in agriculture (including on R&amp;D and irrigation dams) have been presented to various stakeholders in 7 states as well as to high-level officials of the Federal Ministry of Agriculture and Rural Development and have been used to inform discussions on the new Seed Bill and other policies.</p> | Evidence on the ways that alternative (agricultural and non-agricultural) public expenditures and public services contribute to agricultural development and rural welfare considered by governments and civil society via policy fora in 2 countries (cumulative total) | Complete                 | <p>Ghana: The 2018 study on the agricultural mechanization service enterprise program informed program design; this is likely to make the program more inclusive, efficient, demand-driven and complementary to the private sector.</p> <p>Nigeria: Studies on public expenditures and investments in agriculture (including on R&amp;D and irrigation dams) completed in 2017-2019 have been presented to various stakeholders in 7 states as well as to high-level officials of the Federal Ministry of Agriculture and Rural Development and have been used to inform the discussions on the new Seed Bills and other policies.</p> | <p>Ghana, OICR 2189 in 2019 AR: <a href="https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2189&amp;cycle=Reporting&amp;year=2019">https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2189&amp;cycle=Reporting&amp;year=2019</a></p> <p>Nigeria: Email from Dr. Fatima Aliyu, Deputy Director, Cereals and Food Crops Division, Federal Ministry of Agriculture and Rural Development of Nigeria: <a href="https://www.dropbox.com/s/4kr39yzzaxy3hsl/RESEARCH%20PRESENTATION.msg?dl=0">https://www.dropbox.com/s/4kr39yzzaxy3hsl/RESEARCH%20PRESENTATION.msg?dl=0</a></p> |
| 2  | Agricultural growth and rural incomes are increased (above counterfactual trend) in 3 countries implementing evidence-based policies and/or public expenditure allocations   | <ul style="list-style-type: none"> <li>• {primary} Increased livelihood opportunities</li> <li>• Improved capacity of women and young people to participate in decision making</li> </ul>  | <p>Egypt: The Ministry of Agriculture is using PIM modeling for its upcoming agricultural strategy.</p> <p>Kenya: The Agricultural Sector Transformation and Growth Strategy and the National Agricultural Investment Plan use PIM research.</p> <p>Malawi: The National Agricultural Investment Plan uses PIM research.</p> <p>Rwanda: The National Strategy for Transformation uses PIM research.</p> <p>USAID's Global Food Security Strategy uses PIM research.</p>  | Tools and evidence on the economywide factors affecting rural transformation are used by 1 country to modify policies or expenditures that are better targeted towards raising agricultural growth and rural incomes   | Complete                 | <p>Kenya: The Agricultural Sector Transformation and Growth Strategy 2019-2029 and the National Agricultural Investment Plan 2019-2024 use PIM research.</p>   | <p>Kenya, OICR 3212 in 2019 AR: <a href="https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=3212&amp;cycle=Reporting&amp;year=2019">https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=3212&amp;cycle=Reporting&amp;year=2019</a></p>  |

| FP | 2022 outcome  | Sub-IDOs   | Progress against 2022 outcome in 2019  | 2019 milestone  | Status of 2019 milestone | Justification for status of 2019 milestone  | Links to evidence of milestone completion; explanation for extended milestones  |
|----|---|--|--|---|--------------------------|---|---|
| 3  | Evidence is used to support changes in trade policy and/or regulations with global and regional implications in 3 instances | <ul style="list-style-type: none"> <li>{primary} CC</li> </ul> Conducive agricultural policy environment | In 2019, the core support to trade negotiations was dedicated to the African Continental Free Trade Area (AfCFTA). Support was provided in different ways: directly to governments at the bilateral level (e.g. Morocco), through regional fora attended by technical staff and high-level policy makers (West and Central Africa), and at the continental level through the UN-Economic Commission for Africa and African Institute for Economic Development and Planning bodies. | 10 representatives of developing countries have strengthened capacity to represent their interests in trade negotiations related to agriculture | Complete                 | <p>The capacity of negotiators from Northern, Western and Central Africa was increased through events and workshops, bilateral mentoring and technical briefing notes:</p> <ul style="list-style-type: none"> <li>- Support to Morocco Ministry of Finance officials on trade policy agenda with focus on the AfCFTA and agreement on joining ECOWAS in 2017</li> <li>- Meeting with Central Africa negotiators</li> <li>- Briefing on the AfCFTA for African policy makers during the Regional Trade Forum for West and Central Africa</li> <li>- Dialogue with the World Trade Organization (WTO) member states on "Rethinking Food and Agricultural Trade Negotiations: Identifying Options for Progress"</li> <li>- Meetings on WTO dispute settlement with agricultural attaches</li> </ul> <p>In addition, specific outreach to African negotiators in Geneva was conducted on other global issues, such as the World Trade Organisation's preparatory work for Ministerial Conference 12 in 2020 and the impacts on Africa of trade tensions between China and the US.</p> | <p>Morocco: no public evidence of PIM role (confidential); topic covered in item #52 in the Heads of State meeting: <a href="https://www.ecowas.int/wp-content/uploads/2017/12/Final-Communiqu%C3%A9-52nd-ECOWAS-Summit-Abuja-16-Dec-17-Eng.pdf">https://www.ecowas.int/wp-content/uploads/2017/12/Final-Communiqu%C3%A9-52nd-ECOWAS-Summit-Abuja-16-Dec-17-Eng.pdf</a>; ECOWAS delayed its decision on Morocco's request to join the community due to the need to further study the implications of Morocco's adhesion, partly based on analyses generated by PIM: <a href="https://en.yabiladi.com/articles/details/72605/ecowas-54th-ordinary-session-ignores.html">https://en.yabiladi.com/articles/details/72605/ecowas-54th-ordinary-session-ignores.html</a></p> <p>Trade integration in Africa and the AfCFTA, major report on issues and trends: <a href="http://ebrary.ifpri.org/cdm/ref/collection/p15738coll2/id/133390">http://ebrary.ifpri.org/cdm/ref/collection/p15738coll2/id/133390</a></p> <p>Regional Trade Forum for West and Central Africa: no public evidence of PIM's contribution; event description: <a href="https://www.uneca.org/regional-trade-forum-west-central-africa-2019">https://www.uneca.org/regional-trade-forum-west-central-africa-2019</a></p> <p>WTO dialogue "Rethinking Food and Agricultural Trade Negotiations: Identifying Options for Progress": <a href="http://www.ictsd.org/sites/default/files/event/final_agenda_-_9_may_-_agriculture.pdf">http://www.ictsd.org/sites/default/files/event/final_agenda_-_9_may_-_agriculture.pdf</a></p> <p>Dispute settlement: no publicly available information on the meetings; background piece: <a href="https://www.ifpri.org/blog/wto-dispute-settlement-procedure-verge-crisis">https://www.ifpri.org/blog/wto-dispute-settlement-procedure-verge-crisis</a></p> <p>Dialogue with WTO member states delegates on "Trade Wars: What Implications for Agriculture in Africa and Beyond?": <a href="https://www.iisd.org/sites/default/files/meterial/Trade%20wars%20dialogue%2010Oct2019%20Final%20agenda.pdf">https://www.iisd.org/sites/default/files/meterial/Trade%20wars%20dialogue%2010Oct2019%20Final%20agenda.pdf</a>; <a href="https://www.iisd.org/sites/default/files/meterial/traore-us-china-wto-october-2019-pdf.pdf">https://www.iisd.org/sites/default/files/meterial/traore-us-china-wto-october-2019-pdf.pdf</a>; <a href="https://www.iisd.org/sites/default/files/meterial/glauber-mfp-wto-october-2019-pdf.pdf">https://www.iisd.org/sites/default/files/meterial/glauber-mfp-wto-october-2019-pdf.pdf</a></p> |

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| 3  | Research and development organizations use PIM tools to address postharvest losses in 10 countries | <ul style="list-style-type: none"> <li>• {primary} Reduce pre- and post-harvest losses, including those caused by climate change</li> </ul> | <p>Collaboration with FAO as the custodian of SDG 12.3 on food losses was further strengthened. FAO scaled up the PIM methodology for quantifying postharvest loss to two additional countries: Mozambique and Tanzania. FAO's 2019 "State of Food and Agriculture" report on food losses used PIM outputs extensively. The PIM methodology was implemented in Ghana through an SNV (Netherlands Development Organisation) project. PIM and partners tested innovations to reduce postharvest losses for beans in Guatemala and Honduras. The Global Agriculture and Food Security Program used a PIM-tested innovation in the project INVEST-H in Honduras.</p> | Partnerships are strengthened among research organizations and with development organizations to enhance use of research on postharvest losses | Complete                 | <p>The PIM measurement methodology was or is being replicated in 7 countries: China, Ecuador, Ethiopia, Ghana, Guatemala, Honduras and Peru. FAO's 2019 "State of Food and Agriculture" report on food losses extensively cites PIM's work. Data, tools and results of the PIM methodology to assess food losses are shared on the FAO technical platform on reduction of food losses. To disseminate the methodology a policy brief was published for the T20 Summit (part of the G20 process).</p> | <p>China, Ecuador, Ethiopia, Guatemala, Honduras, Peru:<br/> <a href="https://pim.cgiar.org/2018/01/12/the-reality-of-food-losses-a-new-measurement-methodology/">https://pim.cgiar.org/2018/01/12/the-reality-of-food-losses-a-new-measurement-methodology/</a><br/> Ghana: <a href="https://snv.org/update/reducing-post-harvest-loss-through-evidence-and-advocacy">https://snv.org/update/reducing-post-harvest-loss-through-evidence-and-advocacy</a><br/> Information on specific partnerships for postharvest research in MARLO and PIM activity plans (available upon request)<br/> Collaboration with FAO: SOFA 2019: <a href="http://www.fao.org/3/ca6030en/ca6030en.pdf">http://www.fao.org/3/ca6030en/ca6030en.pdf</a> (Chapters 1-2-3 and Boxes 8 and 9); PIM background papers for the SOFA: <a href="https://www.dropbox.com/s/9umm01zpxi8830p/D21082_Nakasone-Delgado-Vos_Determinants%20of%20farm%20post-harvest%20losses%20in%20developing%20countries.pdf?dl=0">https://www.dropbox.com/s/9umm01zpxi8830p/D21082_Nakasone-Delgado-Vos_Determinants%20of%20farm%20post-harvest%20losses%20in%20developing%20countries.pdf?dl=0</a>; <a href="https://www.dropbox.com/s/ll3j6lgl4dyobl1/D13684_Delgado-Schuster-Torero_Quantity%20and%20Quality%20Food%20Losses%20Across%20the%20Value%20Chain.%20A%20Comparative%20Analysis.pdf?dl=0">https://www.dropbox.com/s/ll3j6lgl4dyobl1/D13684_Delgado-Schuster-Torero_Quantity%20and%20Quality%20Food%20Losses%20Across%20the%20Value%20Chain.%20A%20Comparative%20Analysis.pdf?dl=0</a>; Platform on Food Loss and Waste: <a href="http://www.fao.org/platform-food-loss-waste/food-loss/food-loss-measurement/ifprimethodology/en/">http://www.fao.org/platform-food-loss-waste/food-loss/food-loss-measurement/ifprimethodology/en/</a><br/> T20 Summit Contribution: <a href="https://t20argentina.org/publicacion/clarifying-the-problem-of-food-loss-and-waste-to-improve-food-and-nutrition-security/">https://t20argentina.org/publicacion/clarifying-the-problem-of-food-loss-and-waste-to-improve-food-and-nutrition-security/</a></p> |

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| 3  | Research and development organizations use PIM tools for value chain analysis and development in 20 instances in 6 countries | <ul style="list-style-type: none"> <li>• {primary} Reduced market barriers</li> <li>• CC Gender-equitable control of productive assets and resources</li> <li>• CC Enhanced institutional capacity of partner research organizations</li> </ul> | In Pakistan, PIM research (with Flagship 2) informed the Punjab Agriculture Marketing Regulation Authority Act and Ordinance, which constitute a major step to increase value addition by producers and enforce fair marketing practices in the province. Workshops and dialogues on value chain interventions involving many partners and using PIM tools have been conducted in several countries. Testing of value chain innovations is being conducted with development partners in 12 countries. | Policy dialogues with key public and private stakeholders prioritize actions to address major value chain distortions or weaknesses in 5 countries | Complete                 | In Pakistan, PIM research (with Flagship 2) informed the Punjab Agriculture Marketing Regulation Authority Act and Ordinance, which constitute a major step to increase value addition by producers and enforce fair marketing practices in the province. PIM tools have been shared and used in several countries: Ecuador (reducing food loss and waste), India, Indonesia, Kenya, Myanmar and Vietnam (risk management and value chain financing) and Ethiopia (broader set of interventions). | <p>Pakistan: OICR 3282 in 2019 AR: <a href="https://marlo.cgiar.org/projects/PIM/study/Summary.do?studyID=3282&amp;cycle=Reporting&amp;year=2019">https://marlo.cgiar.org/projects/PIM/study/Summary.do?studyID=3282&amp;cycle=Reporting&amp;year=2019</a></p> <p>Ecuador: <a href="https://www.dropbox.com/s/xiubeyshkc039k9/Agenda%20de%20reuni%C3%B3n%20MAG%20-%20FAO%20-%20CIP%204%20de%20junio%202018.pdf?dl=0">https://www.dropbox.com/s/xiubeyshkc039k9/Agenda%20de%20reuni%C3%B3n%20MAG%20-%20FAO%20-%20CIP%204%20de%20junio%202018.pdf?dl=0</a></p> <p>Ethiopia: <a href="https://www.dropbox.com/sh/klw3bsx01s_sampu/AAD1NPkziq4nxdqRyZrUH9r8a?dl=0">https://www.dropbox.com/sh/klw3bsx01s_sampu/AAD1NPkziq4nxdqRyZrUH9r8a?dl=0</a></p> <p>India: <a href="http://ebrary.ifpri.org/cdm/ref/collection/p15738coll2/id/133148">http://ebrary.ifpri.org/cdm/ref/collection/p15738coll2/id/133148</a></p> <p>Indonesia: <a href="https://www.dropbox.com/s/bhx0bgbk9ej_veni/Undangan%20Workshop%2014%20Nov%202019-b.pdf?dl=0">https://www.dropbox.com/s/bhx0bgbk9ej_veni/Undangan%20Workshop%2014%20Nov%202019-b.pdf?dl=0</a></p> <p>Kenya: <a href="https://www.dropbox.com/s/1ixk3u541i28o45/Tentative%20Project%20Program.pdf?dl=0">https://www.dropbox.com/s/1ixk3u541i28o45/Tentative%20Project%20Program.pdf?dl=0</a></p> <p>Myanmar: <a href="https://www.dropbox.com/s/2ofhlv0pwcp_wiv4/Agenda_External_public.pdf?dl=0">https://www.dropbox.com/s/2ofhlv0pwcp_wiv4/Agenda_External_public.pdf?dl=0</a></p> <p>Vietnam: <a href="https://www.dropbox.com/s/lwh9a2mcdvf88l4/invitation%2022%20Nov19%20.pdf?dl=0">https://www.dropbox.com/s/lwh9a2mcdvf88l4/invitation%2022%20Nov19%20.pdf?dl=0</a></p> |

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| 3  | Implementation partners in three countries use analysis of approaches to scaling to increase numbers of beneficiaries by 50% in designated projects | <ul style="list-style-type: none"> <li>• {primary} Improved access to financial and other services</li> <li>• Reduced market barriers</li> </ul> | <p>A study on the use of market system approaches was completed in 2018. Two other studies were launched in 2019 with completion expected in 2020: a study of how CRPs are using value chains in scaling up their innovations and a review of value chain research across CGIAR. The dissemination of the findings of these three studies is planned for 2020. There are multiple research collaborations with implementation partners to test and expand value chain innovations.</p> <p>In 2019 CGIAR value chain researchers met with IFAD and SNV (Netherlands Development Organisation) to share research results and clarify their information needs.</p> | Analyses of scaling models for value chain are shared with key actors in value chain development (2018 <u><a href="#">milestone</a></u> , <u><a href="#">extended</a></u> ) | Extended                 | A review on "Behaviour Change Scale-Up in Market Systems Development" was completed in 2018. Because that review highlighted a paucity of scientific evidence on market systems development, it was decided to review other scaling up approaches. Hence, two other studies were launched in 2019 with completion expected in 2020: a study of how CRPs are using value chains in scaling up their innovations and a review of CGIAR value chain research. The dissemination of the findings of these 3 studies is planned for 2020. In 2019 CGIAR value chain researchers met with IFAD and SNV (Netherlands Development Organisation) to share results and clarify research demand from these implementation partners. | 2018 paper "Behaviour Change Scale-Up in Market Systems Development: A literature review": <a href="https://cgspace.cgiar.org/handle/10568/100158">https://cgspace.cgiar.org/handle/10568/100158</a>   |
| 3  |   |  |   | Value chain innovations are used by public and private sector agents to achieve greater development impact in 2 countries   | Extended                 | PIM's work on scaling methods in value chains has been delayed due to the complexity of the topic and to difficulties to generate rigorous evidence on scaling methods. Additional studies were launched in 2019 to improve our understanding of this topic. Concurrently, PIM researchers are continuing support for the wider application of PIM value chain interventions, including postharvest loss mitigation and improved insurance products for farmers.   | 2018 paper "Behaviour Change Scale-Up in Market Systems Development: A literature review": <a href="https://cgspace.cgiar.org/handle/10568/100158">https://cgspace.cgiar.org/handle/10568/100158</a> ; <a href="https://www.cabi.org/news-article/cabi-partnered-seeing-is-believing-project-goes-under-the-microscope-for-facebook-live-event/">https://www.cabi.org/news-article/cabi-partnered-seeing-is-believing-project-goes-under-the-microscope-for-facebook-live-event/</a> |

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| 4  | National social protection programs and policies are modified based on evidence in 3 countries | <ul style="list-style-type: none"> <li>• {primary} Conducive environment for managing shocks and vulnerability, as evidenced in rapid response mechanisms</li> <li>• CC Enhanced institutional capacity of partner research organizations</li> <li>• CC Enhanced individual capacity in partner research organizations through training and exchange</li> </ul> | <p>An impact assessment of the Vulnerable Group Development program in Bangladesh identified means to make the program more effective; four of the five changes recommended were implemented in the second phase.</p> <p>In Egypt, the government is using advice from the impact evaluation of the Takaful and Karama program to revise the program's targeting approach during the next wave of enrollment.</p> | National social protection programs and policies are modified based on evidence in 2 countries | Complete                  | <p>Bangladesh: An impact assessment of the Vulnerable Group Development program identified means to make the program more effective; four of the five changes recommended were implemented in the second phase.</p> <p>Egypt: Recommendations about targeting for the Takaful and Karama program were provided during a meeting with the Ministry of Social Solidarity. Oral confirmation was given by the Minister that these recommendations would be followed in the next round of enrollment.</p> | <p>Bangladesh, OICR2661 in 2018 AR: <a href="https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2661&amp;cycle=Reporting&amp;year=2018">https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2661&amp;cycle=Reporting&amp;year=2018</a></p> <p>Egypt, OICR2171 in 2018 AR: <a href="https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2171&amp;cycle=Reporting&amp;year=2018">https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2171&amp;cycle=Reporting&amp;year=2018</a></p> |

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| 4  | Improved social protection innovations provide food security and nutrition benefits to poor households in 3 countries | <ul style="list-style-type: none"> <li>• {primary} Increased access to diverse nutrient-rich foods</li> <li>• Increased household capacity to cope with shocks</li> <li>• CC Gender-equitable control of productive assets and resources</li> </ul> | <p>PIM research has informed the design of social protection programs in three countries:</p> <p>In Bangladesh, the pilot version of the government's new Mother and Child Benefit program includes behavior change communication based on PIM findings.</p> <p>In Mali, the recommendations of an evaluation were used by the government to improve the impacts of the program on child nutrition.</p> <p>In Egypt, researchers are testing a new social protection program, Forsa, meant to assist the beneficiaries of the Takaful and Karama cash transfer program in graduating from this program through asset transfers and job trainings.</p> | Improved social protection innovations are adopted by government and other implementing organizations in 2 countries | Complete                  | <p>Social protection innovations related to targeting and behavioral change communications (BCC) have been adopted in Bangladesh and Mali in order to improve the targeting and nutritional status of households reached through social protection programs. Here we focus on the adoption of the BCC innovation in these two countries. In Bangladesh, impact evaluations of the ongoing Improved Maternity and Lactating Mothers Allowance Program found that BCC improves nutritional outcomes for enrolled households. As a result, the government is piloting a new program (to be rolled out at scale as the Mother and Child Benefit Program) which includes BCC. In Mali, results from the impact evaluation of the Jigisémèjiri safety net program provide evidence that measures accompanying cash transfers, such as informational sessions on nutrition, improve certain child health outcomes. As a result of these findings, the government and local NGO partners are piloting another phase of this program that includes household visits and BCC targeted toward health and nutritional outcomes.</p> | <p>Bangladesh: Discussion Paper: <a href="http://ebrary.ifpri.org/cdm/ref/collecton/p15738coll2/id/133450">http://ebrary.ifpri.org/cdm/ref/collecton/p15738coll2/id/133450</a>;</p> <p>Mali: World Bank Emergency Safety Nets project document (see last numbered point on page 2): <a href="http://documents.vseirnnyjbank.org/curated/ru/414211561752166476/pdf/Disclosable-Version-of-the-ISR-Emergency-Safety-Nets-project-Jigis-m-jiri-P127328-Sequence-No-11.pdf">http://documents.vseirnnyjbank.org/curated/ru/414211561752166476/pdf/Disclosable-Version-of-the-ISR-Emergency-Safety-Nets-project-Jigis-m-jiri-P127328-Sequence-No-11.pdf</a>; policy seminar "Integrated Cash Transfer Programs in West Africa: How to make cash transfer programs more nutrition sensitive?": <a href="https://www.ifpri.org/event/integrated-cash-transfer-programs-west-africa-how-make-cash-transfer-programs-more-nutrition">https://www.ifpri.org/event/integrated-cash-transfer-programs-west-africa-how-make-cash-transfer-programs-more-nutrition</a>; OICR2659 in 2018 AR: <a href="https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2659&amp;cycle=Reporting&amp;year=2018">https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2659&amp;cycle=Reporting&amp;year=2018</a></p> |

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| 5  | Evidence informs natural resource governance and tenure policy processes/ Implementation in 12 countries | <ul style="list-style-type: none"> <li>• {primary} CC Conducive agricultural policy environment</li> <li>• CC Enhanced individual capacity in partner research organizations through training and exchange</li> <li>• CC Increased capacity for innovation in partner development organizations and in poor and vulnerable communities</li> </ul> | Evidence from PIM Flagship 5 research is informing land tenure policy in Ethiopia, Mozambique and Nigeria; rangeland policy in Ethiopia, Tanzania and Tunisia; forest tenure and governance policy in Ethiopia, Guatemala, Indonesia, Madagascar, Peru and Uganda; commons tenure and governance policy in India. Implementation of reforms and innovations is supported through training, tools and guides for governments, NGOs and communities, including women (DRC, Kenya, Peru, Uganda); several tools focus on multistakeholder platforms in forested landscapes (Brazil, Ethiopia, Indonesia and Peru). An M&E system has been developed for Africa and rolled out in Malawi and Tanzania, with plans for rolling out in all Intergovernmental Authority on Development countries. | Staff from research, civil society and development organization staff are trained in Flagship 5 methods | Complete                 | International Land Coalition National Engagement Strategy facilitators were trained on multistakeholder methods. Foundation for Ecological Security uses collective action games in Andhra Pradesh and Maharashtra states (India). The Rulal game is being used by universities (Thailand and Netherlands) and NGOs (Lao PDR). Researchers were trained on the Rulal land use planning game at a meeting of the International Association for the Study of the Commons. Government collaborators were trained on participatory land use planning in pastoral areas in Ethiopia and Tanzania. Tools for implementation were launched in Peru (indigenous titling programs) and Uganda (guide on forest tenure for community leaders). Trainings were given on gender and indigenous groups rights on forests and lands (DRC, Kenya). A guideline for assessing performance of multistakeholder platforms in forest landscapes was disseminated to partners in Brazil, Ethiopia, Indonesia and Peru. | <p>International Land Coalition:<br/> <a href="https://www.dropbox.com/s/el7h1fve8lbfa65/Attachment%203%20-%20CoP%20design%20elements%20and%20consultation%20feedback.pdf?dl=0">https://www.dropbox.com/s/el7h1fve8lbfa65/Attachment%203%20-%20CoP%20design%20elements%20and%20consultation%20feedback.pdf?dl=0</a>;<br/> <a href="https://www.dropbox.com/s/8km880lalvq989w/MSP%20CoP%20Workshop_Report_Final.docx?dl=0">https://www.dropbox.com/s/8km880lalvq989w/MSP%20CoP%20Workshop_Report_Final.docx?dl=0</a></p> <p>Foundation for Ecological Security: OICR 3335:<br/> <a href="https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=3335&amp;cycle=Reporting&amp;year=2019">https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=3335&amp;cycle=Reporting&amp;year=2019</a>; MOUs between FES and State Governments showing training on experimental games:<br/> <a href="https://www.dropbox.com/s/5ur9cxs7gtdzckx/MoU%20between%20APDMP%20and%20FES.pdf?dl=0">https://www.dropbox.com/s/5ur9cxs7gtdzckx/MoU%20between%20APDMP%20and%20FES.pdf?dl=0</a>;<br/> <a href="https://www.dropbox.com/s/532cwo4yda7ab69/MoU%20between%20Maharashtra%20and%20FES.pdf?dl=0">https://www.dropbox.com/s/532cwo4yda7ab69/MoU%20between%20Maharashtra%20and%20FES.pdf?dl=0</a>;</p> <p>the FES 2018-2019 report mentions collaboration with CGIAR and other PIM partners on collective action games and other innovations: <a href="http://fes.org.in/pdf/annual-report-2018-19.pdf">http://fes.org.in/pdf/annual-report-2018-19.pdf</a></p> <p>Rulal land use planning game, OICR 3312:<br/> <a href="https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=3312&amp;cycle=Reporting&amp;year=2019">https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=3312&amp;cycle=Reporting&amp;year=2019</a></p> <p>Participatory land use planning in Ethiopia, OICR 3301:<br/> <a href="https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=3301&amp;cycle=Reporting&amp;year=2019">https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=3301&amp;cycle=Reporting&amp;year=2019</a></p> <p>Participatory land use planning in Tanzania, OICR 2631:<br/> <a href="https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2631&amp;cycle=Reporting&amp;year=2019">https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2631&amp;cycle=Reporting&amp;year=2019</a></p> <p>Titling guide in Peru: <a href="https://www.cifor.org/library/7162/">https://www.cifor.org/library/7162/</a><br/> Guide for community leaders on forest tenure in Uganda:<br/> <a href="https://www.cifor.org/library/7488/">https://www.cifor.org/library/7488/</a><br/> Workshop on gender and indigenous women's rights in DRC:<br/> <a href="https://www.cifor.org/library/7552/">https://www.cifor.org/library/7552/</a><br/> Guidelines on integrating gender into development of sub-catchment management plans in Kenya:<br/> <a href="http://www.cifor.org/publications/pdf_files/Flyer/7480-flyer.pdf">http://www.cifor.org/publications/pdf_files/Flyer/7480-flyer.pdf</a><br/> Guidelines on multistakeholder platforms in Brazil, Ethiopia, Indonesia and Peru: <a href="https://www.cifor.org/library/7149/">https://www.cifor.org/library/7149/</a><br/> Practitioner's guide on implementation of forest tenure reforms (global): <a href="https://www.cifor.org/library/7503/">https://www.cifor.org/library/7503/</a></p> |

| FP | 2022 outcome     | Sub-IDOs         | Progress against 2022 outcome in 2019 | 2019 milestone  | Status of 2019 milestone | Justification for status of 2019 milestone  | Links to evidence of milestone completion; explanation for extended milestones  |
|----|------------------|------------------|---------------------------------------|---|--------------------------|---|---|
| 5  | See previous row | See previous row | See previous row                      | An M&E system to track progress towards tenure security policy reforms is operationalized in 5 more African countries | Extended                 | Funding through the African Land Policy Center did not materialize. Alternative funding was secured through the Intergovernmental Authority on Development (IGAD). IGAD has requested rolling out the M&E system in all IGAD countries. | <p>MELA-Malawi:<br/> <a href="https://www.dropbox.com/s/srvnxauj4eq6u7z/Inception%20report%20-Malawi%20MELA%20%20%282%29.docx?dl=0">https://www.dropbox.com/s/srvnxauj4eq6u7z/Inception%20report%20-Malawi%20MELA%20%20%282%29.docx?dl=0</a></p> <p>MELA-Tanzania:<br/> <a href="https://www.dropbox.com/s/abijdhqxr513zl2/Country%20inception%20report%20MELA%20mm%2025th%20oct%20-%20Tanzania.docx?dl=0">https://www.dropbox.com/s/abijdhqxr513zl2/Country%20inception%20report%20MELA%20mm%2025th%20oct%20-%20Tanzania.docx?dl=0</a></p> |

| FP | 2022 outcome  | Sub-IDOs   | Progress against 2022 outcome in 2019   | 2019 milestone  | Status of 2019 milestone | Justification for status of 2019 milestone   | Links to evidence of milestone completion; explanation for extended milestones   |
|----|---|--|---|---|--------------------------|--|--|
| 5  | Tenure security is improved for beneficiaries in 6 countries, with detailed documentation for 2 | <ul style="list-style-type: none"> <li>• {primary} Increased access to productive assets, including natural resources</li> <li>• CC Gender-equitable control of productive assets and resources</li> </ul> | Progress towards tenure security of pastoralists has been made in Ethiopia and Tanzania thanks to implementation of land use planning and issuance of certificate of customary rights of occupancy in Tanzania. Research is supporting state governments in India to strengthen rights on commons. Community forest concessions are being extended in Guatemala based on research showing the benefits of these concessions. An analysis in Madagascar highlighted the importance of customary collective forest use and governance arrangements and contributed to a strengthened focus on collective tenure security in a GIZ project in the country. | In collaboration with policy makers, innovative tenure security-enhancing innovations are tested across relevant contexts in 5 countries (cumulative total) | Complete                 | <p>Land use planning approaches implemented by governments in Ethiopia and Tanzania and certificate of customary rights of occupation to pastoralists in Tanzania.</p> <p>Frameworks, tools, and approaches for the assessment of rangeland governance in Tunisia.</p> <p>CGIAR partnership with FES led to testing of innovations in two states of India.</p> <p>Renewal of a community forest concessions in Guatemala.</p> <p>Strengthened approach to collective tenure in GIZ project in Madagascar.</p> <p>Tools on gender and forest landscape restoration in Africa.</p> | <p>Participatory land use planning in Ethiopia, OICR 3301 in 2019 AR:<br/> <a href="https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=3301&amp;cycle=Reporting&amp;year=2019">https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=3301&amp;cycle=Reporting&amp;year=2019</a></p> <p>Participatory land use planning in Tanzania, OICR 2631 in 2019 AR:<br/> <a href="https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2631&amp;cycle=Reporting&amp;year=2019">https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2631&amp;cycle=Reporting&amp;year=2019</a></p> <p>Frameworks, tools, and approaches for the assessment of rangeland governance in Tunisia:<br/> <a href="https://www.researchgate.net/publication/335444124_Frameworks_tools_and_approaches_for_the_assessment_of_rangeland_governance">https://www.researchgate.net/publication/335444124_Frameworks_tools_and_approaches_for_the_assessment_of_rangeland_governance</a></p> <p>Engagement in India (MOUs between FES and State Governments specifying implementation of PIM innovations):<br/> <a href="https://www.dropbox.com/s/5ur9cxs7gtdzckx/MoU%20between%20APDMP%20and%20FES.pdf?dl=0;">https://www.dropbox.com/s/5ur9cxs7gtdzckx/MoU%20between%20APDMP%20and%20FES.pdf?dl=0;</a><br/> <a href="https://www.dropbox.com/s/532cwo4yda7ab69/MoU%20between%20Maharashtra%20and%20FES.pdf?dl=0;">https://www.dropbox.com/s/532cwo4yda7ab69/MoU%20between%20Maharashtra%20and%20FES.pdf?dl=0;</a></p> <p>Community forest concessions in Guatemala, OICR 3302 in AR 2019:<br/> <a href="https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=3302&amp;cycle=Reporting&amp;year=2019">https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=3302&amp;cycle=Reporting&amp;year=2019</a></p> <p>GIZ project in Madagascar: confidential email from GIZ project managers</p> <p>Tools on tenure and FLR:<br/> <a href="https://doi.org/10.1016/j.landusepol.2018.11.053">https://doi.org/10.1016/j.landusepol.2018.11.053</a></p> <p>Tools on gender and FLR in Africa:<br/> <a href="https://pim.cgiar.org/2017/12/18/gender-matters-in-forest-landscape-restoration-a-framework-for-design-and-evaluation/">https://pim.cgiar.org/2017/12/18/gender-matters-in-forest-landscape-restoration-a-framework-for-design-and-evaluation/</a></p> |

| FP | 2022 outcome   | Sub-IDOs  | Progress against 2022 outcome in 2019  | 2019 milestone  | Status of 2019 milestone | Justification for status of 2019 milestone   | Links to evidence of milestone completion; explanation for extended milestones  |
|----|--|---|--|---|--------------------------|--|---|
| 5  | Improved landscape-level governance arrangements are implemented in 6 countries, with more productive and equitable management in at least 2 | <ul style="list-style-type: none"> <li>{primary}</li> </ul> <p>More productive and equitable management of natural resources</p> <ul style="list-style-type: none"> <li>CC Gender-equitable control of productive assets and resources</li> </ul> | <p>The Promise of Commons Initiative in India implements several landscape governance innovations. Multistakeholder platforms (MSPs) for landscape governance are implemented in Kenya, Somalia and Vietnam. The Rural game helps strengthen landscape governance in Lao PDR. A study of MSPs reported on actions for improved governance in Brazil, Ethiopia, Indonesia and Peru. A self-monitoring tool was developed to improve MSP governance in Indonesia and Peru, including work with rural women on gender indicators.</p> | Models for more inclusive and effective landscape governance are disseminated to key policy and development actors in 3 countries | Complete                 | <p>The Promise of Commons Initiative in India implements several landscape governance innovations in different Indian states. Workshops on multistakeholder platforms (MSPs) took place for Kenya/Somalia and Vietnam. A tool for co-management areas was disseminated to the Peruvian National Service of Protected Areas. A study of MSPs reported on actions for improved governance in Brazil, Ethiopia, Indonesia and Peru.</p> | <p>Engagement in India (MOUs between FES and Indian state governments showing strengthening management of commons through collective action):</p> <p><a href="https://www.dropbox.com/s/5ur9cxs7gtdzckx/MoU%20between%20APDMP%20and%20FES.pdf?dl=0">https://www.dropbox.com/s/5ur9cxs7gtdzckx/MoU%20between%20APDMP%20and%20FES.pdf?dl=0</a>;</p> <p><a href="https://www.dropbox.com/s/532cwo4yda7ab69/MoU%20between%20Maharashtra%20and%20FES.pdf?dl=0">https://www.dropbox.com/s/532cwo4yda7ab69/MoU%20between%20Maharashtra%20and%20FES.pdf?dl=0</a>;</p> <p>the FES 2018-2019 report references the collaborations with CGIAR and other PIM partners on the use of collective action games and other innovations:</p> <p><a href="http://fes.org.in/pdf/annual-report-2018-19.pdf">http://fes.org.in/pdf/annual-report-2018-19.pdf</a></p> <p>Multistakeholder platforms for landscape governance in Kenya and Somalia:</p> <p><a href="http://www.worldagroforestry.org/output/third-cross-border-stakeholder-dialogue-platform">http://www.worldagroforestry.org/output/third-cross-border-stakeholder-dialogue-platform</a></p> <p>Multistakeholder platforms for landscape governance in Vietnam:</p> <p><a href="http://old.worldagroforestry.org/region/sea/publications/detail?pubID=4533">http://old.worldagroforestry.org/region/sea/publications/detail?pubID=4533</a></p> <p>Tool for co-management areas in Peru:</p> <p><a href="https://www.dropbox.com/s/wjuo5x5fyz8my88/Programa%20Taller%20SERNANP%20%28Lima%29.docx?dl=0">https://www.dropbox.com/s/wjuo5x5fyz8my88/Programa%20Taller%20SERNANP%20%28Lima%29.docx?dl=0</a>;</p> <p><a href="https://www.dropbox.com/s/4sj9v010yfv9zpo/Workshop%20PPT%20GOV%20tool%20shared%20with%20SERNANP.pdf?dl=0">https://www.dropbox.com/s/4sj9v010yfv9zpo/Workshop%20PPT%20GOV%20tool%20shared%20with%20SERNANP.pdf?dl=0</a></p> <p>Training on MSPs in Brazil, Ethiopia, Indonesia and Peru:</p> <p><a href="https://www.cifor.org/library/7149/">https://www.cifor.org/library/7149/</a></p> |

| FP | 2022 outcome   | Sub-IDOs  | Progress against 2022 outcome in 2019  | 2019 milestone  | Status of 2019 milestone | Justification for status of 2019 milestone  | Links to evidence of milestone completion; explanation for extended milestones  |
|----|--|---|--|---|--------------------------|---|---|
| 6  | National researchers use improved gender research methods in 5 countries | <ul style="list-style-type: none"> <li>• {primary} CC Enhanced individual capacity in partner research organizations through training and exchange</li> <li>• CC Improved capacity of women and young people to participate in decision-making</li> <li>• CC Enhanced institutional capacity of partner research organizations</li> </ul> | <p>The Gender Platform promoted sharing of innovative research methods through blogs, webinars and capacity development events. In 2019 two new countries and 13 new organizations used a Women's Empowerment in Agriculture Index-related product, bringing the total to 54 and 103, respectively. Several gender research tools were created, piloted and/or disseminated.</p> | New gender research methods are developed and disseminated widely through the gender platform | Complete                 | <p>The Gender Platform promoted sharing of innovative research methods through blogs, webinars and capacity development events such as Seeds of Change conference. By the end of 2019, there were 54 countries and 103 organizations using some version of WEAI (including their adaptations). A survey-based module designed to measure men's and women's experiences with freedom of movement that can be incorporated into large multipurpose surveys was piloted. A guide on participatory methods to collect data for understanding gender dynamics in agricultural settings was created and piloted in Honduras. A tool was developed to promote young men and women's engagement in growing root, tuber and banana crops. Vignettes were used to understand decision-making processes within households in Senegal; this method could be applied in other countries.</p> | <p>Gender Platform blogs:<br/> <a href="https://gender.cgiar.org/resources/engendering-data-methods-blog/">https://gender.cgiar.org/resources/engendering-data-methods-blog/</a><br/>           Gender Platform webinars:<br/> <a href="https://gender.cgiar.org/gender_events/webinars/">https://gender.cgiar.org/gender_events/webinars/</a><br/>           Seeds of Change conference:<br/> <a href="https://gender.cgiar.org/annual-conference-2019/">https://gender.cgiar.org/annual-conference-2019/</a><br/>           WEAI, OICR 3192 in 2019 AR:<br/> <a href="https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=3192&amp;cycle=Reporting&amp;year=2019">https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=3192&amp;cycle=Reporting&amp;year=2019</a><br/>           Freedom of movement, Innovation 1187 in 2019 AR:<br/> <a href="https://marlo.cgiar.org/summaries/PIM/projectInnovationSummary.do?innovationID=1187&amp;phaseID=102">https://marlo.cgiar.org/summaries/PIM/projectInnovationSummary.do?innovationID=1187&amp;phaseID=102</a><br/>           Participatory guide, Innovation 1189 in 2019 AR:<br/> <a href="https://marlo.cgiar.org/summaries/PIM/projectInnovationSummary.do?innovationID=1189&amp;phaseID=102">https://marlo.cgiar.org/summaries/PIM/projectInnovationSummary.do?innovationID=1189&amp;phaseID=102</a><br/>           Youth-focused tool:<br/> <a href="https://cgospace.cgiar.org/handle/10568/99077">https://cgospace.cgiar.org/handle/10568/99077</a><br/>           Work on vignettes:<br/> <a href="http://pim.cgiar.org/2019/10/08/using-vignettes-to-understand-decision-making-processes-within-households/">http://pim.cgiar.org/2019/10/08/using-vignettes-to-understand-decision-making-processes-within-households/</a></p> |

| FP | 2022 outcome  | Sub-DOs  | Progress against 2022 outcome in 2019   | 2019 milestone  | Status of 2019 milestone | Justification for status of 2019 milestone   | Links to evidence of milestone completion; explanation for extended milestones   |
|----|---|--|---|---|--------------------------|--|--|
| 6  | Gender dimensions of policies are strengthened in 4 countries | <ul style="list-style-type: none"> <li>• {primary} CC</li> <li>Conducive agricultural policy environment</li> <li>• CC</li> <li>Technologies that reduce women's labor and energy expenditure adopted</li> </ul> | <p>PIM research informed Nigeria's National Gender Policy in Agriculture (with Flagship 2).</p> <p>A policy seminar on "Crafting the next generation of CGIAR gender research" provided policy lessons for decision makers.</p> <p>The work of the Research Collaborative on cash transfers and intimate partner violence is being drawn upon in high-level guidance documents (evidence review from DFID's "What Works" program, report from a high-level Wilton Park meeting).</p> <p>Work on women's access to markets in the Middle-East and North Africa was presented to policy makers.</p> <p>Policy makers from the Russian Federation have shown interest in research undertaken by PIM regarding the gendered impacts of income shocks and rural policy interventions in Central Asian countries.</p> | Policy lessons from gender research are shared widely with global, regional, and national policy makers | Complete                 | <p>PIM research informed Nigeria's National Gender Policy in Agriculture (with Flagship 2). A policy seminar on "Crafting the next generation of CGIAR gender research", highlighting CGIAR research which will be synthesized in a 2020 book, provided policy lessons for decision makers. Policy work regarding intimate partner violence has been shared with several prominent global institutions and is influencing policy guidelines (e.g. "DFID's What Works program").</p> <p>Work on women's access to markets in the Middle-East and North Africa was presented at a workshop organized by the London School of Economics, and featured prominently in the workshop report. Research on the gendered impacts of income shocks and of interventions to achieve rural revitalization in Central Asia was presented to the Ministry of Finance of the Russian Federation and to the Ministry of Agriculture of Uzbekistan. A PIM workshop was organized for research, government and seed sector stakeholders to discuss policy issues for vegetatively propagated crops, including innovations that address gender dimensions.</p> <p>The PIM Flagship 6 leader gave the Memorial Lecture, on understanding rural household behavior, at the African Conference of Agricultural Economists.</p> | <p>Informing Nigeria's National Gender Policy in Agriculture, OICR 3191 in 2019 AR: <a href="https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=3191&amp;cycle=Reporting&amp;year=2019">https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=3191&amp;cycle=Reporting&amp;year=2019</a></p> <p>Policy seminar: <a href="http://pim.cgiar.org/2019/10/22/policy-seminar-crafting-the-next-generation-of-cgiar-gender-research/">http://pim.cgiar.org/2019/10/22/policy-seminar-crafting-the-next-generation-of-cgiar-gender-research/</a></p> <p>Work on intimate partner violence, OICR 2687 in 2019 AR: <a href="https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2687&amp;cycle=Reporting&amp;year=2019">https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2687&amp;cycle=Reporting&amp;year=2019</a></p> <p>Work in MENA: <a href="http://eprints.lse.ac.uk/102946/4/Women_s_Access_to_Market_Opportunities_in_South_Asia_and_the_Middle_East_North_Africa.pdf">http://eprints.lse.ac.uk/102946/4/Women_s_Access_to_Market_Opportunities_in_South_Asia_and_the_Middle_East_North_Africa.pdf</a></p> <p>Work in Central Asia: <a href="https://www.ifpri.org/event/fourth-annual-international-conference-agriculture-food-security-and-nutrition-eurasia">https://www.ifpri.org/event/fourth-annual-international-conference-agriculture-food-security-and-nutrition-eurasia</a></p> <p>Work on vegetatively propagated crops in Kenya: <a href="https://myemail.constantcontact.com/NPCK-March-2019-E-newsletter.html?soid=1132314066358&amp;aid=00Yr6gZGHIM">https://myemail.constantcontact.com/NPCK-March-2019-E-newsletter.html?soid=1132314066358&amp;aid=00Yr6gZGHIM</a></p> <p>AAAE lecture: <a href="https://aaae-africa.eventbank.com/event/6th-african-conference-of-agricultural-economists-10772/programme.html">https://aaae-africa.eventbank.com/event/6th-african-conference-of-agricultural-economists-10772/programme.html</a></p> |

| FP | 2022 outcome   | Sub-IDOs   | Progress against 2022 outcome in 2019  | 2019 milestone  | Status of 2019 milestone | Justification for status of 2019 milestone  | Links to evidence of milestone completion; explanation for extended milestones   |
|----|--|--|--|---|--------------------------|---|--|
| 6  | Indicators of women's empowerment in agriculture increase in 3 countries | <ul style="list-style-type: none"> <li>{primary} CC Gender-equitable control of productive assets and resources</li> </ul> | <p>The Women's Empowerment in Agriculture Index (WEAI) is being adopted in additional countries and used in many PIM studies, enabling an assessment of changes in empowerment due to the tested interventions. Findings from the Research Collaborative on cash transfers and intimate partner violence (mostly from work in Ecuador) have been taken up by the World Health Organization. Studies aimed at improving gender indicators in Honduras and Papua New Guinea have been implemented at scale.</p> <p>In Uganda, the effects of gender-responsive extension approaches on women's participation in decision making are being tested, and research on barriers to women's participation in sugar cane value chains is undergoing further scaling up.</p> | Best bet empowerment interventions are evaluated at scale (proof of application) by researchers and implementers in 3 countries | Complete                 | <p>Completion of this milestone went beyond the initial plans, covering four countries instead of three. The World Health Organization's new RESPECT Women framework for preventing violence against women draws heavily on the work of the Research Collaborative on cash transfers and intimate partner violence, citing PIM-funded studies (a study in Ecuador and a mixed methods review) as examples.</p> <p>In Southern Honduras, Swisscontact implemented the Women's Empowerment in Agriculture Index and the Women's Empowerment in Agriculture Index for Value Chains in the cashew, dairy and fruits value chains to help inform their intervention strategy.</p> <p>In Papua New Guinea, research showing the impacts of improving perceptions of household welfare on women's empowerment triggered new investments to understand women's employment and economic activities.</p> <p>In Uganda, the effects of gender-responsive extension approaches on women's participation in decision making are being tested, and research on barriers to women's participation in sugar cane value chains is undergoing further scaling up.</p> | <p>Work on intimate partner violence, OICR 2687 in 2019 AR:<br/> <a href="https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2687&amp;cycle=Reporting&amp;year=2019">https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2687&amp;cycle=Reporting&amp;year=2019</a><br/> Honduras:<br/> <a href="https://blog.ciat.cgiar.org/es/herramientas-cualitativas-para-el-analisis-de-genero-en-agricultura/">https://blog.ciat.cgiar.org/es/herramientas-cualitativas-para-el-analisis-de-genero-en-agricultura/</a><br/> Papua New Guinea:<br/> <a href="https://www.ifpri.org/country/papua-new-guinea">https://www.ifpri.org/country/papua-new-guinea</a><br/> Uganda:<br/> <a href="http://cdm15738.contentdm.oclc.org/cdm/ref/collection/p15738coll2/id/133523">http://cdm15738.contentdm.oclc.org/cdm/ref/collection/p15738coll2/id/133523</a>;<br/> <a href="http://www.ifpri.org/publication/role-men-womens-empowerment-initiative-evidence-uganda">http://www.ifpri.org/publication/role-men-womens-empowerment-initiative-evidence-uganda</a></p> |

Table 6: Numbers of peer-reviewed journal articles

|                        | Number | Percent |
|------------------------|--------|---------|
| Peer-reviewed articles | 115    | 100%    |
| Open access            | 72     | 63%     |
| ISI                    | 101    | 88%     |

Table 7: Participants in capacity development activities

| Number of trainees     | Female | Male  |
|------------------------|--------|-------|
| In short-term programs | 3,516  | 6,870 |
| In long-term programs  | 20     | 8     |
| PhDs                   | 10     | 5     |

Table 8: Key external partnerships

| Lead flagship | Brief description of partnership aims   | List of key partners in partnership   | Main area of partnership   |
|---------------|---|---|--|
| Flagship 1    | Investigating regional responses to climate change in Southern Africa   | <ul style="list-style-type: none"> <li>• Energy Research Centre</li> <li>• National Treasury of South Africa</li> <li>• DPME – Department of Planning, Monitoring and Evaluation, Republic of South Africa</li> <li>• ZIPAR - Zambia Institute for Policy Analysis and Research</li> <li>• IAPRI - Indaba Agricultural Policy Research Institute (Zambia)</li> <li>• Amargi Media, Inc, South Africa</li> <li>• Aurecon AMEI Limited</li> <li>• UNU-WIDER – United Nations World Institute for Development Economics Research</li> <li>• Massachusetts Institute of Technology, USA</li> <li>• IFPRI</li> </ul> | <ul style="list-style-type: none"> <li>• Outreach</li> <li>• Policy</li> <li>• Research</li> </ul> |
| Flagship 1    | Expanding on past research on the effects of climate change on the nutrient content of crops by projecting these effects into the future at global and regional scale | <ul style="list-style-type: none"> <li>• USDA - U.S. Department of Agriculture</li> <li>• RTI - RTI International</li> <li>• EPA – US Environmental Protection Agency</li> <li>• CSIRO - Commonwealth Scientific and Industrial Research Organization</li> <li>• Harvard School of Public Health</li> <li>• IFPRI</li> </ul>  | <ul style="list-style-type: none"> <li>• Research</li> </ul>                                       |
| Flagship 1    | Evaluation of ICT-based extension methods in Ethiopia and Uganda  | <ul style="list-style-type: none"> <li>• Digital Green</li> <li>• Viamo</li> <li>• Ministry of Agriculture and Natural Resources (Ethiopia)</li> <li>• University of Antwerp</li> <li>• USAID – United States Agency for International Development</li> <li>• GFRAS – Global Forum for Rural Advisory Services</li> <li>• CIMMYT</li> <li>• IFPRI</li> </ul>  | <ul style="list-style-type: none"> <li>• Delivery</li> <li>• Research</li> </ul>                   |

| <b>Lead flagship</b> | <b>Brief description of partnership aims</b>  | <b>List of key partners in partnership</b>   | <b>Main area of partnership</b>  |
|----------------------|---|--|--|
| Flagship 1           | Building the capacity of seed sector stakeholders, revising outdated regulations and improving smallholders' access to improved varieties and quality seed in Ethiopia, Ghana, Kenya, Nepal, Nigeria, Vietnam, and Uganda | <ul style="list-style-type: none"> <li>• MoFA - Ministry of Food and Agriculture (Ghana)</li> <li>• MARD - Ministry of Agriculture and Rural Development (Vietnam)</li> <li>• SEAN - Seed Entrepreneurs' Association of Nepal</li> <li>• NARC - Nepal Agricultural Research Council</li> <li>• NARO - National Agricultural Research Organisation (Uganda)</li> <li>• TEGEMEO - Tegemeo Institute of Agricultural Policy and Development (Kenya)</li> <li>• CABE - Centre for African Bio-Entrepreneurship</li> <li>• WCDI - Wageningen Center for Development Innovation</li> <li>• MSU - Michigan State University</li> <li>• KIT - Royal Tropical Institute</li> <li>• Bioversity International</li> <li>• CIP</li> <li>• ICRISAT</li> <li>• IFPRI</li> <li>• IITA</li> </ul> | <ul style="list-style-type: none"> <li>• Capacity</li> <li>• Policy</li> <li>• Research</li> </ul>                     |
| Flagship 1           | General release of a genetically engineered pod borer resistant cowpea in Nigeria   | <ul style="list-style-type: none"> <li>• NBMA - National Biosafety Management Agency (Nigeria)</li> <li>• ARCN - Agricultural Research Council of Nigeria</li> <li>• IFPRI</li> </ul>  | <ul style="list-style-type: none"> <li>• Capacity</li> <li>• Delivery</li> <li>• Policy</li> <li>• Research</li> </ul> |
| Flagship 2           | Developing and applying the Agriculture Investment Data Analyzer tool in Arab-speaking countries  | <ul style="list-style-type: none"> <li>• IFAD – International Fund for Agricultural Development</li> <li>• UN-ESCWA – United Nations Economic and Social Commission for Western Asia</li> <li>• IFPRI</li> </ul>   | <ul style="list-style-type: none"> <li>• Capacity</li> </ul>   |
| Flagship 2           | Structural Transformation of African Agriculture and Rural Spaces (STAARS) Fellowship Program   | <ul style="list-style-type: none"> <li>• African Economic Research Consortium</li> <li>• African Development Bank</li> <li>• The World Bank</li> <li>• PEP – Partnership for Economic Policy</li> <li>• Cornell University</li> <li>• IFPRI</li> </ul>   | <ul style="list-style-type: none"> <li>• Capacity</li> <li>• Research</li> </ul>                                       |

| <b>Lead flagship</b> | <b>Brief description of partnership aims</b>  | <b>List of key partners in partnership</b>   | <b>Main area of partnership</b>  |
|----------------------|---|--|--|
| Flagship 2           | Book <i>Youth and Jobs in Rural Africa</i>  | <ul style="list-style-type: none"> <li>• Cargill</li> <li>• Policy Studies Institute (Ethiopia)</li> <li>• FAO</li> <li>• The World Bank</li> <li>• International Labour Organisation</li> <li>• Arizona State University</li> <li>• University of Groningen</li> <li>• IFPRI</li> </ul>                         | <ul style="list-style-type: none"> <li>• Outreach</li> <li>• Research</li> </ul>                   |
| Flagship 2           | Research and policy engagement on land dynamics in East and Southern Africa   | <ul style="list-style-type: none"> <li>• TEGEMEO - Tegemeo Institute of Agricultural Policy and Development (Kenya)</li> <li>• IAPRI - Indaba Agricultural Policy Research Institute (Zambia)</li> <li>• MSU - Michigan State University</li> <li>• CIMMYT</li> </ul>  | <ul style="list-style-type: none"> <li>• Capacity</li> <li>• Policy</li> <li>• Research</li> </ul> |
| Flagship 2           | Understanding decentralization processes and progress in Zambia   | <ul style="list-style-type: none"> <li>• Zambian Revenue Authority</li> <li>• Decentralisation Secretariat of Zambia (Government)</li> <li>• University of Zambia, Center for Urban and Regional Planning</li> <li>• International Growth Centre</li> <li>• Texas A&amp;M University</li> <li>• IFPRI</li> </ul> | <ul style="list-style-type: none"> <li>• Delivery</li> <li>• Policy</li> <li>• Research</li> </ul> |
| Flagship 3           | Ag-Incentives Consortium: International Organisations Consortium for Measuring the Policy Environment for Agriculture                       | <ul style="list-style-type: none"> <li>• FAO</li> <li>• Inter-American Development Bank</li> <li>• Organization of Economic Cooperation and Development</li> <li>• The World Bank</li> <li>• IFPRI</li> </ul>  | <ul style="list-style-type: none"> <li>• Capacity</li> <li>• Research</li> </ul>                   |
| Flagship 3           | Fostering gender-inclusive business models in small rural enterprises in Honduras through the use of the gender-responsive LINK methodology | <ul style="list-style-type: none"> <li>• Swisscontact</li> <li>• McGill University</li> <li>• CIAT</li> </ul>  | <ul style="list-style-type: none"> <li>• Capacity</li> <li>• Delivery</li> </ul>                   |
| Flagship 3           | Testing value chain innovations related to quality certification and standards  | <ul style="list-style-type: none"> <li>• COORDID cooperative (Senegal)</li> <li>• COOPEDELSI cooperative (Senegal)</li> <li>• Ethiopian Millers Association</li> <li>• Global Aquaculture Alliance</li> <li>• Bioversity International</li> <li>• CIMMYT</li> <li>• IFPRI</li> </ul>                             | <ul style="list-style-type: none"> <li>• Delivery</li> <li>• Research</li> </ul>                   |

| <b>Lead flagship</b> | <b>Brief description of partnership aims</b>  | <b>List of key partners in partnership</b>   | <b>Main area of partnership</b>  |
|----------------------|---|--|--|
| Flagship 3           | Measurement and reduction of postharvest losses   | <ul style="list-style-type: none"> <li>• Albay (private company, Guatemala)</li> <li>• Government of Honduras</li> <li>• FAO</li> <li>• Wageningen University and Research</li> <li>• CIMMYT</li> <li>• CIP</li> <li>• IFPRI</li> </ul>  | <ul style="list-style-type: none"> <li>• Delivery</li> <li>• Outreach</li> <li>• Research</li> </ul>                   |
| Flagship 3           | Applied research on picture-based insurance and advisory services   | <ul style="list-style-type: none"> <li>• eeMAUSAM, Weather Risk Management Services Private LTD</li> <li>• HDFC ERGO General Insurance Company Ltd.</li> <li>• CABI</li> <li>• Agriculture Climate Risk Enterprise Africa (ACRE)</li> <li>• Africa Risk Capacity</li> <li>• World Food Programme</li> <li>• University of Manchester</li> <li>• Ghent University</li> <li>• IFPRI</li> </ul> | <ul style="list-style-type: none"> <li>• Delivery</li> <li>• Research</li> </ul>                                       |
| Flagship 4           | Effects of cash transfers in Yemen  | <ul style="list-style-type: none"> <li>• Yemen Social Fund for Development</li> <li>• The World Bank</li> <li>• GIZ</li> <li>• IFPRI</li> </ul>  | <ul style="list-style-type: none"> <li>• Capacity</li> <li>• Delivery</li> <li>• Policy</li> <li>• Research</li> </ul> |
| Flagship 4           | Impact evaluation of the Strengthen PSNP4 Institutions and Resilience (SPIR) Development Food Security Activity program in Ethiopia | <ul style="list-style-type: none"> <li>• Government of Ethiopia</li> <li>• World Vision International</li> <li>• Hawassa University</li> <li>• Ambo University</li> <li>• Johns Hopkins Bloomberg School of Public health</li> <li>• IFPRI</li> </ul>  | <ul style="list-style-type: none"> <li>• Capacity</li> <li>• Delivery</li> <li>• Policy</li> <li>• Research</li> </ul> |
| Flagship 4           | Impact evaluation of the Takaful and Karama cash transfer program   | <ul style="list-style-type: none"> <li>• Government of Egypt</li> <li>• IFPRI</li> </ul>   | <ul style="list-style-type: none"> <li>• Capacity</li> <li>• Delivery</li> <li>• Policy</li> <li>• Research</li> </ul> |

| <b>Lead flagship</b> | <b>Brief description of partnership aims</b>  | <b>List of key partners in partnership</b>  | <b>Main area of partnership</b>  |
|----------------------|---|---|--|
| Flagship 4           | Impact evaluation of conflict and food assistance on food-insecure populations in Mali  | <ul style="list-style-type: none"> <li>• Institute of Development Studies</li> <li>• World Food Programme</li> <li>• IFPRI</li> </ul>   | <ul style="list-style-type: none"> <li>• Policy</li> <li>• Research</li> </ul>   |
| Flagship 4           | Impact evaluation of the Improved Maternity and Lactating Mother Allowance and Vulnerable Group Development programs  | <ul style="list-style-type: none"> <li>• Government of Bangladesh</li> <li>• World Food Programme</li> <li>• Cornell University</li> <li>• IFPRI</li> </ul>   | <ul style="list-style-type: none"> <li>• Capacity</li> <li>• Delivery</li> <li>• Policy</li> <li>• Research</li> </ul> |
| Flagship 5           | Capacity building to convene and sustain multistakeholder platforms to accelerate progress in reforming and implementing policies for people-centered land governance | <ul style="list-style-type: none"> <li>• International Land Coalition</li> <li>• Collaborating for Resilience</li> <li>• ForestAction - Forest Resources Studies and Action Team</li> <li>• CIFOR</li> <li>• ICRAF</li> <li>• IFPRI</li> </ul>  | <ul style="list-style-type: none"> <li>• Capacity</li> <li>• Delivery</li> </ul>                                       |
| Flagship 5           | Scaling up efforts to secure tenure, improve governance and contribute to ecological restoration of 30 million acres of common land in India                          | <ul style="list-style-type: none"> <li>• Foundation for Ecological Security</li> <li>• Collaborating for Resilience</li> <li>• Arizona State University</li> <li>• University of Colorado</li> <li>• Bioversity International</li> <li>• CIFOR</li> <li>• ICRAF</li> <li>• ICNISAT</li> <li>• IFPRI</li> </ul>  | <ul style="list-style-type: none"> <li>• Capacity</li> <li>• Delivery</li> </ul>                                       |
| Flagship 5           | Improved rangeland governance in Ethiopia, Tanzania and Tunisia   | <ul style="list-style-type: none"> <li>• National Land Use Planning Commission (Tanzania)</li> <li>• Ministry of Agriculture, Livestock and Fisheries (Tanzania)</li> <li>• Ministry of Equipment, Housing and Territorial Planning (Tunisia)</li> <li>• Ministry of Agriculture, Hydraulic Resources and Fisheries (Tunisia)</li> <li>• Ministry of Agriculture and Natural Resources (Ethiopia)</li> <li>• Office d'Elevage et des Paturages (Tunisia)</li> <li>• Institut des Régions Arides Médenine (Tunisia)</li> <li>• International Fund for Agricultural Development</li> <li>• International Land Coalition</li> <li>• ICARDA</li> <li>• IFPRI</li> </ul> | <ul style="list-style-type: none"> <li>• Capacity</li> <li>• Delivery</li> </ul>                                       |

| <b>Lead flagship</b> | <b>Brief description of partnership aims</b>  | <b>List of key partners in partnership</b>  | <b>Main area of partnership</b>  |
|----------------------|---|---|--|
| Flagship 5           | Improving capacities and tools to address the challenges of formalization and tenure security of native communities in Peru | <ul style="list-style-type: none"> <li>• Universidad Nacional Agraria (Peru)</li> <li>• Pontificia Universidad Católica del Perú</li> <li>• FAO</li> <li>• Global Environment Facility</li> <li>• European Union</li> <li>• International Fund for Agricultural Development</li> <li>• CIFOR</li> </ul>   | <ul style="list-style-type: none"> <li>• Capacity</li> <li>• Delivery</li> <li>• Outreach</li> <li>• Research</li> </ul> |
| Flagship 5           | Assessment of the community forest concessions in the Maya Biosphere Reserve, Guatemala                                     | <ul style="list-style-type: none"> <li>• ACOFOP – Association of Forest Communities of Petén (Guatemala)</li> <li>• CONAP – National Council for Protected Areas (Guatemala)</li> <li>• Rainforest Alliance</li> <li>• CIFOR</li> <li>• ICRAF</li> </ul>  | <ul style="list-style-type: none"> <li>• Delivery</li> <li>• Outreach</li> <li>• Research</li> </ul>                     |
| Flagship 6           | Management and coordination of the Gender Platform  | <ul style="list-style-type: none"> <li>• Royal Tropical Institute</li> <li>• University of Oxford</li> <li>• IFPRI</li> <li>• ILRI</li> <li>• WorldFish</li> </ul>  | <ul style="list-style-type: none"> <li>• Capacity</li> <li>• Delivery</li> <li>• Outreach</li> <li>• Research</li> </ul> |
| Flagship 6           | Tools to analyze women’s involvement in intrahousehold decision making  | <ul style="list-style-type: none"> <li>• University of Central Asia</li> <li>• Westminster International University, Tashkent, Uzbekistan</li> <li>• CIAT</li> <li>• ICARDA</li> <li>• IFPRI</li> </ul>   | <ul style="list-style-type: none"> <li>• Capacity</li> <li>• Research</li> </ul>   |
| Flagship 6           | Building a research agenda on cash transfers and intimate partner violence  | <ul style="list-style-type: none"> <li>• London School of Hygiene and Tropical Medicine</li> <li>• University of North Carolina</li> <li>• Johns Hopkins Bloomberg School of Public Health</li> <li>• United Nations Children's Fund</li> <li>• IFPRI</li> </ul>  | <ul style="list-style-type: none"> <li>• Capacity</li> <li>• Outreach</li> <li>• Research</li> </ul>                     |
| Flagship 6           | Piloting the Women’s Empowerment in Agriculture Index for Value Chains in Bangladesh, Benin, Malawi and the Philippines     | <ul style="list-style-type: none"> <li>• Government of Bangladesh</li> <li>• African Union Development Agency-New Partnership for Africa’s Development (AUDA-NEPAD)</li> <li>• Millennium Challenge Corporation</li> <li>• Bill &amp; Melinda Gates Foundation</li> <li>• USAID</li> <li>• GIZ</li> </ul> | <ul style="list-style-type: none"> <li>• Capacity</li> <li>• Policy</li> <li>• Research</li> </ul>                       |

| Lead flagship | Brief description of partnership aims                 | List of key partners in partnership   | Main area of partnership   |
|---------------|---|---|--|
| Flagship 6    | Women's empowerment and nutrition in Papua New Guinea | <ul style="list-style-type: none"> <li>• Government of Papua New Guinea</li> <li>• AUSAID</li> <li>• University of California, Berkeley</li> <li>• IFPRI</li> </ul> | <ul style="list-style-type: none"> <li>• Capacity</li> <li>• Policy</li> <li>• Research</li> </ul> |

Table 9: Internal cross-CGIAR collaborations

Note: Inter-Center collaborations within PIM are not listed and Centers are not listed for cross-CRP collaborations because adding these would make the table too large and messy. Two exceptions have been made for the CGIAR Foresight Report and for the Gender and Agriculture book, which involve all Centers and are highlighted in the report's narrative sections.

| Brief description of the collaboration  | Name(s) of collaborating CRP(s), Platform(s) or Center(s)  | Optional: Value added, in a few words  |
|---|--|--|
| Climate change impacts on food system futures   | CCAFS, PIM   | CCAFS provides climate change modeling projections and PIM uses the information, along with other projected changes, to generate implications on food production and other outcomes  |
| All Centers participate in the CGIAR foresight report, a CGIAR-wide initiative to inform strategic decision making about future food systems  | AfricaRice, Bioversity International, CIAT, CIFOR, CIMMYT, CIP, ICARDA, ICRAF, ICRISAT, IFPRI, IITA, ILRI, IRRI, IWMI, WorldFish | Each Center contributes tools and analyses to the report – Directors from FISH, FTA, LIVESTOCK, PIM and WLE are Steering Committee members, along with DDGs from the Alliance of Bioversity International and CIAT, CIP, IITA, and IWMI; various collaborations across Centers are also producing articles in high-impact journals |
| Cross-country research on the impact of public investments in agricultural research and agriculture on agricultural performance in the maize sector and for other cereals   | MAIZE, PIM   | Each team brings to bear their unique expertise and comparative advantage, PIM on the impacts of public investments in agriculture and MAIZE on the maize/other cereals' sectors   |
| Policy and regulatory options for strengthening seed systems for vegetatively propagated crops; gender dynamics in seed systems   | Gender Platform, PIM, RTB  | RTB leads studies on successful models for seed systems, PIM leads studies on policy and regulatory issues, and the Gender Platform leads studies on gender dynamics in seed systems   |
| Seed business development for maize   | MAIZE, PIM   | PIM brings in policy dimensions and analytical frameworks to MAIZE investments in the seed sector  |
| Impact of advisory services on agroforestry adoption in Peru  | FTA, PIM   | PIM is complementing an FTA project by adding a component to test alternative approaches to formulating advice on agroforestry practices   |
| Impact of the revision of the Multilateral System of Access and Benefit Sharing of plant genetic resources  | Genebanks Platform, PIM  | Genebanks provides technical guidance and data and PIM funds the econometric analysis  |
| Analysis of distortions in rice value chains  | PIM, RICE  | PIM generates distortion data and RICE invests in their analysis and implications  |
| Insights on markets, policy and nutrition in Bangladesh – In 2019, publication of the book <i>The Making of a Blue Revolution in Bangladesh</i> and of a study on well-being and food safety outcomes in dairy value chains | A4NH, PIM  | PIM supports social protection and markets research, while Bangladesh is a focal country for A4NH - The synergies are facilitated by IFPRI's Bangladesh Country Program, which provides outreach support to both CRPs  |
| Agriculture-nutrition linkages, cooking-time, intrahousehold equality among women and children: Evidence from Tajikistan  | A4NH, PIM  | Each CRP provides complementary insights into the article's subject areas  |

| Brief description of the collaboration  | Name(s) of collaborating CRP(s), Platform(s) or Center(s)   | Optional: Value added, in a few words   |
|---|---|---|
| Household dietary patterns and the cost of a nutritious diet in Myanmar   | A4NH, PIM   | Each CRP provides complementary insights into the article's subject areas   |
| Research on reducing the costs of nutritious foods in Ethiopia  | A4NH, PIM   | PIM provides methods and resources for the production and value chain study, A4NH helped to inform focus crops and is conducting complementary work on the food environment and diets   |
| Postharvest losses (hermetic storage bags in Ethiopia with MAIZE and managing postharvest losses in potatoes and sweetpotatoes with RTB)      | MAIZE, PIM, RTB   | Unified methodology to measure losses, coordinated pilot interventions to reduce losses   |
| <i>Book Value Chain Development and The Poor: Promise, Delivery and Opportunities for Increased Impact at Scale (to be published in 2020)</i> | MAIZE, PIM  | Collection of new and previously published papers on value chain development and the poor – The book will contain various PIM-funded papers   |
| Livestock value chains in small ruminants in East Africa and cattle in West Africa  | LIVESTOCK, PIM  | LIVESTOCK brings technical expertise on livestock and baseline sectoral data, PIM supplements data collection and contributes methods to deepen the analyses  |
| Cross-CGIAR engagement on value chains  | A4NH, Big Data Platform, CCAFS, FTA, FISH, Gender Platform, GLDC, LIVESTOCK, MAIZE, PIM, RICE, RTB, WHEAT | PIM workshop to improve the coordination of CGIAR's work on value chains through the CGIAR community of practice, revamped Toos4valuechains.org website, collaborative studies on efficiency and employment in value chains, new research call on food quality through co-investments with other CRPs |
| Use of smartphone pictures to develop applications for insurance and advisory services  | Big Data Platform, PIM  | PIM invests in the development of a picture-based insurance product; the co-investment with Big Data helps test the development of a business case and scale up   |
| Learning Platform for Agricultural Insurance  | CCAFS, PIM  | CGIAR community of practice on weather-related agricultural insurance   |
| Interaction between social protection programs and interventions on agriculture and nutrition in Peru   | PIM, RTB  | The RTB team brings a thorough understanding of the government systems and cultural contexts, while the IFPRI team brings expertise on impact assessment of social protection programs  |
| Policy dialogue and capacity building for rangeland management and land use planning in pastoral areas in Ethiopia, Tanzania and Tunisia      | LIVESTOCK, PIM  | LIVESTOCK brings in expertise on land use planning of rangelands and PIM brings in attention to gender, tenure and governance   |
| Joint planning of initiatives for restoring degraded landscapes in India, Kenya and Uganda  | FTA, PIM, WLE   | Synergy between PIM's focus on strengthening landscape-level governance, policies and gender dimensions and the focus of WLE and FTA on technical and institutional interventions related to soil, water and forest resources   |

| Brief description of the collaboration   | Name(s) of collaborating CRP(s), Platform(s) or Center(s)   | Optional: Value added, in a few words  |
|--|---|--|
| Synthesis of evidence of economic benefits from community forest concessions at household, community and national levels in the Maya Biosphere Reserve, Guatemala and dissemination to government and other stakeholders | FTA, PIM  | Each CRP provided funds for the study of some of the concessions   |
| Games on collective action to improve governance of common resources in India: research methods and capacity building  | PIM, WLE  | The use of collective action games by ICRISAT and IFPRI to improve collective water management was piloted under WLE, and has been expanded under PIM to cover other types of resources (e.g. forest management) and create an online resource center – In addition to expanding the reach of games as an intervention, PIM is examining ways of measuring the social learning effect of games |
| Synthesis on the effectiveness of multistakeholder platforms   | FTA, LIVESTOCK, PIM, WLE  | PIM provides support for the compilation and synthesis, drawing upon case studies supported by the other CRPs  |
| Further development of tools tailored to different types of users based on the Women's Empowerment in Agriculture Index  | A4NH, PIM   | A4NH contributes to the development of the project-level WEAI (Pro-WEAI) and PIM to the development of the Abbreviated WEAI (A-WEAI) and WEAI for value chains (WEAIVC)  |
| Women's empowerment and mobile phone data in Uganda  | Big Data Platform, Gender Platform, PIM   | Platforms work together to assess whether mobile data can be used as predictors for women's empowerment  |
| Research on gender roles and decision making in value chains in Egypt, Jordan and Uzbekistan   | GLDC, PIM, WHEAT  | Co-investment to produce joint outputs   |
| Analyses of joint decision making about agricultural production in households of Nicaragua and Colombia  | A4NH, CCAFS, PIM, RICE  | PIM funded a synthesis of lessons from studies funded by the three other CRPs  |
| Preparation of Special Issue on gender in seed systems   | Gender Platform, GLDC, LIVESTOCK, PIM, RICE, RTB  | Production of a joint output following a PIM call for research proposals   |
| Gender Platform's 2018-2020 grants on the feminization of agriculture  | CCAFS, FTA, LIVESTOCK, MAIZE, PIM, RTB, WHEAT, WLE  | Co-investment to produce joint outputs   |
| Publication on cross-CGIAR gender research that aims to rethink gender research and craft a forward-looking research agenda  | Africa Rice, Bioversity International, CIAT, CIFOR, CIMMYT, CIP, ICRAF, ICRISAT, IFPRI, IITA, ILRI, IRRI, IWMI, WorldFish | Co-authorship of nine thematic chapters; leadership by the Gender Platform   |

Table 10: Monitoring, evaluation, learning and impact assessment (MELIA)

| Studies/learning exercises planned for this year  | Status           | Type of study or activity        | Description  | Links to MELIA publications, comments   |
|---|------------------|----------------------------------|--|---|
| Contribution of foresight tools and outputs to policy and program decision making   | Complete         | Qualitative outcome study        | This study identified users of foresight tools, data and outputs and followed up through surveys and interviews to document uses of foresight research in decision making and other outcomes.  | <a href="#">Assessment of Outcomes Based on the Use of PIM-Supported Foresight Modeling Work, 2012-2018</a> |
| Analysis of CGIAR innovations and policy contributions  | Extended         | Other MELIA activity             | The purpose of this study, which uses mainly information included in CRPs' and platforms' annual reports, is to assess CGIAR policy contributions across thematic and geographical areas and to identify ways in which collaboration could be strengthened.  | Started in 2019, to be completed in 2020  |
| Impact assessment of the Ethiopia Direct Seed Marketing program   | Planned for 2020 | <i>Ex post</i> impact assessment | This study uses existing data from different waves of household surveys to assess changes in purchases of seed through the Ethiopia Direct Seed Marketing program as well as the effects of the program on productivity. Qualitative interviews of stakeholders will be conducted to analyze levels of satisfaction and remaining concerns with the program. | Designed in 2019, to be implemented in 2020   |
| Retrospective assessment of PIM's gender work in 2018-2019  | Extended         | Other MELIA activities           | The accuracy of gender scores for PIM 2018 and 2019 peer-reviewed publications will be assessed. In addition, the study will include a synthesis of lessons learned on gender issues and make recommendations for improving PIM gender research in the future portfolio  | To be delivered in 2020 (will assess both the 2018 and 2019 gender work)                                    |
| Assessment of resource tenure and governance outcomes   | Extended         | Qualitative outcome study        | This external evaluation (qualitative study relying on desk review, surveys and interviews) aims to identify successes, outcomes and impacts from PIM's Flagship 5 research as well as missed opportunities, with a view to strengthen this type of research in OneCGIAR.  | Postponed in order to follow the completion of synthesis work undertaken by the research team               |
| Contribution of social accounting matrices' databases, economy-wide tools and outputs to policy and program decision making | Extended         | Qualitative outcome study        | This study identifies users of national economywide modeling tools (CGE models), data (social accounting matrices) and outputs (publications) and follows up through surveys and interviews to document uses of economywide modeling research in decision making and other outcomes.   | Ongoing, to be delivered in 2020  |

Table 11: Update on actions taken in response to relevant evaluations

| Name of the evaluation  | Rec. # | Text of recommendation  | Status of response to this rec. | Concrete actions taken for this recommendation   | By whom  | When      |
|---|--------|---|---------------------------------|--|--|-----------|
| <a href="#">PIM Evaluation</a> (Independent Evaluation Arrangement, 2015) | 7      | PIM should support a vibrant and innovative research program on the interface between science and policy.   | Ongoing                         | Following the PIM-organized cross-CGIAR <a href="#">workshop</a> on political economy research in September 2019, PIM issued a call for proposals on the political economy of food system transformation. Three grants were awarded, for a total amount of \$155K. At the PIM 2019 “extended team” meeting, fifteen participants from ten Centers took part in a “research lab” session to discuss opportunities for enhanced collaboration on political economy research across CGIAR.  | PMU, Flagship 2 team   | 2019-2020 |
|   |        |   |                                 | In 2019, PIM and the SMO launched a study to analyze the 2018 policy outcomes reported by CRPs and Platforms to identify ways in which support for policy outcomes could be better coordinated.  | PMU, SMO   | 2019-2020 |
|   |        |   |                                 | A collaboration with WorldFish started for PIM to support the efforts of WorldFish on policy engagement.   | PMU, WorldFish   | 2019      |
| <a href="#">PIM Evaluation</a> (Independent Evaluation Arrangement, 2015) | 8      | PIM should support more opportunities for intellectual exchange and a greater diversity of scholarly disciplines to expand the choice of research topics, designs, and methods. | Ongoing                         | In 2019 PIM convened three cross-cutting events for building social science capacity in CGIAR: the <a href="#">Seeds of Change</a> conference with the Australian Centre for International Agricultural Research and the University of Canberra; the <a href="#">XVII Biennial Conference of the International Association for the Study of the Commons</a> ; and a workshop on <a href="#">political economy for improved policy analysis and implementation in CGIAR</a> . In addition, PIM hosted an <a href="#">invited panel</a> on the role of institutional capacity development in Africa’s agricultural transformation at the African Association of Agricultural Economists in Abuja, Nigeria. | PMU, flagship teams, Gender Platform                               | 2019      |
|   |        |   |                                 | Flagship/research teams are regularly holding meetings focused on research topics and design.  | PMU, flagship teams, Gender Platform                               | 2017-2020 |
|   |        |   |                                 | Diversity of scholarly disciplines is one of the factors taken into consideration for replacing two outgoing members of the PIM <a href="#">Independent Steering Committee</a> in 2020.  | PMU, Management Committee, IFPRI Director, IFPRI Board of Trustees | 2019-2020 |

| Name of the evaluation  | Rec. # | Text of recommendation  | Status of response to this rec. | Concrete actions taken for this recommendation   | By whom                                 | When      |
|---|--------|---|---------------------------------|--|---|-----------|
| <a href="#">PIM Evaluation</a> (Independent Evaluation Arrangement, 2015) | 9      | PIM and its flagships should adopt a more strategic approach to collaborating with other CRPs.  | Ongoing                         | Two key cross-CRP outputs will come out in 2020: a foresight report and a <a href="#">publication on gender and agriculture</a> .  | Flagships 1 and 6, Gender Platform, PMU | 2018-2020 |
|   |        |   |                                 | The Gender Platform <a href="#">hosted in PIM's Flagship 6</a> in 2017-2019 successfully grew gender research collaboration between CRPs.  | Gender Platform, Flagship 6             | 2017-2019 |
|   |        |   |                                 | PIM continues to foster the development of a <a href="#">CGIAR Value Chains community of practice</a> (workshop held in October 2019, revamped <a href="#">Tools4valuechains website</a> , ongoing review of CGIAR contributions to the discourse on value chains development).                      | Flagship 3, PMU                         | 2018-2020 |
|   |        |   |                                 | A new collaboration started with A4NH on interventions that contribute to improving food quality and efficiency in production and marketing to help reduce the costs of nutritious foods, with focus on Ethiopia.  | Flagship 3, PMU                         | 2019-2020 |
|   |        |   |                                 | The collaboration with FTA and WLE on landscape restoration was strengthened.  | Flagship 5                              | 2019-2020 |
|   |        |   |                                 | A set of studies were launched around the common theme of enhancing food quality in value chains in collaboration with A4NH, FISH, RTB and WHEAT.  | Flagship 3                              | 2019-2020 |
| <a href="#">PIM Evaluation</a> (Independent Evaluation Arrangement, 2015) | 10     | PIM should formulate an explicit capacity strengthening strategy to be implemented in conjunction with its Lead Center, IFPRI.                    | Ongoing                         | PIM commissioned a paper by the IFPRI Capacity Development Unit to reflect on the strategic ways in which PIM can build capacity for impact. A draft was produced at the end of 2019; given the programmed end of CRPs in 2021, this paper is being reworked to reflect a broader CGIAR perspective. | PMU                                     | 2018-2020 |
| <a href="#">PIM Evaluation</a> (Independent Evaluation Arrangement, 2015) | 11     | The leaders of the three major modeling teams in IFPRI should explore possible synergies in their work and broaden their communities of practice. | Ongoing                         | Collaboration between the PIM IMPACT and national economywide CGE modeling teams resulted in a joint 2019 <a href="#">paper</a> on climate change effects in Ethiopia.   | Flagships 1, 2 and 3                    | 2018-2019 |

| Name of the evaluation  | Rec. # | Text of recommendation  | Status of response to this rec. | Concrete actions taken for this recommendation   | By whom                     | When      |
|---|--------|---|---------------------------------|--|-----------------------------|-----------|
| <a href="#">PIM Evaluation (Independent Evaluation Arrangement, 2015)</a> | 12     | PIM should strongly support the new regional hubs on value chains that are being pilot-tested during the extension phase.   | Cancelled                       | A period of several years of piloting showed that the hubs struggled to fulfill their originally intended mandate of outreach to implementation partners. After internal review and discussion with the hubs' partners, it was agreed that the concept should be rethought. The PIM value chains team is now seeking stronger linkages with implementation partners through <a href="#">strengthened collaboration with other CRPs</a> . This revised approach of outreach on value chains methods and applications started to be implemented in 2018. | PMU, Flagship 3, other CRPs | 2017-2020 |
| <a href="#">PIM Evaluation (Independent Evaluation Arrangement, 2015)</a> | 13     | PIM should explore the extent to which other Centers or CRPs have unmet needs for trade analysis that PIM could provide through different types of collaboration.   | Ongoing                         | PIM stands ready to assist CRPs and Centers on trade issues. In 2018-2019 PIM collaborated with IRRI and RICE to address distortions in the global rice value chain. At this point, no other request for assistance has been received and no evidence of unmet needs has been reported.  | PMU, Flagship 3             | 2016-2019 |
| <a href="#">PIM Evaluation (Independent Evaluation Arrangement, 2015)</a> | 14     | Flagships 1 and 4 should increase their attention to gender issues by building on the innovative ways in which some of their activities are already addressing gender issues.   | Ongoing                         | Flagship 1 includes a significant body of research to understand the gender implications of innovative extension methods, some of which are intended to reduce gender gaps. Several 2019 products of Flagship 4 have a strong focus on gender through analysis of gender-sensitive design of social protection interventions and of gender dimensions of outcomes on nutrition, health and well-being.   | PMU, Flagships 1 and 4      | 2016-2019 |
| <a href="#">PIM Evaluation (Independent Evaluation Arrangement, 2015)</a> | 15     | PIM should complete its plans to put in place a monitoring system to track the level of attention to gender issues and to validate the claims that the activity proposals and annual progress reports make in relation to gender. | Completed                       | Since 2017, following completion of the annual reporting cycle, PIM's gender team undertakes an <i>ex post</i> review of PIM deliverables with attention to gender in order to validate the consistency between planning and reporting and share lessons learned with the PIM team. A joint analysis of the 2018 and 2019 deliverables will be undertaken in early 2020.   | PMU, Flagship 6             | 2017-2020 |
|   |        |   |                                 | Starting in 2020 the Flagship 6 team will systematically review the inputs from the flagship teams and PMU on the gender scoring of PIM's milestones, policy contributions and outcome/impact case reports as part of the reporting process.   | PMU, Flagship 6             | 2020      |

| Name of the evaluation   | Rec. # | Text of recommendation   | Status of response to this rec. | Concrete actions taken for this recommendation  | By whom           | When      |
|--|--------|--|---------------------------------|---|-------------------|-----------|
| <a href="#">Ex-Post Impact Assessment Review of IFPRI's Research Program on Social Protection, 2000–2012 (2015)</a>  | N/A    | This evaluation emphasized the need for the social protection research team to be more visible in global discussions so as to contribute more to agenda setting.   | Ongoing                         | Examples of such influence include the role of the social protection team in influencing the prioritization of research on intimate partner violence through the creation of a research <a href="#">Collaborative</a> on that topic.  | Flagships 4 and 6 | 2018      |
|  |        |  |                                 | At the IFPRI-FAO <a href="#">conference</a> "Accelerating the End of Hunger and Malnutrition: A Global Event" in November 2018 in Bangkok, Flagship 4 researchers contributed a side event on humanitarian assistance, a keynote address ("Food security in protracted refugee situations"), and a panel discussion ("Social safety nets and integrated nutrition programs"). | Flagship 4        | 2018      |
|  |        |  |                                 | The Flagship 4 leader now serves as an advisor to World Vision (one of the largest international NGOs supporting humanitarian assistance globally), as a member of World Vision's Research Advisory Council for the Food Security and Livelihoods Sector.   | Flagship 4        | 2018-2020 |
| <a href="#">Balancing International Public Goods and Accountability: Exploring the Impact of IFPRI's Policy Research on Science, Technology, and Innovation (2016)</a> | N/A    | This evaluation emphasized the importance of identifying national demand and opportunities for moving research into policy deliberations at critical times, for international public good research to be impactful at the country level. | Ongoing                         | The <a href="#">ASTI strategy</a> for 2018-2022 focuses on demand-driven research collaboration and considers a diverse set of delivery mechanisms to inform policy.  | Flagship 1        | 2018-2019 |
|  |        |  |                                 | The PIM foresight team increasingly engages with national decision makers to enhance the impact of the foresight-related global databases and models, as shown by the 2019 <a href="#">external assessment</a> of outcomes based on the PIM-supported foresight work.   | Flagship 1        | 2018-2019 |
| <a href="#">IEA Evaluation of Capacity Development activities of CGIAR (2017)</a>  | 2      | Centers and CRPs should base their medium-term capacity development plans on clear capacity development strategies and incorporate capacity development more consistently into their theories of change.                                 | Ongoing                         | The IFPRI Capacity Development Unit was more formally integrated into PIM, with the organization of a capacity building event in Bhutan with policy makers in November 2018.  | PMU               | 2018-2019 |
|  |        |  |                                 | A draft strategy paper was produced at the end of 2019; given the programmed end of CRPs in 2021, this paper is being reworked to reflect a broader CGIAR perspective.  | PMU               | 2019-2020 |

| Name of the evaluation  | Rec. # | Text of recommendation  | Status of response to this rec. | Concrete actions taken for this recommendation   | By whom           | When      |
|---|--------|---|---------------------------------|--|-------------------|-----------|
| <a href="#">IEA Evaluation of Capacity Development activities of CGIAR</a> (2017) | N/A    | There was good evidence of the effectiveness of individual CD interventions and programs, but little evidence of cumulative effects to strengthen organizational and institutional capacity in agricultural research and development.   | Ongoing                         | Some of PIM's organizational capacity strengthening support is directed towards long-term cumulative effects. This includes <a href="#">ASTI's partnership with the Asia-Pacific Association of Agricultural Research Institutions</a> , collaborations with research and government agencies in Bangladesh, Egypt, Ethiopia, India, Nigeria and Pakistan, and with longstanding partner <a href="#">Foundation for Ecological Security</a> in India under the <a href="#">landscape restoration initiative with FTA and WLE</a> . | Various flagships | 2017-2019 |
| <a href="#">Evaluation of Gender in Research and in CGIAR workplace</a> (2017)    | 5      | CRPs should refresh and refocus their gender strategies and/or future work plans, as relevant, to ensure alignment with priorities in the Gender in CGIAR Research Policy.  | Ongoing                         | The Flagship 6 team holds annual workshops to identify research gaps and priorities. This includes alignment and partnership with the Gender Platform.   | PMU, Flagship 6   | 2017-2019 |
| <a href="#">Evaluation of Gender in Research and in CGIAR workplace</a> (2017)    | 10     | CRPs should invest in improving and institutionalizing systems for monitoring outputs, as well as effectiveness and outcomes of gender research.  | Ongoing                         | See recommendation "PIM should complete its plans to put in place a monitoring system to track the level of attention to gender issues and to validate the claims that the activity proposals and annual progress reports make in relation to gender" above.   | PMU, Flagship 6   | 2017-2019 |
| <a href="#">Evaluation of Gender in Research and in CGIAR workplace</a> (2017)    | 11     | The Gender Platform should harness the energy of the gender network, while placing greater emphasis on supporting common research priorities; joint assessment of gender research effectiveness and outcomes/impacts; fostering interdisciplinary dialogue and collaboration between gender and other researchers; supporting roll out of existing tools and methods. | Completed                       | These objectives were <a href="#">achieved</a> by the Gender Platform.   | Flagship 6        | 2017-2019 |

| Name of the evaluation                                    | Rec. # | Text of recommendation  | Status of response to this rec. | Concrete actions taken for this recommendation   | By whom                    | When      |
|---|--------|---|---------------------------------|--|----------------------------|-----------|
| Evaluation Netherlands-CGIAR Strategic Partnership (2019) | N/A    | Raise the profile of the “Nutrition and health” partnership priority.   | Ongoing                         | Nutrition is one of the five new impact areas highlighted by PIM since 2019. Work in this area, previously limited to social protection, is expanding to almost all other flagships: promoting fodder tree technology adoption for improved nutrition in Malawi (Flagship 1); studies on food system transformation and nutrition (Flagship 2); analysis of links between trade and nutritional outcomes (Flagship 3); reducing aflatoxin in Senegal’s groundnut value chains (Flagship 3); addressing the high costs of vegetables in Ethiopia in collaboration with the Dutch Embassy and SNV (Flagship 3); study on women’s empowerment to bridge the gap between agriculture and nutrition in Myanmar (Flagships 1 and 6); strengthening fish value chains in Ghana and Nigeria (Flagships 1 and 3). | Flagships 1, 2, 3, 4 and 6 | 2019-2020 |
| Evaluation Netherlands-CGIAR Strategic Partnership (2019) | N/A    | CGIAR should have more work and collaboration on vegetables and minor crops and animal production systems for diversification of diets. | Ongoing                         | In 2020 PIM is funding a study on inefficiencies and innovations in the Ethiopian vegetable value chains, which will complement related work by A4NH. Discussions about this work involve the Dutch Embassy and SNV, who are implementing a horticulture development program in the country. Other studies on fish are underway in Ghana and Nigeria in collaboration with FISH.   | Flagships 1 and 3          | 2019-2020 |
| Evaluation Netherlands-CGIAR Strategic Partnership (2019) | N/A    | Further dialogue, collaboration and capacity building on how to operationalize the “food systems approach”.                             | Ongoing                         | Plans were made at the end of 2019 to join A4NH in discussions with Wageningen University and Research (WUR) and IFPRI to explore WUR-CGIAR collaboration on food systems transformation. A meeting on this topic was held in January 2020.  | PMU                        | 2019-2020 |
| Evaluation Netherlands-CGIAR Strategic Partnership (2019) | N/A    | Raise the visibility of gender equality in the work of CGIAR.   | Ongoing                         | The Gender Platform <a href="#">hosted in PIM’s Flagship 6</a> in 2017-2019 significantly <a href="#">contributed</a> to this.   | Gender Platform,           | 2019-2020 |
|   |        |   |                                 | A PIM 2019 <a href="#">brochure</a> highlights several PIM studies on gender.  | PMU, all flagships         | 2019      |
| Evaluation Netherlands-CGIAR Strategic Partnership (2019) | N/A    | There is still ground to cover on implementation/enabling and scaling.  | Ongoing                         | In 2019, PIM funded an analysis of the scaling up approaches related to value chains used by CRPs.   | Flagship 3                 | 2019-2020 |
|   |        |   |                                 | In October 2019, PIM co-hosted a <a href="#">meeting</a> on scaling CGIAR innovations with CIMMYT.   | PMU                        | 2019      |
|   |        |   |                                 | PIM continues to conduct research on extension systems and approaches, which are a key component to scaling.   | Flagships 1 and 2          | 2019-2020 |

| Name of the evaluation  | Rec. # | Text of recommendation   | Status of response to this rec. | Concrete actions taken for this recommendation  | By whom   | When      |
|---|--------|--|---------------------------------|---|---|-----------|
| Performance Management Standards Pilot Assessment Report, PIM (November 2019) | Std 1  | Documentation of the decision-making process for adding and withdrawing projects is currently tracked in an Excel spreadsheet, which makes it easy to find records in a collected manner. To reach Level 4, ensure that there are explanations for each project with no gaps, and provide evidence the Program has considered implications of projects beyond basic criteria (e.g., relevance, credibility, legitimacy). | Ongoing                         | Documentation of the justifications for adding/withdrawing bilateral/W3 grants to the PIM portfolio is now systematically filed. Due to the large number of such grants, this process generates high transaction costs.   | PMU, flagship leaders, cluster leaders, project leaders | 2019-2020 |
| Performance Management Standards  | Std 4  | The Program should show that its prioritization process takes a clear portfolio view, and that transparent systems are in place to track funding and results easily. The Program may consider tracking such processes in a central location beyond emails, such as a spreadsheet that records allocation decisions with criteria.  | Ongoing                         | In 2019 PIM issued guidelines for the PIM annual Window 1-2 budget allocation process. Each flagship-level allocation process followed these guidelines. Information about these processes and their outcomes (i.e., PIM 2020 allocations at activity level) were shared with the PIM extended team. The online MARLO tool serves as the repository of information about delivery of outputs and contributions to impact pathways; it currently does not allow for documentation of prioritization processes. | PMU, flagship leadership teams                          | 2019-2020 |
| Pilot Assessment Report, PIM (November 2019)                                  | Std 5  | Ensure that all links are working properly and are up to date, that all Tables (including the publications Table 6) have corresponding pieces of evidence that are clearly marked and so are easy to identify, and that evidence is publicly available.  | Ongoing                         | Links to online contents can stop working as web pages evolve. On occasions there have been issues with accessibility of MARLO contents at certain times. The PMU ensures that all links are working at the time of submission of the Annual Report – that is what we have control over.  | PMU   | 2019-2020 |

| Name of the evaluation           | Rec. # | Text of recommendation   | Status of response to this rec. | Concrete actions taken for this recommendation   | By whom | When      |
|----------------------------------|--------|--|---------------------------------|--|---------|-----------|
| Performance Management Standards | Std 6  | <p>Availability of Program information (online)</p> <ul style="list-style-type: none"> <li>To reach Level 3, ensure all required information in this section, including meeting minutes, is available online. This could include an internal online CGIAR system or database (e.g., MARLO); note that it is not necessary to have on a public-facing website.</li> </ul> <p>(Y) Availability of Program information (to be provided on request)</p> <ul style="list-style-type: none"> <li>To reach Level 4, all information should be available via link to a public or internal website where the information is regularly updated.</li> </ul> | Ongoing                         | <p>PIM is in compliance with this. The single exception relates to the PIM Management Committee minutes, which are not for public consumption as they occasionally contain confidential information. In addition, a substantial portion of their contents is focused on internal matters which are of no interest outside of the PIM teams. In Phase 1 the Program Management Unit created a Sharepoint site to make Management Committee minutes and other key program documents accessible to the PIM “extended team”. At the end of Phase 1 an assessment of this Sharepoint site revealed that it was not used enough to justify the costs of maintaining it. In Phase 2 the Program Management Unit has used Dropbox to file relevant program documentation. The PIM Dropbox folder is shared with the PIM flagship managers, who are the main users of this information. Membership of the sub-folder containing Management Committee minutes could be broadened to the full “extended team” for compliance with Standard 6.</p> | PMU     | 2019-2020 |

Table 12: Examples of W1/2 use

| Specific examples   | Broad area of use of W1-2  |
|---|--|
| Continued support for CGIAR foresight team and collaborative achievements on foresight modeling and outreach: <a href="#">articles</a> in high-impact journals, presentations in high-profile conferences, launch of the <a href="#">Global Foresight for Food and Agriculture Tool</a> , preparation of the CGIAR foresight report.  | Partnerships   |
| Maintenance and improvement of computable general equilibrium modeling tools and social accounting matrices to assist with national and development agencies' priority setting, and update of the Statistics of Public Expenditures for Economic Development ( <a href="#">SPEED</a> ) interactive tool (latest dataset update in <a href="#">2019</a> ).   | Research   |
| Continued support to the <a href="#">Structural Transformation of African Agriculture and Rural Spaces</a> program.   | Capacity development   |
| <a href="#">Workshop</a> on "Political economy for improved policy analysis and implementation in CGIAR" with participation of staff from 12 Centers  | Capacity development   |
| <a href="#">Ag-Incentives</a> network facilitated by IFPRI with the Food and Agriculture Organization, the Inter-American Development Bank, the Organisation for Economic Co-operation and Development and the World Bank   | Partnerships   |
| <a href="#">Platform</a> to share data and methodologies for measuring food losses in partnership with the Food and Agriculture Organization  | Partnerships   |
| Cross-country comparative studies on rural transformation ( <a href="#">book</a> on youth and jobs in rural Africa, forthcoming book on mechanization), analysis of <a href="#">employment data</a> from large national surveys and measurement of employment in selected value chains, including gender and age dimensions   | Research   |
| Cross-CRP engagement on value chains: <a href="#">workshop</a> to improve and share research methods across CGIAR and strengthen the CGIAR community of practice, PIM collaborative studies on quality certification and market competitiveness through co-investments with other CRPs, revamped <a href="#">Tools for Value Chains website</a>   | Partnerships   |
| Launch of research to address the high costs of nutritious foods in Ethiopia in collaboration with A4NH   | Research   |
| <a href="#">Synthesis of research</a> on gender-differentiated outcomes from social safety net programs in Africa   | Research   |
| Strengthening the partnership with FTA and WLE on coordination of <a href="#">CGIAR collaboration with the Foundation for Ecological Security on the Promise of the Commons initiative</a> in India   | Partnerships   |
| Side events and presentations by CGIAR scientists at the International Association of the Study of the Commons biannual <a href="#">meeting</a>   | Capacity development   |
| <a href="#">Session</a> on "Restoring Forests, Restoring Communities" with FTA at the Global Landscapes Forum meeting   | Capacity development   |
| Side event at the African Association of Agricultural Economists Conference on <a href="#">the role of institutional capacity development in Africa's agricultural transformation</a>   | Capacity development   |
| Activities of the Gender Platform to enhance and coordinate gender research in CGIAR: <a href="#">webinars</a> , <a href="#">newsletters</a> , <a href="#">campaigns</a> , cross-CRP engagement on <a href="#">gender dynamics in seed systems</a> and the <a href="#">feminization of agriculture</a> , investment in communities of practices and in supporting a large CGIAR presence at the <a href="#">Seeds of Change</a> Conference, preparation of a landmark <a href="#">publication</a> on CGIAR research on gender | Other cross-cutting issues (gender)                                  |
| Impact assessment studies led by the Program Management Unit: analyses of outcomes from PIM-supported <a href="#">foresight research</a> ; study of the outcomes from the use of economywide models and datasets (to be completed in 2020); joint study with the SMO of policy outcomes reported by CRPs and platforms (to be completed in 2020)  | Other Monitoring, learning, evaluation and impact assessment (MELIA) |
| Contribution to the improvement of the Monitoring Agricultural Research for Learning and Outcomes (MARLO) management information system   | Other Monitoring, learning, evaluation and impact assessment (MELIA) |

Table 13: CRP financial report

Amounts in USD (thousands)

|  | Planned budget 2019* |                  |               | Actual expenditure 2019** |                  |               | Difference (planned - actual) |                  |              |
|--|----------------------|------------------|---------------|---------------------------|------------------|---------------|-------------------------------|------------------|--------------|
|  | W1-2                 | W3/<br>bilateral | Total         | W1-2                      | W3/<br>bilateral | Total         | W1-2                          | W3/<br>bilateral | Total        |
| <b>FP1: Technological Innovation and Sustainable Intensification</b>                   | 4,018                | 9,217            | 13,235        | 3,627                     | 9,716            | 13,343        | 390                           | -499             | -109         |
| <b>FP2: Economywide Factors Affecting Agricultural Growth and Rural Transformation</b> | 2,882                | 20,713           | 23,595        | 2,706                     | 21,814           | 24,520        | 176                           | -1,101           | -925         |
| <b>FP3: Inclusive and Efficient Value Chains</b>                                       | 3,459                | 7,958            | 11,417        | 3,196                     | 3,359            | 6,555         | 263                           | 4,599            | 4,862        |
| <b>FP4: Social Protection for Agriculture and Resilience</b>                           | 1,478                | 2,523            | 4,001         | 1,362                     | 3,387            | 4,749         | 116                           | -864             | -748         |
| <b>FP5: Governance of Natural Resources</b>  | 1,996                | 2,694            | 4,689         | 2,008                     | 1,659            | 3,667         | -12                           | 1,035            | 1,023        |
| <b>FP6: Cross-cutting Gender Research and Coordination</b>                             | 3,492                | 1,702            | 5,195         | 2,137                     | 1,141            | 3,278         | 1,356                         | 561              | 1,917        |
| <b>CRP management &amp; support Cost</b>   | 2,637                | 0                | 2,637         | 2,078                     | 0                | 2,078         | 559                           | 0                | 559          |
| <b>Total</b>   | <b>19,962</b>        | <b>44,806</b>    | <b>64,769</b> | <b>17,114</b>             | <b>41,076</b>    | <b>58,190</b> | <b>2,848</b>                  | <b>3,731</b>     | <b>6,579</b> |

\* Source: PIM Plan of Work and Budget 2019. Planned Window 3 and bilateral expenditures reflected firm or likely commitments at the time of the POWB.

\*\* Source: Participating Centers' year-end reports consolidated by PIM.

**Part C: Additional evidence to be submitted through Management Information Systems or as indicated**

*Evidence A: Full list of policy contributions*

In MARLO

*Evidence B: Full list of innovations*

In MARLO

*Evidence C: Outcomes and milestones*

In MARLO

## Evidence D: Full list of peer-reviewed journal articles

Detailed references and links available [here](#)

| Author(s)   | Article title  | Journal title   |
|---|--|---|
| Agus, Fahmuddin; Andrade, José F.; Rattalino Edreira, Juan I.; Deng, Nanyan; Purwantomo, Dwi K.G.; Agustiani, Nurwulan; Aristya, Vina E.; Batubara, Siti F.; Herniwati; Hosang, Evert Y.; Krisnadi, Leonardus Y.; Makka, Andarias; Samijan; Cenacchi, Nicola; Wiebe, Keith D.; Grassini, Patricio | Yield gaps in intensive rice-maize cropping sequences in the humid tropics of Indonesia  | <i>Field Crops Research</i>                                     |
| Alderman, Harold; Behrman, Jere R.; Tasneem, Afia   | The contribution of increased equity to the estimated social benefits from a transfer program: An illustration from PROGRESA/Oportunidades               | <i>World Bank Economic Review</i>                               |
| Ambler, Kate; de Brauw, Alan; Godlonton, Susan  | Cash transfers and management advice for agriculture: Evidence from Senegal  | <i>World Bank Economic Review</i>                               |
| Arndt, Channing; Arent, Doug; Hartley, Faaïqa; Merven, Bruno; Mondal, Md. Hossain Alam  | Faster than you think: Renewable energy and developing countries   | <i>Annual Review of Resource Economics</i>                      |
| Arndt, Channing; Chinowsky, Paul; Fant, Charles; Paltsev, Sergey; Schlosser, Adam; Strzepek, Kenneth; Tarp, Finn; Thurlow, James  | Climate change and developing country growth: the cases of Malawi, Mozambique, and Zambia  | <i>Climatic Change</i>  |
| Arndt, Channing; Henley, Giles; Hartley, Faaïqa   | Bioenergy in Southern Africa: An opportunity for regional integration?   | <i>Development Southern Africa</i>                              |
| Aurino, Elisabetta; Tranchant, Jean-Pierre; Diallo, Amadou Sekou; Gelli, Aulo   | School feeding or general food distribution? Quasi-experimental evidence on the educational impacts of emergency food assistance during conflict in Mali | <i>Journal of Development Studies</i>                           |
| Bachewe, Fantu Nisrane; Minten, Bart; Taffesse, Alemayehu Seyoum; Pauw, Karl; Cameron, Alethia; Endaylalu, Tirsit Genye   | Farmers' grain storage and losses in Ethiopia: Measures and associates   | <i>Journal of Agricultural and Food Industrial Organization</i> |
| Bachewe, Fantu Nisrane; Regassa, Mekdim Dereje; Minten, Bart; Taffesse, Alemayehu Seyoum; Tamru, Seneshaw; Hassen, Ibrahim Worku  | The transforming value chain of Ethiopia's "orphan" tef crop   | <i>Planta</i>   |
| Bahri, Haithem; Annabi, Mohamed; M'Hamed, Hatem Cheikh; Frija, Aymen  | Assessing the long-term impact of conservation agriculture on wheat-based systems in Tunisia using APSIM simulations under a climate change context      | <i>Science of The Total Environment</i>                         |
| Bakhshinyan, Elmira; Molinas, Luca; Alderman, Harold  | Assessing poverty alleviation through social protection: School meals and family benefits in a middle-income country                                     | <i>Global Food Security</i>                                     |
| Balana, Bedru B.; Sanfo, Safietou; Barbier, Bruno; Williams, Timothy O.; Kolavalli, Shashidhara   | Assessment of flood recession agriculture for food security in Northern Ghana: An optimization modelling approach  | <i>Agricultural Systems</i>                                     |

| <b>Author(s)</b>   | <b>Article title</b>   | <b>Journal title</b>                                   |
|--|--|--|
| Bathla, Seema; Joshi, Pramod Kumar; Kumar, Anjani  | Targeting agricultural investments and input subsidies in low-income lagging regions of India  | <i>European Journal of Development Research</i>        |
| Beach, Robert H.; Sulser, Timothy B.; Crimmins, Allison; Cenacchi, Nicola; Cole, Jefferson                               | Combining the effects of increased atmospheric carbon dioxide on protein, iron, and zinc availability and projected climate change on global diets: a modelling study                      | <i>Lancet Planetary Health</i>                         |
| Bell, Andrew; Ward, Patrick S.; Tamal, Md. Ehsanul Haque; Killilea, Mary E.  | Assessing recall bias and measurement error in high-frequency social data collection for human-environment research  | <i>Population and Environment</i>                      |
| Bernard, Tanguy; Doss, Cheryl R.; Hidrobo, Melissa; Hoel, Jessica B.; Kieran, Caitlin                                    | Ask me why: Patterns of intrahousehold decision-making   | <i>World Development</i>                               |
| Bi, Jieying; Chen, Kevin Z.  | Experience of international poverty targeting and its implications for China   | <i>World Agriculture</i>                               |
| Bi, Jieying; Liu, Chengfang; Li, Shaoping; He, Zhenya; Chen, Kevin Z.; Luo, Renfu; Wang, Zimei; Yu, Yanying; Xu, Haiquan | Dietary diversity among preschoolers: A cross-sectional study in poor, rural, and ethnic minority areas of Central South China   | <i>Nutrients</i>                                       |
| Bouët, Antoine; Métivier, Jeanne   | Is the dispute settlement system, "jewel in the WTO's crown", beyond reach of developing countries?  | <i>Review of World Economics</i>                       |
| Breisinger, Clemens; Mukashov, Askar; Raouf, Mariam; Wiebelt, Manfred  | Energy subsidy reform for growth and equity in Egypt: The approach matters   | <i>Energy Policy</i>                                   |
| Brooks, Karen; Place, Frank M.   | Global food systems: Can foresight learn from hindsight?   | <i>Global Food Security</i>                            |
| Ceballos, Francisco; Kramer, Berber; Robles, Miguel  | The feasibility of Picture-Based Insurance (PBI): Smartphone pictures for affordable crop insurance  | <i>Development Engineering</i>                         |
| Chamberlin, Jordan; Jayne, T. S.   | Does farm structure affect rural household incomes? Evidence from Tanzania   | <i>Food Policy</i>                                     |
| Chaminuka, Petronella; Beintema, Nienke M.; Flaherty, Kathleen; Liebenberg, Frikkie                                      | Public agricultural research and development spending in South Africa – update   | <i>Agrekon</i>   |
| Chen, Joyce J.; Kosec, Katrina; Mueller, Valerie   | Temporary and permanent migrant selection: Theory and evidence of ability-search cost dynamics   | <i>Review of Development Economics</i>                 |
| Chen, Kevin Z.; Bi, Jieying; Nie, Fengying; Fang, Xiangming; Fan, Shenggen   | New vision and policy recommendations for nutrition-oriented food security in China [In Chinese]   | <i>Scientia Agricultura Sinica</i>                     |
| Chen, Kevin Z.; Jieying, Bi; Guobao, Wu; Xiaojun, He; Zimei, Wang  | Post-2020 rural urban integrative poverty reduction strategy: Development status, evolution, new vision and key areas  | <i>Chinese Rural Economy</i>                           |
| Cheng, Xiaoyu; Chen, Kevin Z.; Zhang, Li   | Measurement and analysis of rural persistent and multidimensional poverty: Based on the census data of three administrative villages in Puding County, Guizhou in 2004 - 2017 [In Chinese] | <i>China Population, Resources and Environment</i>     |
| Chilemba, Joanna; Ragasa, Catherine  | The impact on farmer incomes of a nationwide scaling up of the farmer business school program: Lessons and insights from central Malawi  | <i>The European Journal of Development Research</i>    |
| Davis, Kristin; Landini, F.; van Niekerk, Green, K.; Terblanche, S. E.   | Extension officers' perceptions of extension and innovation in South Africa  | <i>South African Journal of Agricultural Extension</i> |

| <b>Author(s)</b>   | <b>Article title</b>   | <b>Journal title</b>                       |
|--|--|--|
| de Brauw, Alan   | Migration out of rural areas and implications for rural livelihoods  | <i>Annual Review of Resource Economics</i> |
| De Pinto, Alessandro; Smith, Vincent H.; Robertson, Richard D.   | The role of risk in the context of climate change, land use choices and crop production: Evidence from Zambia                          | <i>Climate Research</i>                    |
| Dedehouanou, Sènakpon F. A.; McPeak, John  | Diversify more or less? Household income generation strategies and food security in rural Nigeria                                      | <i>Journal of Development Studies</i>      |
| Deininger, Klaus; Liu, Yanyan  | Heterogeneous welfare impacts of National Rural Employment Guarantee Scheme: Evidence from Andhra Pradesh, India                       | <i>World Development</i>                   |
| Del Prete, Davide; Ghins, Léopold; Magrini, Emiliano; Pauw, Karl   | Land consolidation, specialization and household diets: Evidence from Rwanda   | <i>Food Policy</i>                         |
| Diao, Xinshen; Kweka, Josaphat; McMillan, Margaret S.; Qureshi, Zara   | Economic transformation in Africa from the bottom up: New evidence from Tanzania   | <i>World Bank Economic Review</i>          |
| Diao, Xinshen; Magalhaes, Eduardo; Silver, Jed   | Cities and rural transformation: A spatial analysis of rural livelihoods in Ghana  | <i>World Development</i>                   |
| Ditzler, Lenora; Komarek, Adam M.; Chiang, Tsai-Wei; Alvarez, Stéphanie; Chatterjee, Shantonu Abe; Timler, Carl;             | A model to examine farm household trade-offs and synergies with an application to smallholders in Vietnam                              | <i>Agricultural Systems</i>                |
| Donovan, Jason; Blare, Trent; Peña, Meliza   | Multiple certification uptake by coffee businesses: Evidence of functions and benefits from Central America                            | <i>Business Strategy and Development</i>   |
| Doss, Cheryl R.; Quisumbing, Agnes R.  | Understanding rural household behavior: Beyond booserup and becker   | <i>Agricultural Economics</i>              |
| Doss, Cheryl; Kieran, Caitlin; Kilic, Talip  | Measuring ownership, control, and use of assets  | <i>Feminist Economics</i>                  |
| Enahoro, Dolapo; Mason-D'Croz, Daniel; Mul, Marloes; Rich, Karl M.; Robinson, Timothy P.; Thornton, Philip; Staal, Steven S. | Supporting sustainable expansion of livestock production in South Asia and Sub-Saharan Africa: Scenario analysis of investment options | <i>Global Food Security</i>                |
| Fadare, Olusegun; Amare, Mulubrhan; Mavrotas, George; Akerele, Dare; Ogunniyi, Adebayo                                       | Mother's nutrition-related knowledge and child nutrition outcomes: Empirical evidence from Nigeria                                     | <i>PLOS One</i>                            |
| Falk, Thomas; Kumar, Shalander; Srigiri, Srinivasa   | Experimental games for developing institutional capacity to manage common water infrastructure in India                                | <i>Agricultural Water Management</i>       |
| Falk, Thomas; Kumar, Shalander; Srigiri, Srinivasa   | Public good experiment data of a water game framed to Rajasthan/India  | <i>Data in Brief</i>                       |
| Figueroa, Jose Luis; Kurdi, Sikandra   | Ex post adjustment for measurement error in stunting calculations: An illustration from Egypt  | <i>Public Health Nutrition</i>             |
| Filipski, Mateusz J.; Jin, Ling; Zhang, Xiaobo; Chen, Kevin Z.   | Living like there's no tomorrow: The psychological effects of an earthquake on savings and spending behavior                           | <i>European Economic Review</i>            |
| Gassner, Anja; Harris, D.; Mausch, K.; Terheggen, A.; Lopes, C.; Finlayson, R. F.; Dobie, P.                                 | Poverty eradication and food security through agriculture in Africa: Rethinking objectives and entry points                            | <i>Outlook on Agriculture</i>              |
| Gbegbelegbe, Sika; Alene, Arega; Kamara, Alpha; Wiebe, Keith D.; Manyong, Victor M.; Abdoulaye, Tahirou; Mkandawire, Petros  | Ex-ante evaluation of promising soybean innovations for sub-Saharan Africa   | <i>Food and Energy Security</i>            |

| Author(s)  | Article title  | Journal title   |
|--|--|---|
| Gilligan Daniel  | School feeding reduces anemia prevalence in adolescent girls and other vulnerable household members in a cluster randomized controlled trial in Uganda | <i>Journal of Nutrition</i>   |
| Gilligan, Daniel; Karachiwalla, Naureen; Kasirye, Ibrahim; Lucas, Adrienne M.; Neal, Derek                     | Educator incentives and educational triage in rural primary schools  | <i>Journal of Human Resources</i>                                   |
| Hatab, Assem Abu; Cavinato, Maria Eduarda Rigo; Lindemer, August; Lagerkvist, Carl-Johan                       | Urban sprawl, food security and agricultural systems in developing countries: A systematic review of the literature                                    | <i>Cities</i>   |
| Heath, Rachel; Hidrobo, Melissa; Roy, Shalini  | Cash transfers, polygamy, and intimate partner violence: Experimental evidence from Mali   | <i>Journal of Development Economics</i>                             |
| Janssens, Charlotte; Van den Broeck, Goedele; Maertens, Miet; Lambrecht, Isabel                                | What if mothers are entrepreneurs? Non-farm businesses and child schooling in rural Ghana  | <i>Journal of Rural Studies</i>                                     |
| Jayne, T. S.; Muyanga, Milu; Wineman, Ayala; Ghebru, Hosaena; Stevens, Caleb                                   | Are medium-scale farms driving agricultural transformation in sub-Saharan Africa?  | <i>Agricultural Economics</i>                                       |
| Jayne, T.S.; Snapp, Sieglinda; Place, Frank M.; Sitko, Nicholas  | Sustainable agricultural intensification in an era of rural transformation in Africa   | <i>Global Food Security</i>   |
| Joglekar, Alison K. B.; Wood-Sichra, Ulrike; Pardey, Philip G.   | Pixelating crop production: Consequences of methodological choices   | <i>PLoS ONE</i>   |
| Kassie, Girma T.; Wubie, Rahel Solomon; Tokgoz, Simla; Majeed, Fahd; Yitayih, Mulugeta; Rischkowsky, Barbara   | Policy-induced price distortions along the small ruminant value chains in Ethiopia   | <i>Journal of Agribusiness in Developing and Emerging Economies</i> |
| Keovilignavong, Oulavanh; Suhardiman, Diana  | Linking land tenure security with food security: Unpacking farm households' perceptions and strategies in the rural uplands of Laos                    | <i>Land Use Policy</i>  |
| Kiptot, Evelyne; Franzel, Steven   | Developing sustainable farmer-to-farmer extension: Experiences from the volunteer farmer–trainer approach in Kenya                                     | <i>International Journal of Agricultural Sustainability</i>         |
| Komarek, Adam M.; De Pinto, Alessandro; Smith, Vincent H.  | A review of types of risks in agriculture: What we know and what we need to know   | <i>Agricultural Systems</i>   |
| Komarek, Adam M.; Kwon, Hoyoung; Haile, Belyou; Thierfelder, Christian; Mutenje, Munyaradzi J.; Azzarri, Carlo | From plot to scale: Ex-ante assessment of conservation agriculture in Zambia   | <i>Agricultural Systems</i>   |
| Komarek, Adam M.; Msangi, Siwa   | Effect of changes in population density and crop productivity on farm households in Malawi   | <i>Agricultural Economics</i>                                       |
| Komarek, Adam M.; Thurlow, James; Koo, Jawoo; De Pinto, Alessandro   | Economywide effects of climate-smart agriculture in Ethiopia   | <i>Agricultural Economics</i>                                       |
| Komatsu, Hitomi; Malapit, Hazel J.; Balagamwala, Mysbah  | Gender effects of agricultural cropping work and nutrition status in Tanzania  | <i>PLoS ONE</i>   |
| Kosec, Katrina; Mogues, Tewodaj  | Public investment choices by local and central governments   | <i>World Bank Economic Review</i>                                   |
| Kouser, Shahzad; Spielman, David J.; Qaim, Matin   | Transgenic cotton and farmers' health in Pakistan  | <i>PLoS ONE</i>   |

| <b>Author(s)</b>  | <b>Article title</b>  | <b>Journal title</b>   |
|---|---|--|
| Kramer, Berber; Kunst, David  | Intertemporal choice and income regularity: Non-fungibility in the timing of income among Kenyan farmers                                      | <i>Journal of Development Studies</i>                                |
| Kumar, Anjani; Mishra, Ashok K.; Saroj, Sunil; Joshi, Pramod Kumar  | Impact of traditional versus modern dairy value chains on food security: Evidence from India's dairy sector                                   | <i>Food Policy</i>   |
| Lamm, Kevan W.; Lamm, Alexa J.; Davis, Kristin; Swaroop, B. Jyothi; Edgar, Leslie D.  | Identifying information and communication technology use capacity needs of extension networks   | <i>Journal of International Agricultural and Extension Education</i> |
| Li, Zihan; Gong, Yazhen; Chen, Kevin Z.   | Energy use and rural poverty: empirical evidence from potato farmers in northern China  | <i>China Agricultural Economic Review</i>                            |
| Libert Amico, Antoine; Ituarte-Lima, Claudia; Elmqvist, Thomas  | Learning from social–ecological crisis for legal resilience building: Multi-scale dynamics in the coffee rust epidemic                        | <i>Sustainability Science</i>  |
| Mann, Michael L.; Warner, James M.; Malik, Arun S.  | Predicting high-magnitude, low-frequency crop losses using machine learning: An application to cereal crops in Ethiopia                       | <i>Climatic Change</i>   |
| Martin, Will  | Economic growth, convergence, and agricultural economics  | <i>Agricultural Economics</i>  |
| Martin, Will; Pham, Cong S.   | Estimating the gravity model when zero trade flows are frequent and economically determined   | <i>Applied Economics</i>   |
| Mason-D'Croz, Daniel; Bogard, Jessica R.; Sulser, Timothy B.; Cenacchi, Nicola; Dunston, Shahnaila; Herrero, Mario; Wiebe, Keith D. | Gaps between fruit and vegetable production, demand, and recommended consumption at global and national levels: An integrated modelling study | <i>Lancet Planetary Health</i>                                       |
| Maystadt, Jean-Francois; Hirvonen, Kalle; Mabiso, Athur; Vandecasteele, Joachim   | Impacts of hosting forced migrants in poor countries  | <i>Annual Review of Resource Economics</i>                           |
| Mogues, Tewodaj; Mueller, Valerie; Kondylis, Florence   | Cost-effectiveness of community-based gendered advisory services to farmers: Analysis in Mozambique and Tanzania                              | <i>PLOS One</i>  |
| Mueller, Valerie; Masias, Ian; Vallury, Sechindra   | Labor-saving technologies and structural transformation in northern Ghana   | <i>Agricultural Economics</i>  |
| Mueller, Valerie; Sheriff, Glenn; Dou, Xiaoya; Gray, Clark  | Temporary migration and climate variation in Eastern Africa   | <i>World Development</i>   |
| Muyanga, Milu; Jayne, Thomas S.   | Revisiting the farm size-productivity relationship based on a relatively wide range of farm sizes: Evidence from Kenya                        | <i>American Journal of Agricultural Economics</i>                    |
| Najjar, Dina; Baruah, Bipasha; El Garhi, Aman   | Women, irrigation and social norms in Egypt: 'The more things change, the more they stay the same?'   | <i>Water Policy</i>  |
| Olagunju, Kehinde Oluseyi; Ogunniyi, Adebayo; Oguntegbe, Kunle Francis; Raji, Ibrahim Oluwole; Ogundari, Kolawole                   | Welfare impact of globalization in developing countries: Examining the mediating role of human capital  | <i>Economies</i>   |
| Padmaja, Ravula; Pramanik, Soumitra; Pingali, Prabhu; Bantilan, Cynthia; Kavitha, Kasala  | Understanding nutritional outcomes through gendered analysis of time-use patterns in semi-arid India  | <i>Global Food Security</i>  |
| Pal, Barun Deb; Saroj, Sunil  | Do improved agricultural practices boost farm productivity? The evidence from Karnataka, India  | <i>Agricultural Economics Research Review</i>                        |
| Parkes, Ben; Higginbottom, Thomas P.; Hufkens, Koen; Ceballos, Francisco; Kramer, Berber; Foster, Tim                               | Weather dataset choice introduces uncertainty to estimates of crop yield responses to climate variability and change                          | <i>Environmental Research Letters</i>                                |

| <b>Author(s)</b>  | <b>Article title</b>   | <b>Journal title</b>                      |
|---|--|---|
| Petsakos, Athanasios; Prager, Steven D.; Gonzalez, Carlos Eduardo; Gama, Arthur Chibwana; Sulser, Timothy B.  | Understanding the consequences of changes in the production frontiers for roots, tubers and bananas                                  | <i>Global Food Security</i>               |
| Pixley, Kevin V.; Falck-Zepeda, José Benjamin; Giller, Ken, E.; Glenna, Leland, L.; Gould, Fred; Mallory-Smith, Carol; Stelly, David, M.; Stewart, C. Neal            | Genome editing, gene drives, and synthetic biology: Will they contribute to disease-resistant crops, and who will benefit?           | <i>Annual Review of Phytopathology</i>    |
| Pradhan, Rajendra; Meinzen-Dick, Ruth Suseela; Theis, Sophie  | Property rights, intersectionality, and women's empowerment in Nepal   | <i>Journal of Rural Studies</i>           |
| Quisumbing, Agnes R.; Ahmed, Akhter; Gilligan, Daniel; Hoddinott, John F.; Kumar, Neha; Leroy, Jef L.; Menon, Purnima; Olney, Deanna K.; Roy, Shalini; Ruel, Marie T. | Randomized controlled trials of multi-sectoral programs: Lessons from development research   | <i>World Development</i>                  |
| Ragasa, Catherine; Aberman, Noora-Lisa; Alvarez Mingote, Cristina   | Does providing agricultural and nutrition information to both men and women improve household food security? Evidence from Malawi    | <i>Global Food Security</i>               |
| Resnick, Danielle   | The politics of crackdowns on Africa's informal vendors  | <i>Comparative Politics</i>               |
| Resnick, Danielle; Sivasubramanian, Bhavna; Idiong, Idiong Christopher; Ojo, Michael Akindele; Tanko, Likita  | The enabling environment for informal food traders in Nigeria's secondary cities   | <i>Urban Forum</i>                        |
| Rufai, Mistura; Ogunniyi, Adebayo; Salman, Kabir Kayode; Oyeyemi, Motunrayo; Salawu, Mutiat   | Migration, labor mobility and household poverty in Nigeria: A gender analysis  | <i>Economies</i>                          |
| Schmidt, Emily; Tadesse, Fanaye   | The impact of sustainable land management on household crop production in the Blue Nile Basin, Ethiopia                              | <i>Land Degradation &amp; Development</i> |
| Seymour, Gregory; Masuda, Yuta J.; Williams, Jason; Schneider, Kate   | Household and child nutrition outcomes among the time and income poor in rural Bangladesh  | <i>Global Food Security</i>               |
| Shee, Apurba; Azzarri, Carlo; Haile, Beliyou  | Farmers' willingness to pay for improved agricultural technologies: Evidence from a field experiment in Tanzania                     | <i>Sustainability</i>                     |
| Shee, Apurba; Turvey, Calum G.; You, Liangzhi   | Design and rating of risk-contingent credit for balancing business and financial risks for Kenyan farmers                            | <i>Applied Economics</i>                  |
| Smith, Pete; Calvin, Katherine; Nkem, Johnson; Campbell, Donovan; Cherubini, Francesco; Nkonya, Ephraim M.  | Which practices co-deliver food security, climate change mitigation and adaptation, and combat land-degradation and desertification? | <i>Global Change Biology</i>              |
| Smith, Vincent H.; Glauber, Joseph W.   | Trade, policy, and food security   | <i>Agricultural Economics</i>             |
| Stehfest, Elke; van Zeist, Willem-Jan; Valin, Hugo; Havlik, Petr; Popp, Alexander; Mason-D'Croz, Daniel; Wiebe, Keith D.  | Key determinants of global land-use projections  | <i>Nature Communications</i>              |
| Stevenson, James; Vanlauwe, Bernard; Macours, Karen; Johnson, Nancy L.; Krishnan, Lakshmi; Place, Frank; Spielman, David J.; Hughes, Karl; Vlek, Paul L.G.            | Farmer adoption of plot-and farm-level natural resource management practices: Between rhetoric and reality                           | <i>Global Food Security</i>               |
| Suhardiman, D., Keovilignavong, O., Kenney-Lazar, M.  | The territorial politics of land use planning in Laos  | <i>Land Use Policy</i>                    |
| Suhardiman, Diana; Bright, J.; Palmano, C.  | The politics of legal pluralism in the shaping of spatial power in Myanmar's land governance   | <i>Journal of Peasant Studies</i>         |
| Suhardiman, Diana; Kenney-Lazar, Miles; Meinzen-Dick, Ruth Suseela  | The contested terrain of land governance reform in Myanmar   | <i>Critical Asian Studies</i>             |

| <b>Author(s)</b>   | <b>Article title</b>   | <b>Journal title</b>   |
|--|--|--|
| Takeshima, Hiroyuki; Hatzenbuehler, Patrick L.; Edeh, Hyacinth O.                                | Effects of agricultural mechanization on economies of scope in crop production in Nigeria  | <i>Agricultural Systems</i>                                      |
| Tamal, Md. Ehsanul Haque; Bell, Andrew R.; Killilea, Mary E.; Ward, Patrick S.                   | Social dynamics of short-term variability in key measures of household and community wellbeing in Bangladesh   | <i>Scientific Data</i>   |
| Valli, Elsa; Peterman, Amber; Hidrobo, Melissa   | Economic transfers and social cohesion in a refugee-hosting setting  | <i>Journal of Development Studies</i>                            |
| Van Campenhout, Bjorn  | The role of information in agricultural technology adoption: Experimental evidence from rice farmers in Uganda   | <i>Economic Development and Cultural Change</i>                  |
| Wang, Jingyi; Zhang, Yue; Chen, Kevin Z.; Nie, Fengying  | Assessing the impacts of Chinese hybrid rice in Sub-Saharan Africa   | <i>Economic Geography</i>  |
| Wang, Jingyi; Zhang, Yumei; Chen, Kevin Z.   | Impacts of exchange rate change on China's agricultural sector: Base on agricultural partial equilibrium model [In Chinese]                              | <i>Journal of China Agricultural University</i>                  |
| Ward, Patrick S.; Gupta, Shweta; Singh, Vartika; Ortega, David L.; Gautam, Shriniwas             | What is the intrinsic value of fertilizer? Experimental value elicitation and decomposition in the hill and terai regions of Nepal                       | <i>Food Policy</i>   |
| Ward, Patrick S.; Makhija, Simrin; Spielman, David J.  | Drought-tolerant rice, weather index insurance, and comprehensive risk management for smallholders: Evidence from a multi-year field experiment in India | <i>Australian Journal of Agricultural and Resource Economics</i> |
| Xiong, Wei; Asseng, Senthold; Hoogenboom, Gerrit; Hernandez-Ochoa, Ixchel; Robertson, Richard D. | Different uncertainty distribution between high and low latitudes in modelling warming impacts on wheat  | <i>Nature Food</i>   |
| Yang, Xi-ran; Chen, Kevin Z.; Kong, Xiang-zhi  | Production scale change, safe production behavior, and performance evaluation from the raw milk quality and production safety perspectives               | <i>Research of Agricultural Modernization</i>                    |

***Evidence E: Altmetric***

See [Section 1.2.4](#) (file with raw Altmetric data shared with CGIAR System Management Office)

***Evidence F: Full list of current external partners***

In MARLO

*Evidence G: Participants in capacity development activities*

| Training title   | Training location    | Training dates      | Center or Managing Partner | Short- or long-term | If long term, PhD | Number of women | Number of men |
|--|----------------------|---------------------|----------------------------|---------------------|-------------------|-----------------|---------------|
| Practice workshops: Using the project-level Women's Empowerment in Agriculture Index; Gender Transformative Approaches in Agriculture and gender-responsive breeding; Developing gender-responsive plant and animal breeding Programs: Gender transformative approach in agrifood systems; Integrating gender into research on agriculture and nutrition | Australia (Camberra) | 4/1/2019            | KIT                        | Short-term          |                   | 9               | 17            |
| Workshop for the Gender Platform's "Gender dynamics in seed systems" grantees (Workshop 2)   | Australia (Camberra) | 3/27/2019-3/29/2019 | KIT                        | Short-term          |                   | 7               | 0             |
| Seeds of change conference   | Australia (Camberra) | 4/2/2019-4/4/2019   | KIT                        | Short-term          |                   | 79              | 154           |
| Workshop for the Gender Platform's "Feminization of agriculture" grantees (Workshop 1)   | Australia (Camberra) | 4/8/2019-4/10/2019  | KIT                        | Short-term          |                   | 11              | 4             |
| Computable General Equilibrium modeling training   | Bangladesh           | 7/21/2019-7/25/2019 | IFPRI                      | Short-term          |                   | 8               | 19            |
| Training workshop: Concepts and Tools for Policy Analysis, for mid-level Ministry of Food officials  | Bangladesh (Dhaka)   | 2/24/2019-3/2/2019  | IFPRI                      | Short-term          |                   | 5               | 15            |
| Workshop with negotiators in Central Africa with a focus on Cameroon and the Regional Trade Forum for West and Central Africa  | Cameroon (Douala)    | 9/1/2019            | IFPRI                      | Short-term          |                   | 3               | 7             |
| Global Food Systems and Policies, Zhejiang University  | China                | November 2019       | IFPRI                      | Short-term          |                   | 35              | 37            |
| Food systems modeling training workshop "GAMS and Its Use on Global Agricultural Partial Equilibrium Model", Chinese Academy of Agricultural Sciences  | China                | 5/13/2019-5/14/2019 | IFPRI                      | Short-term          |                   | 54              | 49            |
| Food systems modeling training workshop "Advanced GAMS and Its Use on Global Agricultural Partial Equilibrium Model", Zhejiang University  | China                | 5/15/2019-5/18/2019 | IFPRI                      | Short-term          |                   | 24              | 21            |
| Training on impact evaluation with a focus on Randomized Control Trial   | China                | 8/12/2019-8/15/2019 | IFPRI                      | Short-term          |                   | 20              | 10            |
| Graduate-level class on development economics, Peking University   | China                | 9/9/2019-12/19/2019 | IFPRI                      | Short-term          |                   | 33              | 40            |
| Yemen SAM and computable general equilibrium modeling training workshop  | Egypt (Cairo)        | 4/24/2019-4/25/2019 | IFPRI                      | Short-term          |                   | 1               | 4             |
| Computable general equilibrium modeling course   | Egypt (Cairo)        | Various (10 days)   | IFPRI                      | Short-term          |                   | 4               | 4             |
| Women's Empowerment in Agriculture Index   | England (London)     | 1/24/2019           | IFPRI                      | Short-term          |                   | 14              | 4             |
| Enumerators training - Baseline for "Transaction costs, Risk Preference, and Market Participation" project, field experiments with chickpea chain actors in Eritrea  | Eritrea (Asmara)     | 9/6/2019-9/7/2019   | ICARDA                     | Short-term          |                   | 0               | 6             |
| National workshop on willingness to pay for livestock market services  | Ethiopia             | 12/21/2019          | ICARDA                     | Short-term          |                   | 4               | 24            |
| Advanced research methods in nutritional sciences  | Ethiopia             | 1/10/2019-1/24/2019 | IFPRI                      | Short-term          |                   | 2               | 6             |

| Training title   | Training location      | Training dates       | Center or Managing Partner | Short- or long-term | If long term, PhD | Number of women | Number of men |
|--|------------------------|----------------------|----------------------------|---------------------|-------------------|-----------------|---------------|
| Using Stata and demographic health surveys to answer policy questions  | Ethiopia               | 10/28/2019-11/1/2019 | IFPRI                      | Short-term          |                   | 6               | 24            |
| Market policy and value chain analysis, Ethiopian Institute for Agricultural Research  | Ethiopia               | 10/8/2019-10/9/2019  | IFPRI                      | Short-term          |                   | 6               | 36            |
| Enumerator training, Ethiopia Strengthen PSNP4 Institutions and Resilience (SPIR) midline survey   | Ethiopia               | 6/19/2019-6/28/2019  | IFPRI                      | Short-term          |                   | 34              | 50            |
| Market policy and value chain analysis, Ethiopian Economics Association  | Ethiopia               | 6/26/2019-6/27/2019  | IFPRI                      | Short-term          |                   | 16              | 76            |
| Training of enumerators and supervisors for Impact Evaluation of Feed the Future Programs in Ethiopia  | Ethiopia               | 7/22/2019-8/3/2019   | IFPRI                      | Short-term          |                   | 45              | 120           |
| Training of quality certification agents   | Ethiopia               | Fall 2019            | IFPRI                      | Short-term          |                   | 5               | 55            |
| Training of survey enumerators, Ethiopia certification study   | Ethiopia               | Fall 2019            | IFPRI                      | Short-term          |                   | 2               | 10            |
| Program for Biosafety Systems - Workshop on public participation and communications  | Ethiopia (Addis Ababa) | 1/17/2019            | IFPRI                      | Short-term          |                   | 2               | 10            |
| National Workshop on Harnessing the Potential of Dryland Areas and Pastoral/Agro-Pastoral Production System in Ethiopia: Developing the Drylands of Ethiopia – Policy issues | Ethiopia (Addis Ababa) | 3/7/2019             | IFPRI                      | Short-term          |                   | 3               | 43            |
| Various topics (rural transformation, social protection, food systems...)  | Ethiopia (Addis Ababa) | 5/2/2019             | IFPRI                      | Short-term          |                   | 13              | 71            |
| Domestic versus export-led agricultural transformation: Evidence from Uganda's dairy value chain   | Ethiopia (Addis Ababa) | 5/17/2019            | IFPRI                      | Short-term          |                   | 2               | 5             |
| Agricultural intensification with farmer misperception and misreporting  | Ethiopia (Addis Ababa) | 6/13/2019            | IFPRI                      | Short-term          |                   | 1               | 9             |
| Teff value chain   | Ethiopia (Addis Ababa) | 8/23/2019            | IFPRI                      | Short-term          |                   | 16              | 142           |
| Nutrition and diets in Ethiopia  | Ethiopia (Addis Ababa) | 12/12/2019           | IFPRI                      | Short-term          |                   | 54              | 100           |
| Program for Biosafety Systems - Workshop on harmonization and coordination of biosafety legal regime   | Ethiopia (Addis Ababa) | 1/15/2019-1/16/2019  | IFPRI                      | Short-term          |                   | 5               | 27            |
| Market policy and value chain analysis   | Ethiopia (Addis Ababa) | 10/8/2019-10/9/2019  | IFPRI                      | Short-term          |                   | 4               | 38            |
| Training of federal and regional statistics offices staff on spatial data collection using ArcCollector  | Ethiopia (Addis Ababa) | 5/13/2019-5/15/2019  | IFPRI                      | Short-term          |                   | 7               | 29            |
| Market policy and value chain analysis   | Ethiopia (Addis Ababa) | 6/26/2019-6/27/2019  | IFPRI                      | Short-term          |                   | 5               | 27            |
| Seminars on research findings from Ethiopia  | Ethiopia (Addis Ababa) | 7/18/2019-7/20/2019  | IFPRI                      | Short-term          |                   | 43              | 412           |

| Training title   | Training location         | Training dates        | Center or Managing Partner | Short- or long-term | If long term, PhD | Number of women | Number of men |
|--|---------------------------|-----------------------|----------------------------|---------------------|-------------------|-----------------|---------------|
| Program for Biosafety Systems - Ethiopian Biotechnology Institute executive-level training   | Ethiopia (Addis Ababa)    | 8/5/2019-8/6/2019     | IFPRI                      | Short-term          |                   | 26              | 4             |
| Enumerator training, impact evaluation of Digital Green's video-mediated extension approach  | Ethiopia (Addis Ababa)    | January-February 2019 | IFPRI                      | Short-term          |                   | 14              | 26            |
| Trainings of World Food Programme Rural Resilience Initiative team on smartphone application to implement picture-based insurance for prototype testing in Ethiopia  | Ethiopia (Addis Ababa)    | Various               | IFPRI                      | Short-term          |                   | 1               | 4             |
| Launch of woreda participatory land use planning manual  | Ethiopia (Bishoftu)       | 9/16/2019-9/19/2019   | ILRI                       | Short-term          |                   | 6               | 29            |
| Training of field staff in Amhara and Tigray on crop cutting experiments   | Ethiopia (Debrezeit)      | 10/11/2019            | IFPRI                      | Short-term          |                   | 0               | 2             |
| Enumerators training - Baseline for "Transaction costs, Risk Preference, and Market Participation" project, field experiments with chickpea chain actors in Ethiopia | Ethiopia (Gondar)         | 9/2/2019-9/3/2019     | ICARDA                     | Short-term          |                   | 1               | 4             |
| Agricultural Commodity Market Price Analysis   | Ghana                     | 2/27/2019-2/28/2019   | IFPRI                      | Short-term          |                   | 7               | 20            |
| Introduction to Net-Map and practical application of Process Net-Map for institutional analysis  | Ghana                     | 6/24/2019-6/26/2019   | IFPRI                      | Short-term          |                   | 3               | 9             |
| Commodity market analysis - Writing workshop 1   | Ghana                     | 6/5/2019-6/7/2019     | IFPRI                      | Short-term          |                   | 4               | 1             |
| Fertilizer sampling and quality assessment workshop, training for inspectors for Ghana's Planting for Food and Jobs Fertilizer Quality Study                         | Ghana                     | 7/9/2019-7/10/2019    | IFPRI                      | Short-term          |                   | 6               | 22            |
| Commodity market analysis - Writing workshop 2   | Ghana                     | 8/29/2019-8/30/2019   | IFPRI                      | Short-term          |                   | 4               | 1             |
| Strengthening the use of poverty analysis to achieve SDGs 1 and 2 (for senior-level Ghanaian and Zambian officials)  | Ghana                     | Various               | IFPRI                      | Short-term          |                   | 3               | 21            |
| Session on Restoring Forests, Restoring Communities at the Global Landscapes Forum meeting   | Ghana (Accra)             | 10/29/2019-10/30/2019 | CIFOR                      | Short-term          |                   | 15              | 20            |
| Program for Biosafety Systems - Capacity strengthening for the Biosafety Appeals Tribunal in Ghana   | Ghana (Accra)             | 6/5/2019-6/6/2019     | IFPRI                      | Short-term          |                   | 3               | 5             |
| Enumerator training, project on conservation agriculture in Ghana  | Ghana (Tamale)            | 3/22/2019-3/28/2019   | IFPRI                      | Short-term          |                   | 20              | 30            |
| Conservación de la agrobiodiversidad para lograr la seguridad alimentaria de los pueblos   | Guatemala (Huehuetenango) | 11/25/2019            | Bioversity International   | Short-term          |                   | 28              | 42            |
| Technical assistance/field extension visits (Production and Seed Network Monitoring)   | Guatemala (Huehuetenango) | Various               | Bioversity International   | Short-term          |                   | 60              | 52            |
| Women's Empowerment in Agriculture Index   | Honduras (Choluteca)      | 10/24/2019-10/26/2019 | CIAT                       | Short-term          |                   | 2               | 2             |
| Gender-sensitive LINK Methodology  | Honduras (Choluteca)      | Various               | CIAT                       | Short-term          |                   | 10              | 9             |
| Enumerator training for the Andhra Pradesh Soil Intelligence System project  | India                     | 2/16/2019-2/19/2019   | IFPRI                      | Short-term          |                   | 10              | 9             |

| Training title   | Training location  | Training dates          | Center or Managing Partner | Short- or long-term | If long term, PhD | Number of women | Number of men |
|--|--|-------------------------|----------------------------|---------------------|-------------------|-----------------|---------------|
| Collaboration for Resilience-Foundation for Ecological Security Multiactor Platform Design workshop                                    | India (Anand, Gujarat)                                       | 9/30/2019-10/2/2019     | CoRe                       | Short-term          |                   | 6               | 17            |
| Isis Blanco Vera, MSc., Promise of Commons initiative  | India (Anand, Gujarat)                                       | September-December 2019 | IFPRI                      | Long-term           | No                | 1               | 0             |
| Training of field staff in Tamil Nadu on insurance education module, project implementation, management and documentation              | India (Chennai)  | 6/18/2019               | IFPRI                      | Short-term          |                   | 6               | 14            |
| Stakeholder consultation and workshop on using crowdsourced smartphone pictures in improving insurance and advisory services           | India (Chennai)  | 2/01/2019-2/03/2019     | IFPRI                      | Short-term          |                   | 18              | 17            |
| Training of field staff in Haryana on providing advisories and assessing losses using smartphone pictures                              | India (Kurukshetra)  | 9/16/2019-9/18/2019     | IFPRI                      | Short-term          |                   | 0               | 12            |
| Training of field staff in Haryana, picture-based insurance project  | India (Ludhiana)   | 5/9/2019-5/12/2019      | IFPRI                      | Short-term          |                   | 0               | 12            |
| IMPACT training  | India (New Delhi)  | 11/4/2019-11/8/2019     | IFPRI                      | Short-term          |                   | 4               | 6             |
| Integrative value chain analytics supporting food systems transformation   | India (Patancheru)   | 5/27/2019-5/31/2019     | ICRISAT, ILRI              | Short-term          |                   | 5               | 20            |
| Trainings of field staff and farmers on usage of smartphone and web application to receive improved insurance and advisories           | India (Pudukkottai)  | 8/19/2019-8/20/2019     | IFPRI                      | Short-term          |                   | 2               | 18            |
| Training of field staff on crop cutting experiments  | India (Tamil Nadu)   | 1/21/2019-1/23/2019     | IFPRI                      | Short-term          |                   | 1               | 19            |
| Trainings of field staff and farmers on usage of smartphone and web application to receive improved insurance and advisories           | India (Tamil Nadu)   | 7/19-2019-7/23/2019     | IFPRI                      | Short-term          |                   | 50              | 50            |
| Impact evaluation  | Indonesia (Bogor)  | 11/15/2019              | IFPRI                      | Short-term          |                   | 17              | 18            |
| Global Community of Practice on Multistakeholder Platforms for People-Centred Land Governance, first planning workshop                 | Italy (Rome)   | 10/18/2019              | CoRe                       | Short-term          |                   | 19              | 18            |
| Workshop "Building tools for evidence-based decision making in Jordan: AIDA and the regional integration assessment system of indexes" | Jordan   | 10/15/2019              | IFPRI                      | Short-term          |                   | 8               | 13            |
| Regional Training Course (Summer School) on Applied Econometric Analysis   | Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan, Uzbekistan | 6/2/2019-6/14/2019      | IFPRI                      | Short-term          |                   | 13              | 11            |
| Trainings of champion farmers on usage of smartphone and web application to receive improved insurance and advisories                  | Kenya (Embu)   | 10/16/2019              | IFPRI                      | Short-term          |                   | 20              | 10            |
| Trainings of champion farmers on usage of smartphone and web application to receive improved insurance and advisories                  | Kenya (Meru)   | 10/18/2019              | IFPRI                      | Short-term          |                   | 40              | 30            |
| Using LSMS for research on rural youth   | Kenya (Nairobi)  | February 2019           | IFPRI                      | Short-term          |                   | 3               | 7             |

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|---|-------------------------|----------------------|----------------------------|---------------------|-------------------|-----------------|---------------|
| Workshop for the Gender Platform's "Gender dynamics in seed systems" grantees (Workshop 1)  | Kenya (Nairobi)         | 2/19/2019-2/21/2019  | KIT                        | Short-term          |                   | 7               | 0             |
| Program for Biosafety Systems - Workshop on genome editing  | Kenya (Nairobi)         | 4/24/2019-4/5/2019   | IFPRI                      | Short-term          |                   | 14              | 13            |
| Building the capacity of Agricultural and Climate Risk Enterprise Ltd (ACRE) staff, project "Promoting stress-tolerant varieties at scale: Interlinking the private seed sector and insurance-advisory services in Kenya" | Kenya (Nairobi)         | Various              | IFPRI                      | Short-term          |                   | 4               | 4             |
| Assessing and Strengthening Malawi's Pluralistic Agricultural Extension System: Evidence and Lessons from a 3-year Research Study   | Malawi                  | 11/13/2019           | IFPRI                      | Short-term          |                   | 23              | 27            |
| Farm household survey and choice experiments  | Malawi                  | 6/6/2019-6/14/2019   | IFPRI                      | Short-term          |                   | 3               | 5             |
| Program for Biosafety Systems - Capacity building workshop on food and feed safety of GM crops  | Malawi                  | 7/3/2019-7/5/2019    | IFPRI                      | Short-term          |                   | 9               | 19            |
| Enumerator training, Building Resilience and Adapting to Climate Change Programme   | Malawi                  | 8/5/2019-8/8/2019    | IFPRI                      | Short-term          |                   | 18              | 35            |
| Workshop with Morocco Ministry of Finance regarding integration with ECOWAS and the Regional Trade Forum for West and Central Africa  | Morocco                 | 7/11/2019            | IFPRI                      | Short-term          |                   | 2               | 4             |
| Enumerator training, endline survey, Evaluation of the Impacts of the InovAgro Market System Development project  | Mozambique (Nampula)    | 7/7/2019-7/14/2019   | IFPRI                      | Short-term          |                   | 5               | 8             |
| Gender and Randomized Control Trial methodology   | Myanmar                 | 7/30/2019            | IFPRI                      | Short-term          |                   | 6               | 12            |
| Lecture on gender research; lecture on journal publications - Food Security Policy dissemination workshop   | Myanmar                 | 9/6/2019             | IFPRI                      | Short-term          |                   | 25              | 14            |
| Questionnaire design workshop, Feed the Future Myanmar Agriculture Policy Support Activity Phase I survey   | Myanmar                 | 11/9/2019-11/12/2019 | IFPRI                      | Short-term          |                   | 9               | 3             |
| Political economy of agri-food system transformation, DFID Livelihoods Conference   | Myanmar (Yangon)        | 2/5/2019             | IFPRI                      | Short-term          |                   | 30              | 30            |
| Workshop for the Gender Platform's "Feminization of agriculture" grantees (Workshop 2)  | Netherlands (Amsterdam) | 11/6/2019-11/8/2019  | KIT                        | Short-term          |                   | 12              | 0             |
| Workshop for the Gender Platform's "Gender in value chains" grantees  | Netherlands (Amsterdam) | 9/18/2019-9/20/2019  | KIT                        | Short-term          |                   | 9               | 0             |
| National and state level workshops and policy seminars on innovations in extension approaches   | Niger                   | 5/16/2019            | IFPRI                      | Short-term          |                   | 12              | 23            |
| National and state level workshops and policy seminars on innovations in extension approaches   | Nigeria                 | 5/15/2019            | IFPRI                      | Short-term          |                   | 6               | 22            |

| Training title  | Training location  | Training dates        | Center or Managing Partner | Short- or long-term | If long term, PhD | Number of women | Number of men |
|---|--|-----------------------|----------------------------|---------------------|-------------------|-----------------|---------------|
| Side event on the Role of Institutional Capacity Development in Africa's Agricultural Transformation at the African Association of Agricultural Economists conference | Nigeria (Abuja)  | 9/3/2019              | PIM PMU                    | Short-term          |                   | 25              | 50            |
| Seminars on recent research findings on seed varieties, irrigation, and agricultural mechanization in Nigeria   | Nigeria (Abuja, Calabar, Abakaliki, Onitsha, Birnin Kebbi, Kaduna, Makurdi, Minna) | Various               | IFPRI                      | Short-term          |                   | 80              | 320           |
| Introduction to Monitoring and Evaluation   | Nigeria (Benue State)  | 11/27/2019-11/29/2019 | IFPRI                      | Short-term          |                   | 6               | 17            |
| Group dynamics training, for private sector   | Nigeria (Benue State)  | 3/25/2019-3/27/2019   | IFPRI                      | Short-term          |                   | 11              | 18            |
| Policy communication training, for farmer group   | Nigeria (Benue State)  | 3/25/2019-3/28/2019   | IFPRI                      | Short-term          |                   | 7               | 20            |
| Agriculture and development   | Nigeria (Benue State)  | 4/29/2019-4/30/2019   | IFPRI                      | Short-term          |                   | 4               | 22            |
| Agriculture and development, for government   | Nigeria (Benue State)  | 5/2/2019-5/3/2019     | IFPRI                      | Short-term          |                   | 13              | 17            |
| Econometrics for policy analysis using Stata, for government  | Nigeria (Benue State)  | 5/6/2019-5/10/2019    | IFPRI                      | Short-term          |                   | 8               | 17            |
| Agriculture and development   | Nigeria (Cross River State)  | 1/14/2019-1/16/2019   | IFPRI                      | Short-term          |                   | 5               | 15            |
| Agriculture and development, for government   | Nigeria (Cross River State)  | 1/17/2019-1/18/2019   | IFPRI                      | Short-term          |                   | 8               | 17            |
| Agriculture and development   | Nigeria (Cross River State)  | 3/18/2019-3/19/2019   | IFPRI                      | Short-term          |                   | 5               | 16            |
| Econometrics for policy analysis using Stata  | Nigeria (Cross River State)  | 3/25/2019-3/29/2019   | IFPRI                      | Short-term          |                   | 6               | 14            |
| Policy communication training, for journalists  | Nigeria (Cross River State)  | 4/15/2019-4/16/2019   | IFPRI                      | Short-term          |                   | 6               | 12            |
| Policy communication training, for private sector   | Nigeria (Cross River State)  | 4/17/2019-4/18/2019   | IFPRI                      | Short-term          |                   | 6               | 21            |
| Agriculture and development   | Nigeria (Cross River State)  | 5/6/2019-5/7/2019     | IFPRI                      | Short-term          |                   | 5               | 17            |
| Agriculture and development, for government   | Nigeria (Cross River State)  | 5/9/2019-5/10/2019    | IFPRI                      | Short-term          |                   | 8               | 16            |
| Policy communication training, for private sector   | Nigeria (Cross River State)  | 6/24/2019-6/25/2019   | IFPRI                      | Short-term          |                   | 6               | 23            |
| Policy communication training, for farmer group   | Nigeria (Cross River State)  | 6/26/2019-6/27/2019   | IFPRI                      | Short-term          |                   | 4               | 14            |
| Introduction to Monitoring and Evaluation   | Nigeria (Cross River State)  | 7/15/2019-7/17/2019   | IFPRI                      | Short-term          |                   | 6               | 21            |

| Training title   | Training location                   | Training dates        | Center or Managing Partner | Short- or long-term | If long term, PhD | Number of women | Number of men |
|--|-------------------------------------|-----------------------|----------------------------|---------------------|-------------------|-----------------|---------------|
| Introduction to Monitoring and Evaluation  | Nigeria (Cross River State)         | 9/11/2019-9/13/2019   | IFPRI                      | Short-term          |                   | 12              | 16            |
| Agricultural extension policy in Nigeria, for government                           | Nigeria (Cross River State)         | 9/18/2019-9/19/2019   | IFPRI                      | Short-term          |                   | 4               | 11            |
| Cross River State level workshop on extension for extension professionals          | Nigeria (Cross River State)         | 9/19/2019-9/20/2019   | IFPRI                      | Short-term          |                   | 10              | 22            |
| Agriculture and development  | Nigeria (Delta State)               | 1/14/2019-1/16/2019   | IFPRI                      | Short-term          |                   | 8               | 16            |
| Agriculture and development, for government  | Nigeria (Delta State)               | 1/17/2019-1/18/2019   | IFPRI                      | Short-term          |                   | 10              | 17            |
| Policy communication training, for private sector                                  | Nigeria (Delta State)               | 4/10/2019-4/11/2019   | IFPRI                      | Short-term          |                   | 8               | 15            |
| Policy communication training, for farmer group                                    | Nigeria (Delta State)               | 4/8/2019-4/9/2019     | IFPRI                      | Short-term          |                   | 4               | 18            |
| Econometrics for policy analysis using Stata                                       | Nigeria (Delta State)               | 5/10/2019-5/14/2019   | IFPRI                      | Short-term          |                   | 4               | 14            |
| Group dynamics training, for farmer group  | Nigeria (Delta State)               | 7/11/2019-7/13/2019   | IFPRI                      | Short-term          |                   | 14              | 16            |
| Group dynamics training, for farmer group  | Nigeria (Delta State)               | 7/8/2019-7/10/2019    | IFPRI                      | Short-term          |                   | 6               | 23            |
| Group dynamics training, for farmer group  | Nigeria (Delta State)               | 8/26/2019-8/28/2019   | IFPRI                      | Short-term          |                   | 16              | 14            |
| Group dynamics training, for farmer group  | Nigeria (Delta State)               | 8/29/2019-8/31/2019   | IFPRI                      | Short-term          |                   | 10              | 20            |
| Policy communication training, for journalists                                     | Nigeria (Ebonyi State)              | 1/21/2019-1/22/2019   | IFPRI                      | Short-term          |                   | 15              | 20            |
| Econometrics for policy analysis using Stata                                       | Nigeria (Ebonyi State)              | 1/21/2019-1/25/2019   | IFPRI                      | Short-term          |                   | 11              | 16            |
| Computer Assisted Personal Interview (CAPI) Training using CSPro                   | Nigeria (Ebonyi State)              | 1/21/2019-1/25/2019   | IFPRI                      | Short-term          |                   | 9               | 13            |
| Policy communication training, for farmer group                                    | Nigeria (Ebonyi State)              | 1/23/2019-1/24/2019   | IFPRI                      | Short-term          |                   | 10              | 5             |
| Group dynamics training, for private sector  | Nigeria (Ebonyi State)              | 4/1/2019-4/3/2019     | IFPRI                      | Short-term          |                   | 11              | 17            |
| Econometrics for policy analysis using Stata                                       | Nigeria (Ebonyi State)              | 4/8/2019-4/12/2019    | IFPRI                      | Short-term          |                   | 11              | 16            |
| Econometrics for policy analysis using Stata                                       | Nigeria (Ebonyi State)              | 5/13/2019-5/17/2019   | IFPRI                      | Short-term          |                   | 5               | 15            |
| Introduction to Monitoring and Evaluation, for government                          | Nigeria (Ebonyi State)              | 6/26/2019-6/28/2019   | IFPRI                      | Short-term          |                   | 7               | 15            |
| Introduction to Monitoring and Evaluation  | Nigeria (Ebonyi State)              | 7/31/2019-8/2/2019    | IFPRI                      | Short-term          |                   | 11              | 14            |
| Impact evaluation training   | Nigeria (Ebonyi State)              | 8/1/2019-8/2/2019     | IFPRI                      | Short-term          |                   | 7               | 9             |
| Training of government staff on the use of the Organization Performance Index tool | Nigeria (Federal Capital Territory) | 8/22/2019             | IFPRI                      | Short-term          |                   | 0               | 7             |
| Introduction to Monitoring and Evaluation, for government                          | Nigeria (Federal Capital Territory) | 11/18/2019-11/20/2019 | IFPRI                      | Short-term          |                   | 9               | 15            |
| Introduction to Monitoring and Evaluation, for government                          | Nigeria (Federal Capital Territory) | 12/11/2019-12/13/2019 | IFPRI                      | Short-term          |                   | 21              | 6             |
| Computer Assisted Personal Interview (CAPI) training using CSPro, for government   | Nigeria (Federal Capital Territory) | 2/11/2019-2/14/2019   | IFPRI                      | Short-term          |                   | 14              | 11            |
| Agricultural policies and strategies in Nigeria, for government                    | Nigeria (Federal Capital Territory) | 2/12/2019-2/13/2019   | IFPRI                      | Short-term          |                   | 5               | 18            |

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|--|-------------------------------------|---------------------|----------------------------|---------------------|-------------------|-----------------|---------------|
| Policy Communication Training for the National Bureau of Statistics                              | Nigeria (Federal Capital Territory) | 2/13/2019-2/14/2019 | IFPRI                      | Short-term          |                   | 8               | 17            |
| Policy communication training, for National Assembly   | Nigeria (Federal Capital Territory) | 3/12/2019-3/13/2019 | IFPRI                      | Short-term          |                   | 2               | 20            |
| Computer Assisted Personal Interview (CAPI) training using CSPro, for government                 | Nigeria (Federal Capital Territory) | 3/4/2019-3/7/2019   | IFPRI                      | Short-term          |                   | 7               | 20            |
| Econometrics for policy analysis using Stata, for government                                     | Nigeria (Federal Capital Territory) | 4/8/2019-4/12/2019  | IFPRI                      | Short-term          |                   | 9               | 10            |
| Introduction to Monitoring and Evaluation, for government  | Nigeria (Federal Capital Territory) | 8/14/2019-8/16/2019 | IFPRI                      | Short-term          |                   | 7               | 22            |
| How to write a policy brief, for government  | Nigeria (Federal Capital Territory) | 8/22/2019-8/23/2019 | IFPRI                      | Short-term          |                   | 3               | 17            |
| Policy communication training, for government  | Nigeria (Federal Capital Territory) | 9/26/2019-9/27/2019 | IFPRI                      | Short-term          |                   | 6               | 15            |
| Agricultural policies and strategies in Nigeria, for government                                  | Nigeria (Federal Capital Territory) | 9/4/2019-9/5/2019   | IFPRI                      | Short-term          |                   | 5               | 18            |
| Support workshop for the Capacity Development for Agricultural Innovation Systems project        | Nigeria (Ibadan)                    | 9/3/2019-9/4/2019   | IFPRI                      | Short-term          |                   | 7               | 13            |
| Computer Assisted Personal Interview (CAPI) Training using CSPro, for National Farmers Help Line | Nigeria (Kaduna State)              | 4/1/2019-4/3/2019   | IFPRI                      | Short-term          |                   | 9               | 16            |
| Agriculture and development, for National Farmers Help Line                                      | Nigeria (Kaduna State)              | 4/4/2019-4/5/2019   | IFPRI                      | Short-term          |                   | 4               | 21            |
| Policy communication training, for journalists   | Nigeria (Kaduna State)              | 5/13/2019-5/14/2019 | IFPRI                      | Short-term          |                   | 11              | 12            |
| Policy communication training, for private sector  | Nigeria (Kaduna State)              | 5/15/2019-5/16/2019 | IFPRI                      | Short-term          |                   | 1               | 15            |
| Group dynamics training, for farmer group  | Nigeria (Kaduna State)              | 5/20/2019-5/22/2019 | IFPRI                      | Short-term          |                   | 4               | 27            |
| Group dynamics training, for private sector  | Nigeria (Kaduna State)              | 5/23/2019-5/25/2019 | IFPRI                      | Short-term          |                   | 3               | 23            |
| Introduction to Monitoring and Evaluation, for private sector                                    | Nigeria (Kaduna State)              | 5/6/2019-5/8/2019   | IFPRI                      | Short-term          |                   | 6               | 19            |
| Econometrics for policy analysis using Stata   | Nigeria (Kaduna State)              | 6/18/2019-6/21/2019 | IFPRI                      | Short-term          |                   | 4               | 22            |
| Policy communication training, for government  | Nigeria (Kebbi State)               | 1/28/2019-1/29/2019 | IFPRI                      | Short-term          |                   | 2               | 23            |
| Group dynamics training, for private sector  | Nigeria (Kebbi State)               | 1/28/2019-1/29/2019 | IFPRI                      | Short-term          |                   | 10              | 25            |
| Policy communication training, for farmer group  | Nigeria (Kebbi State)               | 1/30/2019-1/31/2019 | IFPRI                      | Short-term          |                   | 8               | 27            |

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|--|-----------------------|-----------------------|----------------------------|---------------------|-------------------|-----------------|---------------|
| Agricultural policies and strategies in Nigeria                    | Nigeria (Kebbi State) | 11/25/2019-11/26/2019 | IFPRI                      | Short-term          |                   | 1               | 21            |
| Agricultural policies and strategies in Nigeria, for government    | Nigeria (Kebbi State) | 11/28/2019-11/29/2019 | IFPRI                      | Short-term          |                   | 1               | 20            |
| Econometrics for policy analysis using Stata                       | Nigeria (Kebbi State) | 4/8/2019-4/12/2019    | IFPRI                      | Short-term          |                   | 7               | 18            |
| Agriculture and development  | Nigeria (Kebbi State) | 5/20/2019-5/21/2019   | IFPRI                      | Short-term          |                   | 0               | 9             |
| Agriculture and development, for government                        | Nigeria (Kebbi State) | 5/20/2019-5/23/2019   | IFPRI                      | Short-term          |                   | 14              | 26            |
| Policy communication training                                      | Nigeria (Kebbi State) | 8/26/2019-8/27/2019   | IFPRI                      | Short-term          |                   | 3               | 22            |
| Econometrics for policy analysis using Stata                       | Nigeria (Niger State) | 1/21/2019-1/25/2019   | IFPRI                      | Short-term          |                   | 5               | 20            |
| Agriculture and development  | Nigeria (Niger State) | 3/18/2019-3/19/2019   | IFPRI                      | Short-term          |                   | 12              | 15            |
| Econometrics for policy analysis using Stata                       | Nigeria (Niger State) | 3/18/2019-3/22/2019   | IFPRI                      | Short-term          |                   | 5               | 20            |
| Agriculture and development, for government                        | Nigeria (Niger State) | 3/21/2019-3/22/2019   | IFPRI                      | Short-term          |                   | 5               | 22            |
| Group dynamics training, for private sector                        | Nigeria (Niger State) | 4/11/2019-4/13/2019   | IFPRI                      | Short-term          |                   | 7               | 23            |
| Group dynamics training, for farmer group                          | Nigeria (Niger State) | 4/8/2019-4/10/2019    | IFPRI                      | Short-term          |                   | 11              | 19            |
| Econometrics for policy analysis using Stata                       | Nigeria (Niger State) | 5/13/2019-5/17/2019   | IFPRI                      | Short-term          |                   | 4               | 14            |
| Introduction to Monitoring and Evaluation                          | Nigeria (Niger State) | 7/3/2019-7/5/2019     | IFPRI                      | Short-term          |                   | 13              | 14            |
| Introduction to Monitoring and Evaluation, for government          | Nigeria (Niger State) | 9/25/2019-9/27/2019   | IFPRI                      | Short-term          |                   | 6               | 21            |
| Group dynamics training, for farmer group                          | Nigeria (Niger State) | 9/26/2019-9/28/2019   | IFPRI                      | Short-term          |                   | 7               | 23            |
| Policy communication training                                      | Nigeria (Oyo State)   | 3/18/2019-3/19/2019   | IFPRI                      | Short-term          |                   | 6               | 17            |
| Group dynamics training, for private sector                        | Nigeria (Oyo State)   | 3/18/2019-3/20/2019   | IFPRI                      | Short-term          |                   | 6               | 25            |
| Policy communication training, for journalists                     | Nigeria (Oyo State)   | 3/20/2019-3/21/2019   | IFPRI                      | Short-term          |                   | 10              | 13            |
| Econometrics for policy analysis using Stata                       | Nigeria (Oyo State)   | 4/15/2019-4/18/2019   | IFPRI                      | Short-term          |                   | 7               | 10            |
| Agriculture and development  | Nigeria (Oyo State)   | 6/10/2019-6/11/2019   | IFPRI                      | Short-term          |                   | 4               | 9             |
| Agriculture and development, for government                        | Nigeria (Oyo State)   | 6/13/2019-6/14/2019   | IFPRI                      | Short-term          |                   | 9               | 13            |
| Consultation and training workshop on Pakistan Food Outlook Report | Pakistan              | 10/17/2019-10/18/2019 | IFPRI                      | Short-term          |                   | 6               | 24            |
| Workshop on social accounting matrices                             | Pakistan              | 11/05/2019-11/06/2019 | IFPRI                      | Short-term          |                   | 0               | 8             |
| Training on the Kaleidoscope Model of Policy Change                | Pakistan              | 2/27/2019-2/28/2019   | IFPRI                      | Short-term          |                   | 6               | 16            |
| Multimarket Model Workshop   | Pakistan              | 7/24/2019- 7/25/2019  | IFPRI                      | Short-term          |                   | 4               | 26            |
| Statistical and econometric training for Punjab Food Outlook       | Pakistan (Islamabad)  | 3/18/2019-3/22/2019   | IFPRI                      | Short-term          |                   | 5               | 10            |
| Statistical and econometric training for Punjab Food Outlook       | Pakistan (Lahore)     | 2/20/2019-2/21/2019   | IFPRI                      | Short-term          |                   | 7               | 18            |
| Stata Course   | Papua New Guinea      | 6/11/2019-6/13/2019   | IFPRI                      | Short-term          |                   | 9               | 28            |

| Training title  | Training location          | Training dates      | Center or Managing Partner                  | Short- or long-term | If long term, PhD | Number of women | Number of men |
|---|----------------------------|---------------------|---|---------------------|-------------------|-----------------|---------------|
| Farmer participation in genetic resources competitive conservation tender (quinoa)  | Peru (Acora, Puno)         | 8/25/2019           | Bioversity International                    | Short-term          |                   | 15              | 35            |
| Dissemination workshop with key stakeholders, research on multistakeholder fora   | Peru (Atalaya)             | 11/20/2019          | CIFOR                                       | Short-term          |                   | 6               | 17            |
| Identification and prioritisation of threatened genetic resources (potato)  | Peru (Huayana, Apurimac)   | 9/4/2019            | Bioversity International                    | Short-term          |                   | 2               | 1             |
| Farmer participation in genetic resources competitive conservation tender (potato)  | Peru (Huayana, Apurimac)   | 9/7/2019            | Bioversity International                    | Short-term          |                   | 7               | 27            |
| Dissemination workshop with key stakeholders, research on multistakeholder fora   | Peru (Inkare)              | September 2019      | CIFOR                                       | Short-term          |                   | 10              | 10            |
| Identification and prioritisation of threatened genetic resources (maize and potato)  | Peru (Lares, Cusco)        | 8/19/2019           | Bioversity International                    | Short-term          |                   | 2               | 2             |
| Farmer participation in genetic resources competitive conservation tender (maize)   | Peru (Lares, Cusco)        | 9/9/2019            | Bioversity International                    | Short-term          |                   | 1               | 10            |
| Identification and prioritisation of threatened genetic resources (potato)  | Peru (Laria, Huancavelica) | 9/12/2019           | Bioversity International                    | Short-term          |                   | 0               | 2             |
| Farmer participation in genetic resources competitive conservation tender (potato)  | Peru (Laria, Huancavelica) | 9/15/2019           | Bioversity International                    | Short-term          |                   | 6               | 40            |
| El papel de los foros multiactor en las jurisdicciones subnacionales: Una herramienta reflexiva para monitorear procesos participativos desde adentro | Peru (Lima)                | 11/15/2019          | CIFOR                                       | Short-term          |                   | 8               | 12            |
| Side events at the International Association of the Study of the Commons biannual meeting   | Peru (Lima)                | 7/1/2019-7/5/2019   | Bioversity International<br>CIFOR,<br>IFPRI | Short-term          |                   | 37              | 42            |
| Dissemination workshop with key stakeholders, research on multistakeholder fora   | Peru (Nueva Esperanza)     | 10/7/2019-10/8/2019 | CIFOR                                       | Short-term          |                   | 11              | 13            |
| Dissemination workshop with key stakeholders, research on multistakeholder fora   | Peru (Pucallpa)            | 11/22/2019          | CIFOR                                       | Short-term          |                   | 4               | 13            |
| Dissemination workshop with key stakeholders, research on multistakeholder fora   | Peru (Tzinquiato)          | September 2019      | CIFOR                                       | Short-term          |                   | 6               | 7             |
| Fourth Annual International Conference on Agriculture, Food Security and Nutrition in Eurasia   | Russia (Moscow)            | 5/28/2019           | IFPRI                                       | Short-term          |                   | 30              | 70            |
| Computable General Equilibrium modeling training for Ministry of Finance and Planning (1)   | Rwanda                     | 5/27/2019-6/05/2019 | IFPRI                                       | Short-term          |                   | 0               | 9             |

| Training title   | Training location              | Training dates          | Center or Managing Partner | Short- or long-term | If long term, PhD | Number of women | Number of men |
|--|--------------------------------|-------------------------|----------------------------|---------------------|-------------------|-----------------|---------------|
| Computable General Equilibrium modeling training for Ministry of Finance and Planning (2)  | Rwanda                         | 9/30/2019-10/08/2019    | IFPRI                      | Short-term          |                   | 1               | 5             |
| Training of farmers on benefits and use of Aflasafe  | Senegal                        | Spring 2019             | IFPRI                      | Short-term          |                   | 100             | 200           |
| Training of survey enumerators, Aflasafe study   | Senegal                        | Spring 2019             | IFPRI                      | Short-term          |                   | 3               | 7             |
| Restoration for Whom, by Whom? session at the 8th World Conference on Ecological Restoration   | South Africa (Cape Town)       | 9/27/2019               | Bioversity International   | Short-term          |                   | 25              | 25            |
| Dialogue with WTO member states delegates on "Trade Wars: What Implications for Agriculture in Africa and Beyond?":  | Switzerland (Geneva)           | 10/10/2019              | IFPRI                      | Short-term          |                   | 6               | 14            |
| Kaleidoscope Model training for USAID  | Thailand (Bangkok)             | 12/9/2019-12/10/2019    | IFPRI                      | Short-term          |                   | 15              | 10            |
| Monitoring, Evaluation and Learning (MEL), Data Management and Geo-informatics Option by Context (GEOC) Learning Week  | Tunisia (Tunis)                | 11/1/2019-11/7/2019     | ICARDA                     | Short-term          |                   | 0               | 3             |
| Qualitative and quantitative methodologies for the assessment of rangeland governance  | Tunisia (Tunis)                | 12/3/2019-12/5/2019     | ICARDA                     | Short-term          |                   | 14              | 9             |
| SAM construction for Tunisia   | Tunisia (Tunis)                | 4/2/2019-4/5/2019       | IFPRI                      | Short-term          |                   | 2               | 3             |
| Thesis "Application of the concept of economic and territorial intelligence for better governance of pastoral territories in South Tunisia"  | Tunisia (Tunis)                | February-September 2019 | ICARDA                     | Long-term           | No                | 1               | 0             |
| Program for Biosafety Systems - Biotechnology and biosafety outreach communication and sensitization meeting for farmer leaders and local government officials   | Uganda (Ibanda)                | 9/6/2019                | IFPRI                      | Short-term          |                   | 31              | 61            |
| Program for Biosafety Systems - Biosafety training for Ministry of Science, Technology and Innovation  | Uganda (Kampala and Namulonge) | 3/19/2019-3/20/2019     | IFPRI                      | Short-term          |                   | 5               | 10            |
| Enumerator training, banana value chain study  | Uganda (Kampala)               | 10/1/2019-10/4/2019     | Bioversity International   | Short-term          |                   | 4               | 2             |
| Training for banana retailers from markets in Jinja and greater Kampala on emerging trends and business opportunities in the banana business, planned developments in the markets, banana cooperatives, gender issues in the banana business and the Evapo-cooler technology | Uganda (Kampala)               | 7/4/2019, 7/11/2019     | Bioversity International   | Short-term          |                   | 125             | 44            |
| The Gender, Agriculture, and Assets conceptual framework: Implications for intrahousehold analysis (part of International Agricultural Development Policy course)  | USA                            | 10/25/2019              | IFPRI                      | Short-term          |                   | 9               | 5             |
| Structural Transformation of African Agriculture and Rural Spaces (STAARS) fellowship  | USA                            | Throughout the year     | IFPRI                      | Long-term           | Yes               | 2               | 2             |
| Seminar on WTO dispute settlement  | USA (Washington DC)            | 5/14/2019               | IFPRI                      | Short-term          |                   | 8               | 17            |

| Training title  | Training location               | Training dates      | Center or Managing Partner | Short- or long-term | If long term, PhD | Number of women | Number of men |
|---|---------------------------------|---------------------|----------------------------|---------------------|-------------------|-----------------|---------------|
| Policy seminar: Digital Tools for Better Rural Investments: The Agricultural Investment Data Analyzer   | USA (Washington DC)             | 5/15/2019           | IFPRI                      | Short-term          |                   | 20              | 40            |
| Policy seminar: Urban Food Systems for Better Diets, Nutrition, and Health  | USA (Washington DC)             | 5/17/2019           | IFPRI                      | Short-term          |                   | 187             | 363           |
| Policy seminar: Ghana's Economic and Agricultural Transformation: Past Performance and Future Prospects   | USA (Washington DC)             | 10/9/2019           | IFPRI                      | Short-term          |                   | 212             | 411           |
| Policy seminar: Information, governance, and rural service delivery   | USA (Washington DC)             | 10/21/2019          | IFPRI                      | Short-term          |                   | 150             | 291           |
| Qualitative research checklists   | USA (Washington DC)             | 11/18/2019          | IFPRI                      | Short-term          |                   | 12              | 22            |
| "Future Extension: Innovations and Evidence" workshop organized by PIM, IFPRI and Feed the Future's "Developing Local Extension Capacity" project | USA (Washington DC)             | 11/7/2019-11/8/2019 | IFPRI                      | Short-term          |                   | 22              | 21            |
| IMPACT model training   | USA (Washington DC)             | 6/24/2019-6/28/2019 | IFPRI                      | Short-term          |                   | 3               | 7             |
| Workshop "Political economy for improved policy analysis and implementation in CGIAR"   | USA (Washington DC)             | 9/11/2019-9/12/2019 | IFPRI                      | Short-term          |                   | 7               | 15            |
| Carolina Barcella, internship with PIM Program Management Unit  | USA (Washington DC)             | January-July 2019   | IFPRI                      | Long-term           | No                | 1               | 0             |
| Training for Chinese Academy of Agricultural Science researchers  | USA (Washington DC)             | Various             | IFPRI                      | Short-term          |                   | 2               | 1             |
| PIM webinar/seminar: Changing farm structure and rural transformation in Africa   | USA (Washington DC) and virtual | 10/24/2019          | PIM PMU                    | Short-term          |                   | 21              | 22            |
| Daisy Demirag, PhD on impacts of public works programs on local and distant labor market participation, University of Maastricht                  | Various                         | Various             | IFPRI                      | Long-term           | Yes               | 1               | 0             |
| Gender Platform webinar: Guidelines and good practices for achieving gender equality outcomes through climate services                            | Virtual                         | 1/23/2019           | KIT                        | Short-term          |                   | 15              | 30            |
| PIM webinar: Climate resilience and job prospects for young people in agriculture   | Virtual                         | 2/7/2019            | IFPRI                      | Short-term          |                   | 40              | 28            |
| Gender Platform webinar: Changing gender norms in agriculture projects – What works in Pakistan and Ethiopia                                      | Virtual                         | 2/28/2019           | KIT                        | Short-term          |                   | 22              | 43            |
| Webinar for on tenure and forest land restoration for GIZ global land policy staff  | Virtual                         | 3/15/2019           | CIFOR                      | Short-term          |                   | 4               | 5             |
| PIM webinar: Innovations to help secure pastoral land tenure and governance   | Virtual                         | 3/28/2019           | IFPRI                      | Short-term          |                   | 27              | 29            |
| Gender Platform webinar: Typologies of change – Making sense of gender integration in agriculture and food security research                      | Virtual                         | 4/16/2019           | KIT                        | Short-term          |                   | 21              | 41            |

| Training title   | Training location | Training dates | Center or Managing Partner | Short- or long-term | If long term, PhD | Number of women | Number of men |
|--|-------------------|----------------|----------------------------|---------------------|-------------------|-----------------|---------------|
| PIM webinar: Power, politics, and governance in the food system: Applications to Africa  | Virtual           | 5/8/2019       | IFPRI                      | Short-term          |                   | 45              | 30            |
| PIM webinar: Determinants of rural youth migration throughout the developing world   | Virtual           | 5/14/2019      | IFPRI                      | Short-term          |                   | 15              | 24            |
| Gender Platform webinar: Reflections on gender transformative approaches in agriculture – The promise and cautionary tales     | Virtual           | 6/20/2019      | KIT                        | Short-term          |                   | 21              | 41            |
| PIM webinar: Land tenure and perceived tenure security in the era of social and economic transformation in Africa              | Virtual           | 7/2/2019       | IFPRI                      | Short-term          |                   | 27              | 26            |
| PIM webinar: The investment effects of forest rights devolution  | Virtual           | 9/10/2019      | IFPRI                      | Short-term          |                   | 14              | 8             |
| Gender Platform webinar: Culture, choice and action in legume seeds systems in East and North Uganda                           | Virtual           | 10/5/2019      | KIT                        | Short-term          |                   | 5               | 10            |
| Gender Platform webinar: Gender dynamics in formal seed system in sub-Saharan Africa and worldwide lessons                     | Virtual           | 11/21/2019     | KIT                        | Short-term          |                   | 14              | 28            |
| Gender Platform webinar: 'Power through': a new concept in the empowerment discourse   | Virtual           | 11/27/2019     | KIT                        | Short-term          |                   | 18              | 36            |
| Launching the Global Foresight for Food and Agriculture Tool   | Virtual           | 12/8/2019      | IFPRI                      | Short-term          |                   | 32              | 61            |
| Gender Platform webinar: Youth realities, aspirations and transitions to adulthood in dryland agricultural systems             | Virtual           | 12/19/2019     | KIT                        | Short-term          |                   | 2               | 4             |
| Webinar on the role of land certification in securing women's land rights on collective lands                                  | Virtual           | 11/19/2020     | CIFOR                      | Short-term          |                   | 100             | 65            |
| Enumerator training, project on political economy of decentralization in Zambia  | Zambia (Lusaka)   | 3/20/2019      | IFPRI                      | Short-term          |                   | 4               | 2             |
| Taxation and informality in urban Zambia   | Zambia (Lusaka)   | 9/19/2019      | IFPRI                      | Short-term          |                   | 20              | 40            |
| Program for Biosafety Systems - Stakeholders' awareness meeting for the development of biotechnology and biosafety in Zanzibar | Zanzibar          | 9/11/2019      | IFPRI                      | Short-term          |                   | 17              | 8             |
| Chinese Academy of Agricultural Sciences student working on IFPRI project on milk safety                                       |                   | Various        | IFPRI                      | Long-term           | Yes               | 1               | 0             |
| Chinese Academy of Agricultural Sciences student working on IFPRI Guizhou poverty project                                      |                   | Various        | IFPRI                      | Long-term           | Yes               | 1               | 0             |
| Chinese Academy of Agricultural Sciences student working on IFPRI Sino-Africa agricultural cooperation project                 |                   | Various        | IFPRI                      | Long-term           | Yes               | 1               | 0             |
| Central European University student  |                   | Various        | IFPRI                      | Long-term           | Yes               | 1               | 0             |

| Training title  | Training location | Training dates      | Center or Managing Partner | Short- or long-term | If long term, PhD | Number of women | Number of men |
|---|-------------------|---------------------|----------------------------|---------------------|-------------------|-----------------|---------------|
| Lilongwe University of Agriculture & Natural Resources student                            |                   | Various             | IFPRI                      | Long-term           | Yes               | 1               | 0             |
| Lilongwe University of Agriculture & Natural Resources students                           |                   | Various             | IFPRI                      | Long-term           | No                | 2               | 1             |
| Asia-Pacific Association of Agricultural Research Institutions/Can Tho University student |                   | Various             | IFPRI                      | Long-term           | No                | 1               | 0             |
| Wageningen University and Research student  |                   | Various             | IFPRI                      | Long-term           | Yes               | 1               | 0             |
| Wageningen University and Research student  |                   | Various             | IFPRI                      | Long-term           | No                | 0               | 1             |
| University of California Berkeley student   |                   | Various             | IFPRI                      | Long-term           | No                | 0               | 1             |
| Pardee RAND Graduate School student   |                   | Various             | IFPRI                      | Long-term           | Yes               | 0               | 1             |
| Lionel Cosnard (with David Laborde)   |                   | Various             | IFPRI                      | Long-term           | Yes               | 0               | 1             |
| Tess Lallemand (with David Laborde)   |                   | Various             | IFPRI                      | Long-term           | No                | 1               | 0             |
| Institute of Agricultural Economics, C.A.U, Kiel student                                  |                   | Various             | IFPRI                      | Long-term           | Yes               | 0               | 1             |
| Summer project, literature review and analysis of effects of conflict in Mali             |                   | June-September 2019 | IFPRI                      | Long-term           | No                | 1               | 0             |
| Summer project, seasonality of nutrition outcomes in Burkina Faso                         |                   | June-September 2019 | IFPRI                      | Long-term           | No                | 1               | 0             |
| Georgetown University student working on the WEAI4VC study in Benin                       |                   | June-December 2019  | IFPRI                      | Long-term           | No                | 1               | 0             |
| Jazmin Gonzales Tovar, University of Florida, Gainesville                                 |                   | Various             | CIFOR                      | Long-term           | Yes               | 1               | 0             |

## Annex: Progress by flagships

### Flagship 1 “Technological Innovation and Sustainable Intensification”

The Flagship 1 team made significant progress in the areas of foresight, seed systems, delivery methods for advisory services, and science and innovation policy.

Results from the collaborative work on foresight continued to inform policy and investment decisions. A 2019 independent [review](#) found that PIM-supported foresight modeling has been commissioned and [used](#) by multiple multilateral donors and international organizations (including the [Asian Development Bank](#), the Bill & Melinda Gates Foundation, the Food and Agriculture Organization, [the International Fund for Agricultural Development](#), the Inter-American Development Bank and USAID), as well as by national partners in [Indonesia](#), the Philippines and South Africa among other countries. In the Philippines, the results of a collaboration between PIM and the National Economic Development Authority [informed](#) the implementation of the Rice Farmer Financial Assistance program, an unconditional cash transfer to farmers negatively affected by the rice tariffication law. Findings of the PIM modeling work were published in numerous high-impact [peer-reviewed publications](#), presenting new [evidence](#) about the negative impacts of climate change on nutrient content of food crops and helping to inform global dialogues on challenges and opportunities facing food systems at global, regional and national levels.

The primary focus of the foresight team in 2019 was preparing the CGIAR foresight report (CGFR). The CGFR aims at filling a gap in the literature on foresight for agriculture and food systems, drawing mostly on work by CGIAR and partners to inform policy making for the poor in developing countries, with a horizon of two to three decades. Work on the CGFR in 2019 included an inventory of CGIAR foresight-related projects, progress on the contents of the report, and building support for the CGFR through meetings with the CGFR Steering Committee and interaction with the Independent Science for Development Council, System Management Office and CGIAR Advisory Services Shared Secretariat. The team also started preparations to support the One CGIAR process. Additional achievements in 2019 include the launch of the [Global Foresight for Food and Agriculture Tool](#), a set of [studies](#) on climate change implications for Latin America and the Caribbean, the development of a [land accounting model](#) for the International Model for Policy Analysis of Agricultural Commodities and Trade (IMPACT) and advances on including fruits and vegetables in IMPACT.

Evidence was provided to global and national policy debates on [seed sector development](#), [extension system reforms](#), and science and innovation policy, including informing policy design and implementation of governmental and non-governmental programs at the national level as well as global investment prioritization processes in key development organizations.

PIM-supported research on seed policies informed discussions or reforms in Afghanistan, Ethiopia, Ghana, Kenya, Nepal, Nigeria, Uganda and Vietnam. In Afghanistan, significant reforms occurred in 2019, including new regulations and guidelines for seed [certification](#). In Uganda, efforts are underway to professionalize the seed sector, revise outdated regulations and improve smallholders’ access to improved varieties and high-quality seed.

Findings from work in partnership with the Feed the Future Developing Local Extension Capacity [project](#) informed initiatives to expand digitized extension and advisory services in [Ethiopia](#), improve youth inclusion and private sector engagement in extension in [Rwanda](#), and identify [opportunities](#) for improving public extension in Guatemala, Guinea, Myanmar, and Niger. In Uganda, a [study](#) on video-based extension in collaboration with the Dutch Research Council demonstrated that providing information and role models to women can influence women’s access to productive resources and improve women’s participation in on-farm decision making. PIM research on [seed sector development](#) and [extension indicators](#) and PIM evaluations of the impacts of seed and extension projects were used to inform investments by

the Bill & Melinda Gates Foundation, the Government of the Netherlands, the Swiss Development and Cooperation Agency, USAID and several other development partners seeking to identify effective strategies for seed systems and [extension services](#), including through mechanisms such as other CGIAR research programs and Centers, the [Integrated Seed System Development Africa initiative](#) and the [Alliance for a Green Revolution in Africa](#).

On the science and innovation policy front, *ex ante* economic impact assessments conducted under the Biotechnology and Biosafety Rapid Assessment and Policy Platform [enabled](#) the approval for general release of genetically engineered pod borer resistant cowpea in Nigeria. Similar studies in Ethiopia, Ghana and Tanzania, supported by the capacity development efforts of the Program for Biosafety Systems, contributed to progress in a science-driven approach to genetically engineered crop assessments. The Agricultural Science and Technology Indicators team produced [regional and country levels analyses](#) of agricultural R&D expenditure patterns and trends. Engagement with the Food and Agriculture Organization, the Global Crop Diversity Trust, the International Treaty for Plant Genetic Resources for Food and Agriculture and the Genebank Platform continued, with the aim of setting up a [study](#) to estimate the economic consequences of global inaction on crop genetic diversity conservation, exchange and use.

## Flagship 2 “Economywide Factors Affecting Agricultural Growth and Rural Transformation”

Contributions of Flagship 2 include the use of economywide modeling tools to prioritize public investments, political economy analysis, policy support through [IFPRI’s country programs](#) and studies on issues related to rural transformation such as agricultural mechanization, rural youth, and land dynamics.

The Rural Investment and Policy Analysis ([RIAPA](#)) model is an economywide tool for evaluating and prioritizing public policies and investments to drive inclusive agricultural transformation. In 2019, [Kenya](#) and [Rwanda](#) launched rural development strategies that were informed by RIAPA-based analysis. Government analysts and researchers in Bangladesh, Egypt, Kenya and Rwanda were trained in the use of RIAPA. A [workshop](#) took place to validate data pertaining to Jordan for the [Arab \(Agricultural\) Investment for Development Analyzer](#), a tool to help prioritize investments in the field of agriculture and agro-processing in Middle East and North Africa. Both RIAPA and PIM’s [social accounting matrices](#) (including those released in 2019 for [Egypt](#) and [Yemen](#)) are also being used by donor organizations to evaluate their own investment priorities. PIM’s [indicators of agri-food system gross domestic product and employment](#) were [adopted](#) as high-level outcome indicators in USAID’s Global Food Security Strategy.

The [Kaleidoscope Model](#), a tool to analyze drivers of food security policy change, was incorporated into a training for the staff of USAID’s Bureau for Resilience and Food Security. Several studies drawing on the Kaleidoscope Model and other political economy analyses of food systems were completed in [Ghana](#), [Nigeria](#), and [Zambia](#), as well as a [cross-country comparison](#). PIM organized a cross-CGIAR [workshop](#) and launched a [call for proposals](#) to foster collaborative research on the political economy of food systems.

[PIM’s research on agricultural mechanization](#), which straddles across rural transformation, service delivery and private investment, is influencing African governments’ rural mechanization programs. In 2019, recommendations from a PIM [study](#) on agricultural mechanization service enterprise centers in Ghana were [used](#) to make these centers’ programs more inclusive, efficient, and complementary to the private sector, for instance by promoting a wider range of equipment and developing a maintenance component.

The work of IFPRI’s country program teams led to several outcomes in 2019. Guidance from [IFPRI’s Nigeria program](#) over a three-year period was [incorporated](#) to the National Gender

Policy in Agriculture launched by the Nigerian Government as a tool to deepen women's involvement in agriculture. The Government of the Punjab Province in Pakistan benefited from support from [IFPRI's Pakistan program](#) to [draft](#) the Punjab Agriculture Marketing Regulatory Authority Act, which aims to create a competitive private sector for agricultural markets.

Other important contributions relate to the transformation of agriculture and economies. A [study](#) across six African countries found that the rise of medium-scale farms is rapidly transforming agriculture in countries with moderate or low population densities (e.g. Tanzania) but that this is not the case in more densely populated countries (e.g. Rwanda). Farm size distribution has implications on efficiency, and a journal [article](#) which revisited the farm size-productivity relationship in Kenya – including a much wider range of farm sizes than most studies – found a U-shaped relationship, challenging the conventional inverse relationship frequently observed among small farms. Another [article](#) taking a broader view of the economy emphasizes the key contribution of micro, small and medium enterprises to nonfarm job creation in the recent period of rapid economic transformation in Tanzania.

[Migration](#) was also a key area of research in 2019, with publication of a [background paper](#) on the intersection of youth access to land, migration, and employment opportunities in Africa for the IFAD 2019 Rural Development Report as well as five articles, two book chapters and a [webinar](#). Among the key [findings](#) on this topic: rural-to-urban migration facilitates the transition to higher income activities but involves a small proportion of youth; the more common rural-to-rural migration also facilitates transitions to non-agricultural work.

Major 2019 outputs from the flagship include five books, among which [Youth and Jobs in Rural Africa](#), [Ghana's Economic and Agricultural Transformation](#), and [The Making of a Blue Revolution in Bangladesh](#). In the book on youth employment, authors explain that the youth are more likely to be engaged in nonfarm rural activities but that the level of nonfarm employment remains low. Flagship 2 researchers contributed to AGRA's [2019 African Agriculture Status Report](#) – which focuses on agri-food systems and the private sector – and to the [Oxford Handbook of the Ethiopian Economy](#). PIM organized an [expert panel](#) on the role of institutional capacity development in Africa's agricultural transformation at the [African Conference of Agricultural Economists](#). A [policy brief](#) provided recommendations on how to improve rural service delivery in developing countries and a [policy seminar](#) explored the links between access to information and effective governance. The [Statistics on Public Expenditures for Economic Development](#) tool was updated and expanded to more countries, and the District-level Database tool for India was [launched](#) to help target technology dissemination, pro-poor programs and development initiatives.

### [Flagship 3 “Inclusive and Efficient Value Chains”](#)

The team continued to investigate where and how to strengthen efficiency of value chains, food quality, and the inclusion of smallholders and women in value chains. Methods include measurement of price distortions and effects of international trade policy, assessment of inefficiencies and development of interventions to strengthen value chains, and a focus on scaling and outreach.

The team continued to support the FAO [technical platform](#) on measurement and reduction of food loss and waste and contributed to FAO's [State of Food and Agriculture 2019 report](#) “Moving Forward on Food Loss and Waste Reduction”. Results from applying the PIM methods to mitigate losses will be available in 2020.

Analysis progressed on multiple value chains, including in Bangladesh ([dairy](#)), Ethiopia (chickpea, [dairy](#), maize, wheat), [Ghana](#) (chicken, fish, rice), [Honduras](#) (cashew), [India](#) (dairy), Malawi (groundnut, [maize](#)), Mali (cattle), [Mozambique](#) (groundnut, maize, pigeon pea, sesame, soybean), [Niger](#) (livestock), Nigeria (fish), Senegal (groundnut), and Uganda (cooking banana, [sugarcane](#)), often in collaboration with other CRPs. Innovative research to

apply in [Malawi](#) (in the groundnut and soybean value chains) and [Senegal](#) (in the millet and groundnut value chains) a Brazilian approach which includes providing agricultural and business training and start-up capital to farmers and linking them to value chains found sustaining effects at the end of the program in Senegal and two years after the end of the program in Malawi. A study in [Ethiopia](#) found that between 2007 and 2016 the costs of nutritious foods increased by 19% to 62%, while those for staple foods, oils and fats either remained constant or decreased.

In Pakistan, PIM research (with Flagship 2) [informed](#) the Punjab Agriculture Marketing Regulation Authority Act and Ordinance, which constitute a major step to increase value addition by producers and enforce fair marketing practices in the province.

A competitive call for proposals was launched early 2019 to fund a set of five studies aiming to enhance food quality through implementation of certification and standards across value chains, to be completed in 2020. Representatives from the projects' partners (six CGIAR Centers, Wageningen University and Research and the University of Wisconsin) took part in a workshop about methods to allow comparability. A new [method](#) to measure and classify employment in agri-food systems was piloted in Ghana, Niger, Tanzania, and Uganda.

[Research on innovative risk management products](#) continued to make progress. A 2019 [paper](#) on the feasibility of picture-based insurance (PBI) describes a successful pilot in India that allowed farmers to use photos taken with smartphones to verify insurance claims. Damage was visible on photos in 71% of affected sites, a much higher percentage compared to using index-based products (damage identified on only 34% of affected sites), showing the value of PBI. The PBI work also expanded into Kenya and Ethiopia with Agricultural Climate Risk Enterprise Africa ([ACRE Africa](#)), [African Risk Capacity](#) and [R4 Rural Resilience Initiative](#) on board as new partners. [Research](#) to develop a risk contingent-credit innovation is also continuing with private sector partners in Kenya, and progress was made on designing attractive products.

On the distortions and policy side, the [Ag-Incentives](#) network facilitated by IFPRI with the Food and Agriculture Organization, the Inter-American Development Bank, the Organisation for Economic Co-operation and Development, and the World Bank continued to update its database on global price distortions, including the indicator on Nominal Rate of Protection. In 2019, the Ag-Incentives database was used to shed light on the negative environmental outcomes generated by farm support; [data provided by PIM experts](#) were included in the [Food and Land Use Coalition report](#) and triggered important policy discussions and [media coverage](#). By calculating nominal rates of protection at different stages along the value chains, CGIAR researchers estimate the source and level of distortion at each stage. For example, a 2019 [paper](#) found negative nominal rates of protection between 2010 and 2015 at the farm gate and retail markets for sheep and goats in Ethiopia, showing that significant economic gains could be made by reducing distortions.

The adoption of the Renewable Energy Directive by the European Commission in December 2018 was [informed](#) by evidence shared by PIM over the past five years. [Research](#) examining economic and agricultural growth in developing countries pointed to agricultural growth's positive effects (increases in domestic food supplies, increased spending in research and development) and negative effects (increased global greenhouse gas emissions, potential volatility in global prices).

The Flagship 3 outreach team continued to work with Swisscontact to implement the [gender-sensitive LINK methodology](#). A [workshop](#) was held to improve and share research methods and tools across CGIAR and with implementation partners and to strengthen the CGIAR community of practice on value chains. The [Tools4ValueChains](#) website was revamped. The flagship contributed to a [CGIAR meeting on scaling](#), which [highlighted](#) that the various

contributions of CGIAR on this topic would significantly benefit from more collaboration and coordination.

#### Flagship 4 “Social Protection for Agriculture and Resilience”

Research on the role of social protection and complementary programs in improving outcomes related to agriculture, nutrition, women’s empowerment and gender equity, and other dimensions of well-being was undertaken in eleven countries in 2019: Armenia, Bangladesh, Egypt, Ethiopia, India, Indonesia, Malawi, Mali, Mexico, Pakistan, and Yemen. Several studies addressed resilience in fragile settings and a new project was launched on market systems and livelihoods interventions in refugee settings in Ethiopia. PIM research continued to influence design of safety nets and contribute to the dialogue on social protection in Bangladesh, Egypt, Ethiopia, Malawi, and Mali. In Ethiopia, results from the midline report of the evaluation of the graduation model “Strengthen PSNP4 Institutions and Resilience ([SPIR](#))” program were presented to the government and partners, while in Egypt meetings were held with the government to discuss lessons from the evaluation of the Takaful and Karama cash transfer program.

A [book chapter](#) synthesized findings on the impact of safety nets on agriculture and nutrition and provided lessons about how to better design programs to maintain consumption and food security in the short run, increase agricultural development and income, and improve maternal and child nutrition.

A [study](#) on the impact of Pakistan’s Benazir Income Support Programme on household labor supply found little evidence of a change in female labor, strong evidence of increased male labor, and no evidence of changes in child labor; hence policy makers should not be concerned that transfers negatively affect labor supply among recipients. A [journal article](#) on the impact of India’s National Rural Employment Guarantee Scheme [showed](#) that the program increased non-financial asset holdings and improved diets, partly by inducing higher income from casual labor, particularly for the poor. A study in [Malawi](#) measured the differential effect of earned and unearned income by randomly assigning work requirements in a cash transfer program; the type of income did not affect patterns of household expenditures, and the work requirement increased overall expenditure immediately following the payment and resulted in a short-term reallocation of labor supply away from household work.

In Bangladesh, the Transfer Modality Research Initiative – a transfer program combined with nutrition behavior change communication (BCC) – was [found](#) to have positive impacts on several dimensions of economic well-being; the provision of cash coupled with BCC increased household consumption and assets more than the provision of cash alone, probably by inducing increases in income generation capabilities through social capital and women’s empowerment. In addition, large positive effects of the Transfer Modality Research Initiative were [observed](#) on child nutritional status. Three studies investigated the impacts of another type of safety net, the provision of school meals – which was shown to alleviate poverty in [Armenia](#), increase equity in [Mexico](#), and generate positive impacts on [nutrition and health of adolescent girls in Uganda](#).

The gender dimensions of the impact of social protection interventions were also examined. A [book chapter](#) and a related UNICEF [thought piece](#) reviewed the evidence on the impact of social safety nets on gender equality and measures of women’s empowerment in Africa; the review concluded that safety nets have substantial potential to improve gender equality and that more evidence is needed on which programs designs best improve outcomes for women. A [study](#) in Egypt showed that the Takaful and Karama cash transfer program reduces women’s control over decision making and labor supply.

[Research](#) in Pakistan showed that, when the beneficiaries of cash transfers perceive their relative deprivation, they show a higher level of support for political leaders and institutions,

while non-beneficiaries become politically disgruntled. This finding has important implications for our understanding of the political ramifications of rising inequality and social protection programs.

Research on improving resilience in fragile settings expanded. A [journal article](#) compared the effects on education of school meals versus general food distribution in conflict-affected Mali and found that school feeding leads to increases in enrolment and to an additional half-year of completed schooling on average. A [policy brief](#) reported that nutrition-sensitive cash transfers in war-torn Yemen improve food expenditure, child diet diversity and child nutritional status. The [results](#) were presented at a [policy seminar](#) during which lessons on delivering nutrition messages in a conflict setting were also shared. Another [study](#) in Yemen measured the impact of a youth employment program on trust and social capital. A new project started in Ethiopia to test interventions to improve market systems and livelihoods for refugees from South Sudan and Somalia and the local population.

Finally, the team continued to identify approaches for reducing reliance on social protection programs through evaluating a World Vision-led multisectoral approach to graduate households from Ethiopia's safety net program and a job training and asset transfer [program](#) for unemployed individuals within or just outside of the threshold of Egypt's main safety net program.

### **Flagship 5 “Governance of Natural Resources”**

In 2019, PIM's work led to several outcomes in the areas of natural resource governance and tenure security. The results of a study on forest concessions in the Maya Reserve Biosphere in Petén, Guatemala were used as key [inputs](#) in Guatemala's National Council for Protected Areas' decision to approve regulations to renew these concessions and in the renewal of the first concession. In India, the Promise of Commons initiative (which aims to restore 30 million acres of degraded forests and pasture land by 2023) led by the Foundation for Ecological Security drew on PIM research to support the states of Odisha and Andhra Pradesh to strengthen tenure of the commons, including forests, rangelands, and water resources. In Ethiopia, PIM and LIVESTOCK, together with GIZ and the Swiss Agency for Development and Cooperation, provided support to the consultative development of the woreda participatory land use planning guide, which will be [applied](#) for improving land use planning across the country's agro-pastoral areas. In Tanzania, PIM, with LIVESTOCK and the International Fund for Agricultural Development, supported the development and piloting of joint village land use planning to protect 175,000 hectares of grazing lands for local livestock keepers; now the Government of Tanzania is [scaling up](#) the approach through a Global Environment Facility grant across twenty-two villages in five districts. Experimental games developed by PIM and WLE to strengthen institutional capacity in managing common water resources are being [scaled out](#) to improve ground and surface water governance in India. Payments for agrobiodiversity conservation services piloted by PIM are being [scaled up](#) in Peru with Global Environment Facility funding.

PIM continued to invest in action research on multistakeholder platforms (MSPs) to address natural resource competition and conflict, from supporting the [design of MSPs in India](#) with the Foundation for Ecological Security to producing a [manual](#) for designing studies on MSPs based on PIM [research](#) on this topic in Brazil, Ethiopia, Indonesia and Peru. Working with indigenous peoples and the Peruvian National Service of Protected Areas, PIM created a [joint evaluation tool for co-management areas](#). Within the frame of the [Multistakeholder Platform Community of Practice initiative](#) promoted by International Land Coalition in partnership with [Collaborating for Resilience](#), representatives from 18 institutions gathered to share progress and explore partnerships on the role of MSPs in improving land and natural resource governance.

In addition to progress on learning games in [India](#), the [Rural game](#) is used to [strengthen](#) landscape governance in Lao PDR and as a teaching tool in universities. A team developed a general [framework](#) for the assessment of rangeland governance under contrasting contexts of land tenure in Southern Tunisia. A note was published on how to [foster joint forest and water conservation](#) at the local level in Kenya and Uganda. As part of the project “Towards New Equitable and Participatory Public and Private Models for Biodiversity Conservation” with funding from the German Federal Ministry for the Environment, Nature Conservation, and Nuclear Safety, an [interactive map](#) was launched to illustrate examples of participatory area-based approaches to biodiversity conservation.

Capacity building also took place in the area of tenure security. Training tools were shared with community leaders for better understanding and protecting forest tenure rights and privileges in [Uganda](#), and a land titling guide for indigenous communities in [Peru](#) was produced. A [practitioners’ handbook](#) describes good practices for implementation of forest tenure reforms. An analysis of [tenure and forest land restoration in Boeny district, Madagascar](#) highlighted the importance of customary collective forest use and governance arrangements; these results contributed to a strengthened focus on collective tenure security in a GIZ project on forest policy in the area. A [guide](#) to investing in collectively held resources drew on four case study countries with successful arrangements for collectively managing natural resources: Guatemala, Mexico and Nepal (devolution of forest rights to communities) and Namibia (devolution of wildlife rights to communities); that topic was also featured in a PIM [webinar](#). The Flagship 5 team contributed two other webinars to the PIM webinar series in 2019, on [land tenure and perceived tenure security in Africa](#) and on [innovations to secure pastoral land tenure and governance in Ethiopia and Tanzania](#).

Gender was addressed in several initiatives, from [integrating gender in participatory forest management plans](#) in Kenya to [protecting women’s rights to land and forest](#) in the Democratic Republic of Congo, as well as a [gender-disaggregated analysis of tenure security](#) in Mozambique and a [synthesis on women’s land rights](#) in Africa. PIM-LIVESTOCK innovations for [participatory planning in rangelands](#) in Tanzania seek to enhance opportunities for active participation of women. At the [8th World Conference on Ecological Restoration](#), PIM joined FTA and WLE to organize a [session](#) drawing attention to the need to integrate gender and social inclusion considerations into forest restoration.

### **Flagship 6 “Cross-cutting Gender Research and Coordination”**

The Flagship 6 team continued to improve the measurement and understanding of women’s empowerment in agriculture, support the inclusion of gender analysis in other flagships, and manage the [Gender Platform](#), thereby contributing to progress in the use of gender research methods within and outside of CGIAR. In addition, the flagship provided evidence to decision makers toward strengthening gender dimensions of policies and programs in several countries.

By the end of 2019, 54 countries and 103 organizations had [used](#) a version of the [Women’s Empowerment in Agriculture Index](#) (WEAI, Project WEAI, Abbreviated WEAI or pilot version of WEAI for value chains-WEAI4VC) to analyze the drivers and impacts of women’s empowerment. In 2019, the NGO Swisscontact implemented the WEAI and pilot version of WEAI4VC in the cashew, dairy, and fruits value chains in Southern Honduras in collaboration with Flagship 3. A survey-based [module](#) to measure women’s freedom of movement in gender studies of agricultural value chains and a [guide](#) on participatory methods to collect data on gender dynamics and empowerment in agriculture were piloted. Recommendations for collecting individual-level data on ownership and control of assets in household and farm surveys were [published](#). In Senegal, vignettes (survey instruments used to measure concepts more easily defined by examples) were used in a survey to [understand](#) patterns of intrahousehold decision-making, [highlighting](#) the importance of identifying not just who makes

decisions but *also* why. Two [issues](#) of the *Journal of Gender, Agriculture and Food Security* were published with support from PIM.

PIM research [informed](#) Nigeria's National Gender Policy in Agriculture (with Flagship 2). The [Cash Transfer and Intimate Partner Violence Research Collaborative](#), launched in 2018 on the basis of PIM research, presented findings at high-level events including the Conference of the United Nations Commission on the Status of Women. DFID's "[What Works](#)" program and the World Health Organization's [RESPECT Women](#) framework for preventing violence against women [drew upon](#) the work of the Collaborative. Key findings include: (1) cash, food, and vouchers reduce intimate partner violence in urban [Ecuador](#); (2) cash transfers conditional on schooling reduce intimate partner violence among young women in [South Africa](#), and (3) coupling food and cash transfers with behavior change communication leads to sustained reductions in intimate partner violence in [Bangladesh](#).

Results on women's employment and land ownership in [Egypt](#) and [Morocco](#) were shared at a [workshop](#) organized by the London School of Economics, a presentation was given to the Ministry of Finance of the Russian Federation and Ministry of Agriculture of Uzbekistan on the [gendered impacts of income shocks](#) in Central Asia, and flagship leader Cheryl Doss gave the Memorial Lecture, on [understanding rural household behavior](#), at the [African Conference of Agricultural Economists](#).

In Papua New Guinea, a [study](#) found that increased feelings of relative poverty make both men and women more likely to support girls' schooling and women's paid employment, suggesting that relative economic insecurity can prompt support for women's economic participation; however, increased feelings of relative poverty may trigger greater intra-household tension. These findings led to designing follow-up work with the government. Initial results of research in Uganda were published: A [study](#) on the barriers to women's participation in the sugarcane value chain underscores the importance of men's participation to make women's economic empowerment initiatives successful; a second [study](#), on using information and communication technologies to empower women, shows that targeting women increases their take-up of recommended practices, their role in agricultural decision making and the quantities they sell on the market.

The Gender Platform held eight [webinars](#) on gender research, released four [newsletters](#), and produced campaigns for [International Women's Day](#) and the [International Day of Rural Women](#) to highlight the role of CGIAR gender research in transforming women's lives. The Platform jointly convened the "[Seeds of Change: Gender Equality through Agricultural Research for Development](#)" conference with the University of Canberra and the Australian Center for International Agricultural Research. CGIAR led or participated in most sessions and played a major role in the success of the conference, which attracted over 250 participants; PIM sponsored the participation of nearly 60 CGIAR scientists. Cross-CRP engagement on [gender dynamics in seed systems](#) through the Platform continued, and a set of [nine projects on the feminization of agriculture](#) was initiated. The Platform was commissioned by the European Commission (EC) to provide a better understanding of [gender-transformative approaches](#) in agriculture, with a focus on their implementation by the Rome-based agencies through various EC-funded projects. A high-profile report on how research on agriculture and natural resource management can promote gender equality was prepared for publication in 2020 and featured in a [policy seminar](#). A [brochure](#) highlights the achievements of the Platform's three years of activity under PIM.