



RESEARCH
PROGRAM ON
Policies,
Institutions,
and Markets

Led by IFPRI



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Annual Report 2020

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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



Center for International Forestry Research (CIFOR)



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



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)

Alliance



The Alliance of Bioversity International and the International Center for Tropical Agriculture (CIAT)



World Agroforestry (ICRAF)



WorldFish

External managing partners:



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EXECUTIVE SUMMARY

In 2020, PIM findings contributed to seed policies in Nepal and Uganda, Malawi's extension strategy and approval of insect-resistant cotton, a nationwide program aimed at improving the effectiveness of public service delivery in Uganda, social protection programs in Egypt, and school gardens for better nutrition in Papua New Guinea. At the global level, PIM research was used to shape strategic decisions of organizations such as the Bill & Melinda Gates Foundation, GIZ, the Inter-American Development Bank, the UK Government's Foreign, Commonwealth & Development Office, the World Bank and the World Health Organization. PIM tools were incorporated in universities' curricula in India and South Africa. Examples of PIM innovations scaled up by partners in 2020 are private sector seed marketing in Ethiopia, picture-based insurance in Ethiopia, India and Kenya, and tools for inclusive governance of natural resources in India and Peru.

A Special issue of *Global Food Security* on foresight for agriculture was completed. Research on youth and employment revisited the assumptions often made about youth in rural Africa and busted the myth of Africa's ageing farmers. PIM continued to collaborate with governments and implementing partners to assess the impacts of social protection programs on poverty, nutrition, health and education in Bangladesh, Egypt, Ethiopia, Ghana, India, Kazakhstan, Mali, Sri Lanka, Tanzania and Yemen. Participatory approaches for natural resource management were assessed in Kenya, Nepal, Nicaragua, Tunisia, Uganda and Vietnam. Tools for gender research were produced (e.g. project-level Women's Empowerment in Agriculture Index for Market Inclusion, conceptual framework for women's land tenure security, gender-sensitive measures of freedom of movement in value chains). PIM co-launched a community of excellence on seed systems and continued to nurture existing CGIAR communities of practice (foresight, value chains...).

Building on PIM investments in economywide modeling tools and social accounting matrices, the impacts of COVID-19 and policy responses at country level were assessed, informing responses to the pandemic in Egypt, Ghana, Indonesia, Malawi, Myanmar, Nigeria, Rwanda, South Africa and Tunisia. Phone surveys were conducted to assess the consequences of COVID-19 on overall food security, value chains, small and medium enterprises, welfare of vulnerable households and/or differentiated effects on women and men in about twenty countries. Inventories and analyses of policies implemented during the pandemic were carried out. Virtual events focused on the impacts of the pandemic on food policies, the contribution of trade to economic recovery and the role of social protection in mitigating the effects of the pandemic on vulnerable households. Insights on methods for research on and during COVID-19 were disseminated.

PIM produced about 500 publications, including 172 journal articles, four books (on extension, mechanization, Ethiopia's agricultural transformation, and investments and subsidies in India), and four synthesis briefs (on gender and rural transformation, gender dynamics in seed systems, methods for measuring women's empowerment, and informal food retail in Africa). Progress was made towards multiple synthesis products scheduled for publication in 2021 and several evaluative reports of PIM's research achievements were completed. PIM trainings and webinars increased the capacity of 25,000 people in over 25 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

PIM researchers conducted an [impact assessment](#) of the effects of Direct Seed Marketing (DSM) in Ethiopia, an innovation for which scaling up was informed by previous PIM research. Researchers made use of the staggered rollout of the program across time and space and utilized panel surveys in three different years to identify the program's impacts. By 2020, according to Ethiopia's Agricultural Transformation Agency, the program has reached over 320 woredas (districts) and nearly two million farmers. The PIM 2020 study finds that DSM has led to improvements in seed availability for maize, wheat and teff. The effects of DSM on productivity and commercialization are mixed: DSM has led to a 26 percent increase in maize yields and 5 percent increase in the share of maize harvest that is marketed, with no significant effects on the productivity and commercialization of wheat and teff. These differences in DSM performance between crops are likely related to the dominance of maize in DSM and to biological differences between hybrid maize and openly pollinated varieties of wheat and teff which incentivize private sector participation in maize seed markets over those of wheat and teff.

Several studies were carried out to evaluate the effectiveness of social protection innovations for which scaling up was informed by previous PIM research (e.g. accompanying nutrition programming). A publication on [Mali](#) showed that cash transfers lead to a significant reduction in intimate partner violence in polygamous households. A study on [Ethiopia](#) found that a significant proportion of households which graduated from the Productive Safety Net Programme (PSNP) remained under the poverty line. These studies will contribute to an ongoing assessment of the quantitative impacts of social protection research under PIM. Finally, a [study](#) on Bangladesh explored the effects of alternative ways of providing nutrition information in combination with agricultural extension. Effects are strongest when a nutrition specialist conveys the information or when an extension agent conveys information on both farming and nutrition.

The [SPIA study](#) on adoption of CGIAR innovations in Ethiopia mentions the PSNP and DSM and finds that 12% of households benefited directly from the PSNP.

PIM researchers conducted a randomized control trial in [Kenya](#) to evaluate the use of credit when bundled with insurance ([PIM risk-contingent credit innovation](#)) compared to conventional credit. The study found that the new product led to a 7% increase in the use of credit, which was statistically significant although less than anticipated.

b) Any areas of learning from impact assessments which have influenced the direction of the program

N/A

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 achievement of nearly all 2020 milestones and description of 22 outcome cases. PIM research informed agricultural policies and investments in [Egypt](#), [Myanmar](#), [Nepal](#), [Nigeria](#), [Papua New Guinea](#), [Rwanda](#), [South Africa](#), [Uganda](#), [Ghana](#), [Indonesia](#), [Malawi](#) and [Tunisia](#). Several PIM innovations are being scaled up by partners: [picture-based insurance](#) in Ethiopia, India and Kenya, [Direct Seed Marketing](#) in Ethiopia, [tools for equitable management of natural resources](#) in Peru, [multi-actor platforms](#) for landscape governance and restoration in India.

Several tools were developed to inform governments and multilateral organizations' responses to COVID-19. The [COVID-19 Policy Response Portal](#) was set up and [the impacts of COVID-19 and policy responses](#) were assessed for over 20 countries. The [Food Trade Policy Tracker](#) was developed to map food export restrictions implemented by governments, showing that these restrictions [jeopardize food and nutrition security around the world](#). Recommendations were provided for implementing gender-sensitive social protection programming as a critical component of the response to the pandemic and researchers provided perspective on [how the crisis could either be a setback or offer opportunities for gender equality](#). Phone surveys were launched to assess the impacts of COVID-19 on poverty, food security and value chains in a dozen countries.

PIM launched the [CGIAR Community of Excellence on Seed Systems](#). Books on [extension](#), [mechanization](#), [value chains](#) and [investments and subsidies in India](#) were published. PIM published [172 journal articles](#). PIM's trainings and webinars increased the capacity of 25,000 people in over 25 countries.

1.2.2.a Progress by flagship

Flagship 1 “Technological Innovation and Sustainable Intensification”

PIM modeling work generated evidence on the impacts of climate change at global, regional and national level, provided insights on [trade-offs between the Sustainable Development Goals](#), and informed strategies of the [Bill & Melinda Gates Foundation](#), [Inter-American development Bank](#) and [World Bank](#). A [study](#) found that to end hunger, double the incomes of small-scale producers and protect the climate, donors need to double their effort by 2030.

Research on seed systems led to [registration of farmers' varieties of beans and rice in Nepal](#) and supported [policy reforms for easier access of smallholders to quality seeds in Uganda](#). PIM facilitated a new community of excellence on [seed systems development](#). Research on agricultural extension informed [Malawi's extension strategy](#) and PIM tools were integrated into [extension curricula in India and South Africa](#). Studies provided recommendations on [youth engagement in advisory services](#), lessons on the role of [advisory services in the COVID-19 crisis](#) were disseminated, and a book on [extension](#) was published. Research on R&D decision support systems and science policy led to [syntheses on global and regional trends in agricultural science and technology](#), ex ante analyses of genetically-engineered innovations in [Uganda](#), [Tanzania](#) and [Ethiopia](#), and findings on [agrobiodiversity conservation](#).

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

The work of IFPRI's country program teams generated several outcomes. In Uganda, recommendations of a PIM study are used to [increase the Baraza program's cost-effectiveness and inclusivity](#), with potential impacts on millions of citizens. Other policy changes informed by PIM research include COVID-related measures in [Egypt](#), [Myanmar](#),

[Rwanda](#), [South Africa](#), [Ghana](#), [Indonesia](#), [Malawi](#) and [Tunisia](#), and [scaling up of the School Gardens project](#) – aimed at increasing food security through agriculture and nutrition education – by the Government of Papua New Guinea. The [COVID-19 Policy Response Portal](#) was set up to analyze the impacts of governments’ responses to the pandemic in 33 countries.

Three books were published, on [Ethiopia’s agricultural transformation](#), [investments and subsidies in India](#), and [agricultural mechanization](#). Research on youth and employment [revisited the assumptions often made about youth in rural Africa](#) and [busted the myth of Africa’s ageing farmers](#). A *World Development Special Issue* investigated the extent to which information can help rural people access improved public services. Research on the challenges faced by [informal food traders](#) in terms of [taxation](#), food safety and service delivery in four African countries was summarized in a [brief](#).

Flagship 3 “Inclusive and Efficient Value Chains”

A [global study](#) found that the effects of agricultural support policies on greenhouse gas (GHG) emissions are overall fairly neutral, with agricultural subsidies inducing greater GHG emissions while trade protection reduces them.

[Results](#) from implementation of the [PIM methodology to measure food losses](#) suggest that staple food losses are highest at the producer level and that most product deterioration occurs before harvest. The [Value chains knowledge portal](#) was updated. A [book](#) shed light on how value chain concepts are translated into development programming and interventions to achieve impact at scale. The flagship team generated knowledge about how to design and implement innovative and inclusive [agricultural value chain financing models in Indonesia, Myanmar and Viet Nam](#). Research on [innovative risk management products](#) continued to make progress, especially on the demand side; [picture-based crop monitoring](#) has now been adopted by six institutions to improve their agricultural insurance and financing services in Ethiopia, India and Kenya.

An impact assessment of Ethiopia’s [Direct Seed Marketing \(DSM\)](#) system – an innovation scaled up partly based on PIM research – found that DSM has led to a 26 percent increase in maize yields and 5 percent increase in the share of maize harvest that is marketed.

Flagship 4 “Social Protection for Agriculture and Resilience”

PIM continued to collaborate with governments and implementing partners to assess the impacts of social protection programs on various outcomes in Bangladesh, Egypt, Ethiopia, Ghana, India, Kazakhstan, Mali, Sri Lanka, Tanzania and Yemen. In Egypt, PIM research led to improvements in the modalities of the [national cash transfer program](#) and of the [food subsidy system](#).

Evidence was generated on Ethiopia’s Productive Safety Net Programme (PSNP)’s [nutrition-sensitive features](#) and [environmental impacts](#). A [study](#) of long-term effects of the PSNP found that many households that were graduated from the program had not progressed out of poverty. In [Bangladesh](#), researchers analyzed long-term effects of the Transfer Modality Research Initiative – a pilot program that provided food or cash transfers with or without nutrition behavior change communication (BCC); households that received a combination of transfers with BCC continued to experience sustained reductions in poverty four years after the program ended. Research on [India’s National Rural Employment Guarantee Scheme](#) outlined its achievements and limitations in effectively targeting the poor.

As part of the flagship’s work on fragile settings, [results](#) on Yemen’s Cash for Nutrition program showed that cash transfers and group nutrition education sessions significantly improved nutrition knowledge and practices for poor women with young children.

Flagship 5 “Governance of Natural Resources”

A [review](#) of seven countries showed that land reforms are generally unsuccessful unless accompanied by complementary investments. In [Ethiopia](#), second stage land certification enhanced land rental markets but reduced access to land for women and youth. In [Indonesia](#), disparities of approaches and forest tenure reforms on gender outcomes were found between the national, provincial, and local levels. Research proposed solutions for [securing territorial rights for indigenous peoples](#) and provided lessons on collective tenure and investment in [Guatemala, Mexico, Namibia and Nepal](#).

Participatory approaches for natural resource management were assessed: [participatory land use scenario development](#) (Vietnam); Participatory Prospective Analysis ([Kenya](#), [Uganda](#), [Nepal](#)); [Bayesian Belief Network Analysis](#) (Tunisia); and [Adaptive Collaborative Management](#) (Nicaragua). A Multistakeholder Dialogue Platform triggered advances in biodiversity conservation and enhanced livelihoods across the Kenya-Somalia border. A PIM [tool](#) for self-monitoring of the effectiveness of multistakeholder fora was adapted by the [Peruvian Service for Natural Protected Areas](#) for more equitable co-management of 76 protected areas. Foundation for Ecological Security deployed guidance on the use of multi-actor platforms among partner networks across India. [Lessons](#) on [payments for agrobiodiversity services \(PACS\)](#) in Latin America were reviewed and the potential of PACS to safeguard crop varieties was assessed in [Guatemala](#).

Flagship 6 “Cross-cutting Gender Research and Coordination”

Work in Uganda highlighted that [providing agricultural information directly to women](#) (as opposed to male heads-of-household) through videos can significantly increase yields on plots managed by women.

The team continued to generate tools for gender research. The project-level [Women’s Empowerment in Agriculture Index for Market Inclusion](#) was released. Guidelines on collecting [gender-sensitive measures of freedom of movement](#) in agricultural value chains were piloted in Benin and Malawi. Researchers published [results](#) from using mobile phone data and phone surveys to train machine learning models to predict indicators of women’s empowerment. Eight blog posts on new approaches to collecting gender data were posted on PIM’s [Engendering Data blog](#).

Results on interventions to reduce intimate partner violence (IPV) were incorporated into the [implementation package](#) of the World Health Organization’s “RESPECT women” framework, and researchers in Ethiopia worked with [Unite for a Better Life](#), a gender-transformative participatory intervention delivered to men, women, and couples to reduce IPV.

Three synthesis briefs were disseminated, on [methods for measuring women’s empowerment](#), [gender and rural transformation](#), and [gender dynamics in seed systems development](#). A [chapter](#) drawing on CGIAR gender and value chain research was published in the *Routledge Handbook of Gender and Agriculture*.

1.2.2.b Relevance to COVID-19 by flagship

Flagship 1 “Technological Innovation and Sustainable Intensification”

- (i) Major incorporation of COVID-19 analyses into existing studies

Lessons on the role of [advisory services in the COVID-19 crisis](#) were disseminated. A research team applied insights from organizational change theory to examine how extension organizations are innovating during the pandemic, and found that COVID has brought about more radical changes than previous crises: extension organizations’ inputs (human capital,

technology and equipment), outputs (services) and organizational components (social structures, participants and goals) all underwent modifications. An analysis of these changes led to [recommendations on how extension services could be strengthened to better respond to crises](#): embrace technology but do so cautiously to prevent exclusion, provide extension staff with the necessary skills to empower them to adapt and problem solve, and ensure that extension's organizational structures are flexible enough to allow for effective collaboration with local authorities and emergency response NGOs.

- (ii) New COVID-19 studies

N/A

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

- (i) Major incorporation of COVID-19 analyses into existing studies

A [study](#) showed that the COVID-19 crisis has exposed the vulnerability of India's agrifood system and accentuated the need for agricultural market reforms and digital solutions to connect farmers to markets, create safety nets and ensure reasonable working conditions.

Building on past PIM investments in economywide tools and social accounting matrices, the PIM teams used multiplier models to [assess the short-term impacts of COVID-19 and policy responses at country level](#) for over 20 countries and engaged closely with the Governments of [Egypt](#), [Myanmar](#), [Nigeria](#), [Rwanda](#) and [South Africa](#) to identify policy priorities to support recovery.

- (ii) New COVID-19 studies

The [COVID-19 Policy Response Portal](#) was set up to analyze the direct and indirect impacts of governments' responses to the pandemic in 33 countries. Using this data, researchers found that the challenges encountered by [informal food traders](#) during “normal periods” – crowded trading spaces, minimal sanitation facilities and government harassment – were exacerbated during the pandemic.

Phone surveys were conducted to assess COVID-19 impacts on small and medium enterprises (SMEs) in [China](#), on agricultural actors and overall food security and welfare of vulnerable households in [Myanmar](#), and on smallholders' food security in [Nigeria](#). The China SME survey questionnaires were translated into several languages and used by many other countries and international organizations including the World Bank and the Asian Development Bank. A [survey of 162 agricultural start-ups in India](#) revealed that many of them have tailored their products, modified their technologies and invested in their long-term growth potential in response to COVID-19. A PIM researcher was invited to lead the Asia node of the [World Pandemic Research Network](#).

Flagship 3 “Inclusive and Efficient Value Chains”

- (i) Major incorporation of COVID-19 analyses into existing studies

The work on trade negotiations pivoted to address COVID-19. The [Food Trade Policy Tracker](#) mapped food export restrictions implemented by governments in response to the pandemic and document their impact, showing that such restrictions have [interrupted progress toward economic integration in Africa](#) and [jeopardize food and nutrition security around the world](#). Several virtual events were held, on [how World Trade Organization members can support economic recovery and resilience](#), [COVID-19 and African agricultural trade](#), and prospects for [long-term recovery and resilience in Latin America](#).

A [study](#) assessed the impact of COVID-19 on poverty, food insecurity and diets using IFPRI's global general equilibrium model linked to epidemiological and household models. The results suggest that the global recession caused by COVID-19 could be much deeper than that of the 2008-2009 financial crisis, with almost 150 million people projected to fall into extreme poverty.

A brief examined the [impacts of the pandemic on informal cross-border trade](#), arguing that appropriate information and customs regulations are key to protect small-scale and female traders and that the crisis provides an opportunity to increase efficiency at border crossings.

A study of 1,500 producers in Odisha and Haryana states in [India](#) found that labor costs and distress selling of crops was more prominent in Odisha due to limited use of mechanization and a weaker public procurement program.

Questions were added to surveys on labor in Malawi to understand effects of COVID-19 on [rural households](#).

(ii) New COVID-19 studies

Several studies were launched to analyze [the impacts of COVID-19 on value chains](#), including studies of coffee in Guatemala, fish in [Nigeria](#), coffee and [vegetables in Ethiopia](#), fruits and vegetables in Kenya, maize in Uganda, various crops in Malawi, rice in Bangladesh, fish in India, and cassava in Vietnam and Cambodia. Most of these surveys use a common set of questionnaires to facilitate cross-country comparisons.

[Flagship 4 “Social Protection for Agriculture and Resilience”](#)

(i) Major incorporation of COVID-19 analyses into existing studies

Ongoing work in Ethiopia pivoted to examine effects of COVID-19 restrictions on [rural households](#) and [delivery of health services](#). Households reported significant disruptions to livelihoods and food security, leading to high stress levels, while Health Extension Workers spent significant time providing lessons on coronavirus protective measures and addressing immediate threats to human life while reducing time allocated to antenatal care and family planning.

Research demonstrated the potential of the [PSNP to mitigate adverse impacts of the COVID-19 pandemic](#) on food security. At the onset of the pandemic, household food insecurity increased by a 11.7 percentage points and the duration of the food gap by 0.47 months. For PSNP households, the likelihood of becoming food insecure increased by only 2.4 percentage points and the duration of the food gap increased by only 0.13 month. PSNP participants were also less likely to reduce expenditures on health, education and agricultural inputs.

In Mozambique, ongoing work on school meals and literacy programs in public primary schools was augmented by an [evaluation of the impacts of COVID-19-related school closures on adolescent human capital and mental health](#).

(ii) New COVID-19 studies

Safety net policies expanded considerably during the COVID-19 pandemic, helping to prevent vulnerable populations from falling further into poverty and supporting households' recovery. A [brief](#) was produced using data from the [COVID-19 Policy Response Portal](#) (a Flagship 2 output) to identify how governments are targeting their efforts, which groups they are prioritizing, and whether citizens are satisfied with these interventions. Recommendations for implementing gender-sensitive social protection programming as a critical component of the response to COVID-19 were provided in a [brief](#) and [blog](#). A [short piece](#) in *Nature Food* outlined key conditions for social protection schemes to successfully buffer the effects of economic slowdowns and downturns on food security caused by pandemics or other crises.

Flagship 5 “Governance of Natural Resources”

- (i) Major incorporation of COVID-19 analyses into existing studies

The lessons from the flagship’s work on collective action were applied to [COVID-19 responses](#), highlighting the challenges of physical distancing as well as the potential and limitations of information and communication technologies as a substitute, especially in the context of unequal access to such technologies.

- (ii) New COVID-19 studies

N/A

Flagship 6 “Cross-cutting Gender Research and Coordination”

- (i) Major incorporation of COVID-19 analyses into existing studies

A journal article focused on the [intersection of COVID-19, gender and food security](#), drawing out potential gendered effects of COVID-19 on production, processing, trading and consumption; it demonstrated that gendered structures can lead to an increase in women’s care work and in women’s agricultural work in substitution for import-restricted inputs, a disproportionate financial effect of the pandemic on women due to women’s larger presence in local markets and in the street vendor sector, and health effects related to women’s central role in food preparation and household nutrition. Another article offered perspectives on how the COVID-19 crisis and responses to the crisis could either be [a setback or offer opportunities for gender equality in food systems](#). Blog posts highlighted [why gender matters in responses to COVID-19](#) and disseminated [recommendations on how to enhance the resilience of rural women](#).

- (ii) New COVID-19 studies

[Phone surveys](#) were carried out to understand how the pandemic is affecting rural men and women differently in Ghana, India, Nepal, Nigeria and Senegal, and insights were collected on [safeguarding gender research during the pandemic](#) and on [the use of phone surveys to assess gendered impacts of COVID-19](#). A [study](#) was initiated on gender, agriculture and digital extension in rural Tunisia. [Rural women in two communes of the Central Plateau of Burkina Faso were interviewed](#) to shed light on their needs and priorities during the pandemic.

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?

At the request of the Government of the Netherlands, PIM formed a CGIAR community of excellence on [seed systems development](#) to facilitate learning across CGIAR and begin identifying priorities for One CGIAR on this topic. The funding for this came from 2019 unspent funding carried over into 2020.

The progress made in measuring value added and employment in the wider food system, i.e. beyond agriculture, to enable the modeling of outcomes at the food system level, generated significant interest from governments and funders; therefore, this line of research was accelerated.

A set of studies on gender dynamics in value chains was launched. These studies had been selected in 2019 through a call of the CGIAR Collaborative Platform on Gender Research (then under PIM) and put on hold due to a funding gap. To allow the planned work to take place, and given that the new GENDER Platform was not in a position to make allocations until later in 2020, PIM management agreed to use unspent 2019 funding carried over to 2020 to fund these studies.

(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?

No major research line was dropped in 2020. COVID-19 affected implementation of several activities across all flagships (see [1.2.2.b](#)).

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

As indicated in section [1.2.2.b](#), numerous planned activities underwent adjustments of fieldwork or modeling plans in response to demand and shifted to address effects of and responses to COVID-19.

1.2.4 Altmetric and publication highlights

Altmetric scores were downloaded by IFPRI's Knowledge Management team on April 6, 2020 for 484 PIM 2020 publications.

As in 2019, six PIM outputs reached a score over 100, with 43 publications in the top 5% of all research outputs scored by Altmetric.

Two of these are related to COVID-19 research. The article "[COVID-19 Risks to Global Food Security](#)" received the highest attention among PIM publications, reaching a score of [379](#), with 14 news stories from 13 outlets, 12 blog posts, 389 tweets, 5 public Facebook posts and 4 Reddit threads. It was also read by 421 Mendeley users and cited by [76 publications on Dimensions](#) (research insights platform linked to Altmetric). The policy note "[Poverty, Food Insecurity, and Social Protection During COVID-19 in Myanmar](#)", which combined evidence from a household phone survey and micro-simulations to provide recommendations on adjustments to safety nets, garnered a score of [226](#) and high attention from news outlets (17 stories); it was also featured in 8 blog posts and 105 tweets.

"[The Impacts of GM Foods: Results from a Randomized Controlled Trial of Bt Eggplant in Bangladesh](#)" was the second most popular publication, with a score of [247](#) – with mentions in one news story, 4 blogs, 302 tweets, one public Facebook post and 6 Reddit threads. It was also cited on the [Genetically modified brinjal](#) Wikipedia page and on [Dimensions](#).

"[Deciphering the Biodiversity–Production Mutualism in the Global Food Security Debate](#)", an interdisciplinary contribution at the intersection between agronomy, agroecology, economics, and conservation science, reached a score of [217](#) and got the highest attention from news outlets (22 stories).

The paper "[Perceptions of Relative Deprivation and Women's Empowerment](#)" (published online in 2020), scored [160](#), attracting substantial media attention (17 news stories) spurred by the authors' [piece in The Conversation](#).

The article "[Influence of Land Tenure Interventions on Human Well-Being and Environmental Outcomes](#)" was mentioned in 4 blog posts, 156 tweets and 3 public Facebook posts, for a total score of [119](#).

The paper "[Covid-19 Lockdowns, Income Distribution, and Food Security: An Analysis for South Africa](#)" was the most cited by policy documents ([cited 3 times](#)).

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 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

A [study](#) assessed the effects of alternative agricultural research and development investments on male and female employment in 14 African countries. In Algeria, Egypt, Ethiopia, Kenya, Nigeria, Senegal, Sudan and Tunisia, female employment increased more than male employment in response to agricultural investments. Investments in infrastructure have larger female employment impacts than other investments.

A [conceptual framework for women's land tenure security](#) identified relevant dimensions of tenure security, going beyond conventional indicators. A [review of 117 land tenure interventions](#) found that outcomes on women's welfare and empowerment were only evaluated in 18 cases. Analysis of [Indonesia's forest tenure reforms](#) showed that national reforms were implemented in a gender-blind manner.

Gender norms and women's time constraints limit women's participation in natural resource management, both at community level and in multi-actor platforms. A tool for [enhancing social inclusion through local dialogues](#) identified ways to overcome these obstacles at community level, whereas a [guidance note](#) in collaboration with International Land Coalition addressed these issues in the context of multistakeholder platforms. Application of [participatory prospective analysis \(PPA\) in forest management in Kenya](#) revealed that women did not express themselves freely in front of men; women-only PPA groups set up in a subsequent PPA process in [Uganda](#) proved more successful in identifying factors affecting women's tenure security.

The project-level [Women's Empowerment in Agriculture Index for Market Inclusion](#) was developed and piloted. Guidelines on collecting [gender-sensitive measures of freedom of movement](#) in agricultural value chains were tested in Benin and Malawi. In Southeast Asia, a [guidance note](#) was developed to ensure that weather forecast-based advice is gender-inclusive. A [brief](#) analyzed how gender concepts have been operationalized in agricultural development projects in Latin America.

A [brief](#) on gender-sensitive social protection in response to COVID-19 informed strategic and advocacy documents of the [Government of Australia](#), [GIZ](#), the [UK Government's Foreign, Commonwealth & Development Office](#), the [United Nations](#) and the [World Bank Recommendations](#) were provided for women's inclusion in COVID-19 relief measures in Myanmar. Results of interventions to reduce intimate partner violence were incorporated into the [implementation package](#) of the World Health Organization's "RESPECT women" framework. In Ethiopia, decentralization was found to have greater benefits for men than for women, [widening the gender gap in access to public services](#); lessons of this research were shared with partners.

Synthesis briefs were disseminated on [gender and rural transformation](#), [gender dynamics in seed system development](#) and [methods for measuring women's empowerment](#). An

Agricultural Science and Technology Indicators (ASTI) [note](#) focused on the evolution of women's participation in agricultural research. A [webinar](#) presented processes for integrating gender into each stage of the research process. Insights were collected on [safeguarding gender research during the COVID-19 pandemic](#) and on the use of [phone surveys to understand gendered impacts of COVID-19](#).

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

Feedback from development partners revealed a high demand for easy-to-implement gender metrics to measure progress on gender goals. This led PIM to invest in simplified versions of the Women's Empowerment in Agriculture Index (WEAI), such as the [project-level WEAI for Market Inclusion](#) as well as other metrics and methods for measuring gender equity and equality for use in development projects.

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

The use of phone surveys during the pandemic was observed to have a negative impact on the quality of gender research. Women were less likely to own phones or have provided phone numbers in earlier surveys; therefore, they proved harder to reach than men. In addition, research showed that [women were not always in a private space when using a phone](#), especially if borrowing one from a family member, and that this could impact their answers.

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

A [study in Rwanda and Uganda](#) uncovered [seven models](#) to engage youth in private sector extension and advisory services as providers or recipients of the services: training youth to become agripreneurs; village agents; youth-led and other fee-based extension providers; paraprofessional extension workers; extension internships; credit and financial services; and youth agripreneurship awards. All of these models were found to provide important benefits to the youth and used to provide [recommendations](#) on youth engagement. [Recommendations](#) were also provided to improve the inclusion of youth in advisory services in Guatemala and Niger. Another [study](#) identified key drivers for the success of youth entrepreneurship in Nigeria.

PIM research on youth and employment in Africa, summarized in a 2019 book [launched](#) in 2020, was featured in several news outlets, [revisiting the assumptions often made about youth in rural Africa](#) and [busting the myth of Africa's ageing farmers](#). This body of research shows that [youth remain a substantial proportion of African farmers](#) but struggle to be productive.

Panel data covering 49 African countries for the period 2000-2017 were used to examine the dynamic relationship between the quality of foundational skills – measured by basic education quality (teacher-pupil ratio) – and youth unemployment, while considering the conditional role of institutional capacity; the [study](#) found that the quality of basic education reduces youth unemployment and that control of corruption, improved regulatory quality and better structured financial sectors strengthen the effect of basic education quality in reducing youth unemployment. These findings provide a clear policy pathway for reducing youth unemployment in Africa.

PIM researchers used sex-disaggregated, nationally representative data from 36 countries to investigate how structural transformation (share of GDP from non-agriculture) and rural transformation (agricultural value added per worker) are associated with land ownership, labor

force participation and sector of employment for rural youth. [Results](#) show that transformation has different implications for young men's and women's transitions to adulthood, with often worse outcomes for young women.

PIM researchers supported Nigeria's Technical Working Group on Agriculture, Food Security, and Rural Development in identifying policy reforms most effective at boosting youth employment – the main goal for Nigeria's medium-term economic planning.

In Africa, young people's land rights have recently been a focus of policy attention. Research in [Ethiopia](#) showed that second stage land certification has stimulated land rental markets but reduced land access by the youth.

PIM's investment in setting up and improving multistakeholder processes and platforms focusing on equity and social inclusion continued, with special attention to indigenous peoples and local communities. Tools were developed to support [indigenous women's inclusion in the governance of indigenous territories](#) as well as participatory decision making inclusive of indigenous peoples and local communities in [Peru's protected areas' co-management committees](#).

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

Previous PIM research on the types of extension provision and on effectiveness and scaling up of the volunteer farmer trainer approach has informed PIM's recent focus on youth's involvement in extension. In particular, research on [volunteer farmer trainers](#) identified the potential of this approach to expand the inclusion of youth (along with women) as trainers and beneficiaries of agricultural advisory services.

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

N/A

1.3.3 Capacity development

25,154 people were trained by PIM in 2020 (15,290 men; 9,864 women) ([Table 7](#)).

Ghanaian fish farmers were [trained](#) to increase adoption of good aquaculture practices. In Nepal, [capacity building of farmers' associations](#) led to [registration of 11 local crop varieties](#).

In India, PIM worked with the NGO Foundation for Ecological Security and several government programs to train over 300 community resource people in using [experiential games to strengthen communities' capacity to manage water resources](#). Several guidelines and toolkits on methods for participatory governance were developed: guidance note on [gender and pastoralism](#) and toolkit on [preventing land use conflicts in pastoral areas](#) in collaboration with the International Fund for Agricultural Development, [guidelines for establishing a monitoring system in grazing areas](#), [tools for inclusive management of resources through multi-stakeholder fora](#), and a [tool for enhancing social inclusion through local dialogues on natural resource management](#).

IFPRI's country program teams in Egypt, Ethiopia, Ghana, Myanmar, Nigeria and Rwanda trained government and research partners in survey design, computable general equilibrium modeling, policy analysis and impact evaluation inter alia.

PIM partnered with Michigan State University, USAID and Wageningen University and Research to develop an [interactive guidebook](#) on capacity development for agricultural

innovation. [Training materials](#) focused on how to implement the [PIM methodology to measure food losses](#) across value chains. Eight blog posts on new approaches to collecting gender data were published on PIM's [Engendering Data blog](#). A series of three [webinars](#) provided guidance to young researchers on how to publish agricultural development research in social science journals.

Multiple virtual workshops on COVID-19 took place, including a series of regional dialogues on [“How Can WTO Members Support Recovery and Resilience”](#) and a policy seminar on the [impacts of the pandemic on economies, food systems and poverty](#).

1.3.4 Climate change

PIM modeling tools were used to investigate the effects of climate change at country level: on crops yields in [Ethiopia](#), on agriculture and food security in [Kazakhstan](#) and [Tajikistan](#), on the broader economy in [Zambia](#), and on agriculture in [several countries in Latin America](#). PIM tools were also used to estimate the [costs of agricultural investment options to support climate change adaptation at regional and global scales](#) to inform the Global Commission on Adaptation. [Climate-smart agriculture](#) (CSA) was found to be able to increase agricultural production under unfavorable climate regimes while contributing to the reduction of greenhouse gas (GHG) emissions. A [study](#) concluded that the effects of agricultural support policies on GHG emissions are overall fairly neutral. A brief was produced to highlight relationships between [climate change impacts and employment prospects for rural youth](#).

Several papers analyzed farm-level adaptation strategies to climate change. In [Ghana](#), a study found that cocoa farmers rarely adopt climate change adaptation technologies and rely mainly on diversification of income sources. In [Ethiopia](#), researchers provided evidence of the welfare effects of conservation agriculture, a CSA practice. In [Kenya](#), a study showed that crop diversification as a climate change adaptation strategy should not crowd-out specialization. Gender-specific strategies for coping with climate change were explored in Nigeria and Uganda. The study in [Nigeria](#) revealed that, although women play crucial roles in addressing food insecurity, gender-specific obstacles impede their abilities to cope with climate-induced food insecurity. In [Uganda](#), ICT-based solutions proved effective to empower women to share climate change adaptation practices.

A team studied [REDD+ implementation challenges](#) related to tenure security and governance institutions in the Peruvian Amazon. Other researchers examined REDD+ through an [environmental justice lens](#), arguing that REDD+ has the potential to be a vehicle of justice by committing to a rights-based approach.

2. Effectiveness and efficiency

2.1 Management and governance

COVID-19 presented a significant challenge to research implementation. PIM management interacted with principal investigators twice during the year to assess risks and changes to work plans. Leaders of activities which were still at risk at mid-year were encouraged to consider repurposing funds in other PIM priority areas. Given that COVID-19 remains a risk in 2021, the PIM Management Committee agreed to aggregate unspent 2020 funding at flagship level – rather than allow carryover at activity level – to allow flagship leadership teams some flexibility in re-allocating funds in 2021.

In accordance with the PIM policy on ethical review for research involving human subjects [updated](#) in September 2019, the Program Management Unit requested from principal investigators the documentation of Institutional Review Board approval for selected Window 1-2-funded 2020 activities to check compliance with the PIM policy. No compliance issue was

noted, although in several cases the submission of research protocols to IRBs was delayed due to the pandemic.

From August to December 2020, PIM management invested significant time in interacting with the [PIM 2020 independent review](#) team. The PIM management response to the review can be found [here](#).

On January 1, 2020, the [CGIAR Collaborative Platform for Gender Research](#) (hosted in [PIM's Flagship 6](#) in 2017-2019) transitioned to the self-standing CGIAR [GENDER Platform](#).

Early 2020, two new members of the [PIM Independent Steering Committee](#) (Regina Birner and Alain de Janvry) were appointed to replace Christopher Barrett and Johan Swinnen, who had stepped down from the committee at the end of 2019 owing to conflicts of interest arising from their new positions.

The composition of the [PIM Management Committee](#) was modified to include two Center representatives instead of one, and a representative from World Agroforestry joined the representative from the Alliance of Bioversity International and CIAT as part of the committee.

2.2 Partnerships

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

PIM continued to nurture partnerships with governments in Bangladesh, China, Egypt, Ethiopia, Ghana, India, Kenya, Malawi, Mali, Myanmar, Nigeria, Pakistan, Papua New Guinea, Peru, the Philippines, Rwanda, South Africa, Tunisia and Uganda to support their policy development processes. PIM research informed policy documents of agencies and donor organizations such as the Bill & Melinda Gates Foundation, FAO, IFAD, the Inter-American Development Bank, the UK Government's Foreign, Commonwealth & Development Office, USAID, the World Bank, the World Food Programme and the World Health Organization. Work continued with private sector partners (e.g. Agriculture Climate Risk Enterprise Africa, Equity Bank, Ghana Oil Palm Development Company Ltd., HDFC ERGO General Insurance Company Ltd., Kakira Sugar, Tropical Bank Ltd., Twiga foods) and NGOs (e.g. Alliance for a Green Revolution in Africa, Digital Green, Foundation for Ecological Security, Helen Keller International, International Land Coalition, International Institute for Sustainable Development, Swisscontact, World Vision International) on extension, agricultural risk management, value chains and social protection.

A [Community of Excellence on Seed Systems](#) was launched to help shape the One CGIAR strategy on seed systems in partnership with the Dutch Research Council, KIT Royal Tropical Institute and Wageningen University and Research. PIM continued to work on the [gender](#) and [policy](#) modules of Integrated Seed Sector Development-Africa.

PIM and A4NH started to evaluate the impacts of the new R5N social protection program in Sri Lanka in partnership with the Government of Sri Lanka, Foundation for Health Promotion, Johns Hopkins University, Medical Research Institute of Sri Lanka, University of California, Wayamba University and World Food Programme.

The [project-level Women's Empowerment in Agriculture Index for Market Inclusion](#) was piloted with the University of San Carlos and University of the Philippines in the Philippines, Wadonda Consult Ltd. in Malawi, CIRFOSS Consulting in Benin, DATA in Bangladesh and Swisscontact in Honduras.

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

Collaboration with A4NH was enhanced in the areas of nutrition (new approach for measuring dietary quality outcomes of alternative agrifood policy choices in 17 countries, assessing a new nutrition-sensitive social protection intervention in Sri Lanka, reducing the costs of nutritious foods in Ethiopia, impact on dietary diversity of [combined interventions](#) targeting agriculture, gender and nutrition in Bangladesh) and women's empowerment (piloting of [project-level Women's Empowerment in Agriculture Index for Market Inclusion](#), [measurement of time use](#), construction of indicators of [women's decision making](#)).

PIM joined forces with FISH and RTB to analyze the impacts of COVID-19 on value chains (fish in India and Nigeria, cassava in Vietnam), and with FTA and WLE to assess the impacts of COVID-19 on the welfare of [rural women in Burkina Faso](#).

The Big Data Platform provided funding for scaling up the use of smartphone pictures for insurance and advisory services, an innovation developed through a collaboration between PIM and CCAFS. Collaborations with MAIZE include the [book](#) « *Value Chain Development and The Poor: Promise, Delivery and Opportunities for Increased Impact at Scale* » and a [study](#) showing that targeting women with agricultural information increases their productivity. Several tools for enhanced participatory governance of natural resources at community and multistakeholder platform levels were jointly developed and piloted with FTA. A [brief](#) on climate adaptation and job prospects for young people in agriculture was produced with CCAFS.

Various synthesis publications involving many or all CRPs and Centers will reach completion in 2021: the CGIAR foresight report, the book « *Advancing Gender Equality through Agricultural and Environmental Research: Past, Present and Future* », a Special Issue on gender in seed systems and a synthesis on the effectiveness of multistakeholder platforms.

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](#) "An assessment of the use of outputs from PIM-supported work on national SAMs and CGE models" finds that PIM's work has led to wide availability of social accounting matrices worldwide, increased capacity for using computable general equilibrium modeling tools, and use of research findings for policy making.

An [assessment](#) of the impact of Ethiopia's Direct Seed Marketing (DSM) approach finds that DSM contributed to improving seed availability for maize, wheat, and teff and led to positive effects on maize productivity and commercialization.

A [study](#) on CGIAR's 2018 policy contributions finds alignment between policy influence and One CGIAR impact areas in selected countries and recommends that CGIAR undertake selected impact assessments of mature policy contributions reported across different CRPs.

A [review](#) of gender research in PIM assessed the accuracy of gender scores for PIM 2018-2019 peer-reviewed publications, synthesized lessons learned on several topics, and provided recommendations for improving gender research in PIM and in the One CGIAR portfolio.

A review of the contributions of PIM-funded research on resource tenure and governance to policy and programs was initiated.

A [collection of PIM Flagship Insight Notes](#) reviewed lessons on theories of change and partnerships within each flagship.

2.5 Efficiency

The PIM financial management policy was [streamlined](#) to reduce transaction costs.

For the first time, the annual PIM "extended team" and Independent Steering Committee meeting was held virtually and in a reduced half-day format. The background documents prepared by the flagship teams and Program Management Unit, videos and use of the MS Teams chat function allowed for efficient information sharing and discussion on PIM achievements and informing the transition to One CGIAR.

Numerous field studies pivoted to using remote phone surveys. In spite of the associated tradeoffs, this approach allowed researchers to acquire key data on COVID-19-related topics, which led to publication of dozens of outputs.

A [PIM Synthesis Brief](#) template was created to convey key findings on selected topics of PIM research in an easy-to-read format; four briefs were produced in 2020, with several more planned for 2021.

The PIM Program Management Head continued to provide inputs into the development of a Business Intelligence module for MARLO to be able to produce customized data reports for improved contribution to program management.

The PIM Program Management Head also provided suggestions to streamline the CRP annual report quality assessment process, which was particularly time-consuming for CRPs in 2020.

2.6 Management of risks

Risks	Causes	Mitigation
The coherence of the portfolio is reduced	Multiple adjustments to workplans due to COVID-19	Embedding new activities in existing PIM results framework; Thorough review of adjusted activity plans by PMU
Synthesis products are not ready by end 2021	Delays in programming and delivery due to COVID-19	Identification, prioritization, and monitoring of synthesis products; Priority to synthesis products over new research
Significant amounts of W1-2 funding cannot be spent wisely by end 2021	Delays in programming and delivery due to COVID-19; Uncertainty in W1-2 amounts available	Pivoting research to COVID-19 topics using phone surveys to encourage spending in 2020; Early information sharing with teams on 2021 allocations and program closing; Guidance sought from Lead Center's Finance Division
Progress towards outcomes slows	Lack of in-person meetings and presentations of findings to decision makers due to COVID-19	Increased dissemination efforts through partners and virtually
The PIM legacy cannot easily be found on the web after 2021	Uncertainties on the future of CRP websites after CRP closing	Push for discussion at System level
PMU staff leave, creating difficulties for management of and reporting on the 2021 portfolio	Lack of job security after 2021	Push for clarity on job opportunities in One CGIAR and process for selection to be implemented as early as possible to ease the transition into 2022
Policy research is not adequately included in the post-2021 portfolio	Prioritization of other topics	Proactive engagement of PIM management/teams in developing the One CGIAR portfolio

2.7 Use of Window 1-2 funding

Window 1-2 funding allowed the launch of syntheses at CRP and flagship levels, including a series of [PIM Synthesis Briefs](#) to convey key findings on selected topics of PIM research in an easy-to-read format. Books on [extension](#), [mechanization](#) and [value chains](#) were published.

W1-2 funding was used to update public goods such as the [website of the International Organisations Consortium for Measuring the Policy Environment for Agriculture](#), the [Value chains knowledge portal](#) and [DREAMPy](#) – a software for evaluating economic impacts of agricultural research and development projects – and create new ones, e.g. the [Monitoring agricultural production and stocks](#) and [Trading in macro-nutrients](#) portals. A large number of COVID-19-related outputs (e.g. [ex ante modeling of COVID-19 economic effects](#)) and dashboards (e.g. [COVID-19 Policy Response Portal](#) and [Food Export Restrictions during the COVID-19 crisis](#)) were produced (see [1.2.2.b](#)).

W1-2 funds supported the launch of the [CGIAR Community of Excellence on Seed Systems Development](#) in partnership with Integrated Seed Sector Development-Africa ([ISSD Africa](#)) and the [Netherlands-CGIAR Seed Systems Development research program](#).

A series of coordinated studies on gender and value chains selected through a call of the previous CGIAR Collaborative Platform for Gender Research in 2019 were launched in partnership with other CRPs.

W1-2 funding was also used to assess the impact of PIM's work (see [Table 10](#)).

3. Financial summary

The CGIAR 2020-2021 Financing Plan communicated to Centers on January 23, 2020 showed an indicative amount of USD 14.5M W1-2 funds for PIM. PIM initially programmed USD 16.3M through adding USD 0.7M from prior years' unallocated/unspent funding and allowing USD 1.0M 2019 unspent funds to be carried over to 2020.

During the year, PIM programmed an additional USD 2.4M from prior years' unallocated/unspent funds and an additional USD 0.4M carried over from 2019 unspent funds, which brought the total allocation to USD 19.1M. This funding boost allowed the Flagship 1 team to broaden the reach of its seed sector-related activities – including the launch of a community of excellence – and to provide foresight support to the One CGIAR priority-setting process. The extra funding for Flagship 2 was used for work on COVID-19 and other responses to demands from governments. Within Flagships 3, 4, and 5, the new funding allowed implementation of activities which had previously been selected for funding but had remained unfunded due to budget constraints, topping up selected activities' budgets for production of additional deliverables, an increased effort towards synthesis, and a call for proposals on the impact of COVID-19 on value chains. In Flagship 6, the increased budget allowed the launch of grants on gender and value chain which had been frozen owing to budget constraints in 2019. In April 2020, many PIM research activities pivoted in response to the COVID-19 pandemic, and a call for COVID-19 research proposals aligned with any of the six flagships' priorities was issued; seven proposals were selected for funding.

In May 2020, the Australian Centre for International Agricultural Research (ACIAR) allocated USD 195,000 to PIM through Window 2 in support of IFPRI's work on Agricultural Science and Technology Indicators (ASTI). With this contribution, the final W1-2 amount programmed by PIM is USD 19.3M.

PIM received an actual W1-2 allocation of USD 14.0M (96% of the indicative Financing Plan amount).

W1-2 expenditures total USD 15.9M, i.e. 113% of the realized Financing Plan, 98% of the planned budget in the 2020 Plan of Work and Budget and 82% of the final programmed amount. Window 3/bilateral expenditures were USD 4.7M lower than the projected USD 40.2M. W1-2 expenses accounted for 31% of the portfolio and W3/bilateral expenses for 69%.

See [Table 13](#) for information about budgets and expenditures by flagship. Negative amounts for W1-2 (planned - actual) reflect spending down of 2019 carryover amounts allocated during 2020.

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	Geographic scope
SLO 1 - Reduce Poverty			
100 million more farm households have adopted improved varieties, breeds, trees, and/or management practices	No new evidence in 2020	PIM is undertaking further analysis of the household datasets used in the 2020 impact assessment of Ethiopia's Direct Seed Marketing (DSM) program to rigorously determine the number of households acquiring seeds through DSM. According to the Ethiopian Agricultural Transformation Agency, DSM has reached nearly 2 million farmers in 320 districts by 2020. The SPIA study on adoption of CGIAR innovations in Ethiopia mentions the contribution of IFPRI to DSM but was not able to measure its uptake by households due to data limitations.	National: Ethiopia
Improve the rate of yield increase for major food staples from current <1% to 1.2-1.5% per year	An ex post impact assessment found that Ethiopia's Direct Seed Marketing (DSM) – an innovation previously tested by PIM – led to a 26% increase in maize yield in locations where DSM was rolled out compared to locations without DSM.		National: Ethiopia

Table 2: List of policy contributions

*Stage 1: Research taken up by next users * 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	Policy type	Stage of maturity	Link to sub-IDOs	Cross-cutting marker scores				Link to OICR
				Gender	Youth	Capdev	Climate change	
Flagship 1 – Technological Innovation and Sustainable Intensification								
719 – Contribution of PIM research to improved smallholder farmers' access to quality seeds in Uganda	Policy or strategy	Stage 2	<ul style="list-style-type: none"> Increased conservation and use of genetic resources (<i>primary</i>) Increased access to productive assets, including natural resources Closed yield gaps through improved agronomic and animal husbandry practices 	1 - Significant	0 - Not targeted	1 - Significant	0 - Not targeted	OICR 4068
723 – Improved procedure for registering farmers' varieties under Nepal's Seed Policy	Policy or strategy	Stage 2	<ul style="list-style-type: none"> Increased conservation and use of genetic resources (<i>primary</i>) Increased access to productive assets, including natural resources Increased genetic diversity of agricultural and associated landscapes 	0 - Not targeted	0 - Not targeted	1 - Significant	1 - Significant	OICR 4071
724 – Contribution to Malawi's National Agricultural Extension and Advisory Services Strategy 2020-2025 (<i>with Flagship 2</i>)	Policy or strategy	Stage 2	<ul style="list-style-type: none"> Increased capacity of beneficiaries to adopt research outputs (<i>primary</i>) Improved capacity of women and young people to participate in decision making Closed yield gaps through improved agronomic and animal husbandry practices 	1 - Significant	0 - Not targeted	1 - Significant	0 - Not targeted	OICR 4079
665 – Contribution to the curricula for Master's and PhD degrees in agricultural extension (to be used by 63 universities), India	Curriculum	Stage 1	<ul style="list-style-type: none"> Increased capacity of beneficiaries to adopt research outputs (<i>primary</i>) Enhanced institutional capacity of partner research organizations Enhanced individual capacity in partner research organizations through training and exchange 	1 - Significant	0 - Not targeted	2 - Principal	1 - Significant	OICR 3951

Title of policy, legal instrument, investment or curriculum	Policy type	Stage of maturity	Link to sub-IDOs	Cross-cutting marker scores				Link to OICR
				Gender	Youth	Capdev	Climate change	
669 – Contribution to the curricula of Bachelor's, postgraduate diploma and Master's degrees in Extension in Sustainable Agriculture, University of the Free State, South Africa	Curriculum	Stage 1	<ul style="list-style-type: none"> Increased capacity of beneficiaries to adopt research outputs (<i>primary</i>) Enhanced institutional capacity of partner research organizations Enhanced individual capacity in partner research organizations through training and exchange 	1 - Significant	0 - Not targeted	2 - Principal	1 - Significant	OICR 3951
741 – Government of Malawi's approval of Bt cotton varieties for release to farmers	Legal instrument	Stage 2	<ul style="list-style-type: none"> Adoption of CGIAR materials with enhanced genetic gains (<i>primary</i>) Appropriate regulatory environment for food safety Increased capacity of partner organizations, as evidenced by rate of investments in agricultural research 	0 - Not targeted	0 - Not targeted	1 - Significant	0 - Not targeted	OICR 2684
Flagship 2 – Economywide Factors Affecting Agricultural Growth and Rural Transformation								
725 – Findings from the Rwanda Strategy Support Program contribute to the Government of Rwanda's Economic Recovery Plan for COVID-19	Policy or strategy	Stage 1	<ul style="list-style-type: none"> Conducive environment for managing shocks and vulnerability, as evidenced in rapid response mechanisms (<i>primary</i>) Conducive agricultural policy environment 	0 - Not targeted	0 - Not targeted	1 - Significant	0 - Not targeted	OICR 4082
720 – Findings from the Myanmar Agriculture Policy Support Activity inform the Government of Myanmar's response to the COVID-19 pandemic	Policy or strategy	Stage 1	<ul style="list-style-type: none"> Conducive environment for managing shocks and vulnerability, as evidenced in rapid response mechanisms (<i>primary</i>) Conducive agricultural policy environment 	0 - Not targeted	0 - Not targeted	1 - Significant	0 - Not targeted	OICR 4077

Title of policy, legal instrument, investment or curriculum	Policy type	Stage of maturity	Link to sub-IDOs	Cross-cutting marker scores				Link to OICR
				Gender	Youth	Capdev	Climate change	
721 – Findings from the Myanmar Agriculture Policy Support Activity contribute to decision on USD 430M loan program to farmers by Myanmar Agriculture Development Bank	Investment	Stage 1	<ul style="list-style-type: none"> • Conducive environment for managing shocks and vulnerability, as evidenced in rapid response mechanisms (<i>primary</i>) • Conducive agricultural policy environment 	0 - Not targeted	0 - Not targeted	1 - Significant	0 - Not targeted	OICR 4077
718 – Inclusion of the Kaleidoscope Model in the Master's degree in Agricultural and Applied Economics, University of Pretoria (South Africa)	Curriculum	Stage 1	<ul style="list-style-type: none"> • Enhanced individual capacity in partner research organizations through training and exchange (<i>primary</i>) • Conducive agricultural policy environment 	0 - Not targeted	0 - Not targeted	2 - Principal	0 - Not targeted	OICR 4067
742 – Recommendations of a PIM impact evaluation are used to improve the Baraza program, implemented by Uganda's Office of the Prime Minister to enhance access to and effectiveness of public services	Policy or strategy	Stage 1	<ul style="list-style-type: none"> • Improved access to financial and other services (<i>primary</i>) • Conducive agricultural policy environment • Improved capacity of women and young people to participate in decision-making 	1 - Significant	0 - Not targeted	1 - Significant	0 - Not targeted	OICR 4073
Flagship 3 – Inclusive and Efficient Value Chains								
197 – Scaling up of Direct Seed Marketing Program by Ethiopia's Agricultural Transformation Agency (<i>with Flagships 1 and 2</i>)	Policy or strategy	Stage 3	<ul style="list-style-type: none"> • Reduced market barriers (<i>primary</i>) • Increased livelihood opportunities 	0 - Not targeted	0 - Not targeted	0 - Not targeted	0 - Not targeted	OICR 2735

Title of policy, legal instrument, investment or curriculum	Policy type	Stage of maturity	Link to sub-IDOs	Cross-cutting marker scores				Link to OICR
				Gender	Youth	Capdev	Climate change	
Flagship 4 – Social Protection for Agriculture and Resilience								
736 – Additional financing of USD 500 million from the World Bank for Egypt's Takaful and Karama cash transfer program (2019) (with Flagship 2)	Budget or investment	Stage 2	<ul style="list-style-type: none"> Increased access to diverse nutrient-rich foods (<i>primary</i>) Optimized consumption of diverse nutrient-rich foods 	1 - Significant	0 - Not targeted	0 - Not targeted	0 - Not targeted	OICR 2171
737 – Increase of the Egyptian Government's budget for the Takaful and Karama national cash transfer program (with Flagship 2)	Budget or investment	Stage 2	<ul style="list-style-type: none"> Increased access to diverse nutrient-rich foods (<i>primary</i>) Optimized consumption of diverse nutrient-rich foods 	1 - Significant	0 - Not targeted	0 - Not targeted	0 - Not targeted	OICR 2171
26 – Changes to Egypt's Takaful and Karama Cash Transfer Program to increase its impacts on the poor (with Flagship 2)	Policy or strategy	Stage 2	<ul style="list-style-type: none"> Increased access to diverse nutrient-rich foods (<i>primary</i>) Optimized consumption of diverse nutrient-rich foods 	1 - Significant	0 - Not targeted	1 - Significant	0 - Not targeted	OICR 2171
726 – Contribution of PIM research to the improvement of the modalities of Egypt's "Tamween" food subsidy system (with Flagship 2)	Policy or strategy	Stage 2	<ul style="list-style-type: none"> Increased access to diverse nutrient-rich foods (<i>primary</i>) Optimized consumption of diverse nutrient-rich foods Conducive agricultural policy environment 	0 - Not targeted	0 - Not targeted	1 - Significant	0 - Not targeted	OICR 4086
706 – Contribution to COVID-19 Gender and Social Protection Guidance Note of the Australian Government	Policy or strategy	Stage 1	<ul style="list-style-type: none"> Improved capacity of women and young people to participate in decision-making (<i>primary</i>) Increased household capacity to cope with shocks Conducive environment for managing shocks and vulnerability, as evidenced in rapid response mechanisms 	2 - Principal	0 - Not targeted	0 - Not targeted	0 - Not targeted	N/A

Title of policy, legal instrument, investment or curriculum	Policy type	Stage of maturity	Link to sub-IDOs	Cross-cutting marker scores				Link to OICR
				Gender	Youth	Capdev	Climate change	
698 – Strategy document supported by UKAID and GIZ on gender and inclusion in social protection responses during COVID-19	Policy or strategy	Stage 1	<ul style="list-style-type: none"> Improved capacity of women and young people to participate in decision-making (<i>primary</i>) Increased household capacity to cope with shocks Conducive environment for managing shocks and vulnerability, as evidenced in rapid response mechanisms 	2 - Principal	0 - Not targeted	0 - Not targeted	0 - Not targeted	N/A
Flagship 5 – Governance of Natural Resources								
677 – Community Development Management Plan for Hanshak Nyongoro community conservancy, Kenya	Policy or strategy	Stage 2	<ul style="list-style-type: none"> Land, water and forest degradation (Including deforestation) minimized and reversed (<i>primary</i>) Increased livelihood opportunities Enrichment of plant and animal biodiversity for multiple goods and services 	0 - Not targeted	0 - Not targeted	1 - Significant	0 - Not targeted	OICR 3945

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 OICR	Stage of maturity	Status
Flagship 1 – Technological Innovation and Sustainable Intensification			
OICR 4068 – Evidence-based support for integration of Quality Declared Seeds (QDS) in Uganda's new seed policy, with 2,000 farmers already trained in the production of QDS	Link	Stage 2	New outcome/impact case
OICR 4071 – Registration of eleven local varieties of rice and beans distributed by more than 3,000 farmers in Nepal	Link	Stage 2	New outcome/impact case
OICR 3951 – Use of New Extensionist Kit and Global Good Practice Notes on extension in curricula of 63 agricultural universities in India and one South African university	Link	Stage 1	New outcome/impact case
OICR 2653 – Volunteer Farmer Trainer program reaching 352,000 dairy farmers in Uganda increases knowledge and productivity	Link	Stage 2	Updated outcome/impact case
OICR 4079 – Contribution to Malawi's National Agricultural Extension and Advisory Services Strategy, launched in 2020 to guide investments	Link	Stage 2	New outcome/impact case
OICR 2684 – Insect-resistant cotton approved for release to farmers in Malawi and planted by 20,000 farmers during the first growing season	Link	Stage 2	Updated outcome/impact case
Flagship 2 – Economywide Factors Affecting Agricultural Growth and Rural Transformation			
OICR 4067 – Integration of the Kaleidoscope Model of Policy Change in the Master's degree program in Agricultural and Applied Economics at the University of Pretoria, South Africa	Link	Stage 1	New outcome/impact case
OICR 4070 – Informing the Government of South Africa's projections on the economic effects of the COVID-19 pandemic	Link	Stage 1	New outcome/impact case
OICR 4087 – Projections of the impacts of COVID-19 on the Egyptian economy based on PIM modeling tools informed the Government of Egypt's responses to the pandemic	Link	Stage 1	New outcome/impact case
OICR 4038 – Building on PIM COVID-19 research, PIM modeling tools are used to inform ranking of policy investments and identification of priority value chains in Nigeria	Link	Stage 1	New outcome/impact case
OICR 4077 – Findings from the Myanmar Agriculture Policy Support Activity inform the Government of Myanmar's response to the COVID-19 pandemic	Link	Stage 1	New outcome/impact case
OICR 4082 – Assessing the impact of the COVID-19 pandemic and formulating policy responses to protect vulnerable sectors and populations in Rwanda	Link	Stage 1	New outcome/impact case

Title of outcome/Impact case report (OICR)	Link to OICR	Stage of maturity	Status
OICR 4029 – Contributions to national-level policy discourse on response to economic impacts of COVID-19 in Ghana, Malawi, Tunisia and Indonesia	Link	Stage 1	New outcome/impact case
OICR 4073 – The Government of Uganda adopts PIM recommendations to improve a nationwide program aimed at involving citizens towards effective public service delivery	Link	Stage 1	New outcome/impact case
OICR 4069 – PIM research used to develop school gardens in 29 schools for better nutrition of 28,000 students in Papua New Guinea	Link	Stage 1	New outcome/impact case
Flagship 3 – Inclusive and Efficient Value Chains			
OICR 2735 – Direct Seed Marketing boosts seed availability and improves crop yields and commercialization in Ethiopia (26% increase in maize yield) <i>(with Flagships 1 and 2)</i>	Link	Stage 3	Updated outcome/impact case
OICR 3905 – Picture-based crop monitoring adopted by six institutions (private-sector insurance companies and associated partners) to improve agricultural insurance and financing services in India, Kenya and Ethiopia	Link	Stage 2	New outcome/impact case
Flagship 4 – Social Protection for Agriculture and Resilience			
OICR 2171 – Uptake of research-based recommendations to increase the impacts of Egypt's national cash transfer program on the very poor <i>(with Flagship 2)</i>	Link	Stage 2	Updated outcome/impact case
OICR 4086 – Evidence-based support to change the modalities of Egypt's food subsidy system for better effectiveness and improved nutrition and food security impacts <i>(with Flagship 2)</i>	Link	Stage 2	New outcome/impact case
Flagship 5 – Governance of Natural Resources			
OICR 3945 – Use of the Multistakeholder Dialogue Platform approach for effective participation of local communities in interventions for biodiversity conservation and enhanced livelihoods across the Kenya-Somalia border	Link	Stage 2	New outcome/impact case
OICR 3965 – Adoption of the "How are we doing?" tool by the Peruvian Service for Natural Protected Areas to enable more equitable co-management of 76 protected areas	Link	Stage 1	New outcome/impact case
OICR 4078 – Deployment of PIM guidance on development of multi-actor platforms for landscape governance and restoration across six states in India	Link	Stage 1	New outcome/impact case

Table 4: List of innovations

Title of innovation, with link	Innovation type	Innovation stage	Geographic scope
Flagship 1 – Technological Innovation and Sustainable Intensification			
2018 – PIM models show that donors must double aid to end hunger (with Flagship 3)	Social science	Stage 1: discovery/proof of concept (PC - end of research phase)	Global
2040 – A product quality assurance mechanism for agricultural inputs in Uganda	Production systems and management practices	Stage 1: discovery/proof of concept (PC - end of research phase)	National: Uganda
2152 – Seed quality assurance options for roots, tubers and bananas, including conclusions and recommendations from several cases studies	Production systems and management practices	Stage 2: successful piloting (PIL - end of piloting phase)	Multi-national: Kenya, Nigeria, Vietnam
2041 – Volunteer farmer trainer approach in Eastern Africa	Social science	Stage 4: uptake by next user (USE)	Regional: Eastern Africa
2043 – Mechanisms to improve coordination in extension services delivery in Kenya	Production systems and management practices	Stage 1: discovery/proof of concept (PC - end of research phase)	National: Kenya
2063 – "Cellphilms" and "Photovoice" tools to strengthen women's agency in climate-resilient strategies in Uganda	Research and communication methodologies and tools	Stage 2: successful piloting (PIL - end of piloting phase)	Sub-national: Uganda
2124 – Radio programming enhances agricultural technology awareness and dietary diversity and promotes women's empowerment in Malawi	Research and communication methodologies and tools	Stage 1: discovery/proof of concept (PC - end of research phase)	National: Malawi
2044 – Dynamic Agricultural Household Bio-economic Simulator	Research and communication methodologies and tools	Stage 1: discovery/proof of concept (PC - end of research phase)	Global
2045 – Capacity Development for Agriculture Innovation: A Practitioners' Guidebook to a Systems Approach	Research and communication methodologies and tools	Stage 3: available/ ready for uptake (AV)	Global

Title of innovation, with link	Innovation type	Innovation stage	Geographic scope
344 – "Agroclimatic similarity" variable developed to improve the measurement of the spatial spillover potential of agricultural R&D investments (with Flagship 2)	Biophysical research	Stage 2: successful piloting (PIL - end of piloting phase)	Multi-national: Ghana, Nepal, Nigeria
Flagship 2 – Economywide Factors Affecting Agricultural Growth and Rural Transformation			
1981 – New evidence on the aging trend in African farming and the need for an effective strategy to make it more profitable	Social science	Stage 1: discovery/proof of concept (PC - end of research phase)	Regional: Sub-Saharan Africa
2093 – Use of near-real-time global evidence from Google search data to estimate the immediate impacts of COVID-19 on demand for selected services	Research and communication methodologies and tools	Stage 1: discovery/proof of concept (PC - end of research phase)	Global
431 – Agricultural Investment for Development Analyzer tool designed to help governments and analysts in Northern Africa draw agricultural investment plans	Research and communication methodologies and tools	Stage 3: available/ ready for uptake (AV)	Regional: MENA
1882 – A method to measure household livelihood flexibility and assess its explanatory factors using longitudinal data	Research and communication methodologies and tools	Stage 1: discovery/proof of concept (PC - end of research phase)	National: Nigeria
1983 – COVID-19 Policy Response Portal	Social science	Stage 3: available/ ready for uptake (AV)	Global
2002 – MAP Egypt: An online database for improving food and nutrition security in Egypt	Research and communication methodologies and tools	Stage 3: available/ ready for uptake (AV)	National: Egypt
2091 – Methods to assess the implications of trade policies and government subsidies on food systems and nutritional outcomes in the Middle East and North Africa	Research and communication methodologies and tools	Stage 1: discovery/proof of concept (PC - end of research phase)	Regional: MENA
Flagship 3 – Inclusive and Efficient Value Chains			
2019 – COVID-19 Food Trade Policy Tracker	Research and communication methodologies and tools	Stage 1: discovery/proof of concept (PC - end of research phase)	Global
2020 – Methodology for measuring postharvest quantity and quality losses	Production systems and management practices	Stage 3: available/ ready for uptake (AV)	Global

Title of innovation, with link	Innovation type	Innovation stage	Geographic scope
2094 – Fish seed business models for socially inclusive tilapia value chains in Ghana	Production systems and management practices	Stage 1: discovery/proof of concept (PC - end of research phase)	National: Ghana
114 – Novel insurance-linked credit product that covers loan repayment during drought for Kenyan smallholder farmers	Social science	Stage 3: available/ ready for uptake (AV)	National: Kenya
2143 – Flexible agricultural index insurance products catering to heterogeneity in farmers' risk exposure improve farmers' welfare compared to traditional insurance schemes	Social science	Stage 1: discovery/proof of concept (PC - end of research phase)	National: Uruguay
335 – Picture-based insurance: delivering affordable crop insurance using farmers' smartphone pictures to assess crop damage	Research and communication methodologies and tools	Stage 4: uptake by next user (USE)	Multi-national: Ethiopia, India, Kenya
2158 - Digital repeat photography to operationalize fail-safe contract design in index insurance in Ethiopia	Research and communication methodologies and tools	Stage 2: successful piloting (PIL - end of piloting phase)	Sub-national: Ethiopia
Flagship 4 – Social Protection for Agriculture and Resilience			
1978 – Cash transfers increasing trust and enhancing informal support networks between households	Social science	Stage 1: discovery/proof of concept (PC - end of research phase)	National: Tanzania
1949 – Measuring women's decision making: Indicator choice and survey design experiments from cash and food transfer evaluations in Ecuador, Uganda and Yemen (with Flagship 6)	Social science	Stage 1: discovery/proof of concept (PC - end of research phase)	Multi-national: Ecuador, Uganda, Yemen
Flagship 5 – Governance of Natural Resources			
19 – Monitoring and Evaluation of Land in Africa framework	Social science	Stage 1: discovery/proof of concept (PC - end of research phase)	Multi-national: Madagascar, Malawi, Tanzania
2062 – Participatory Prospective Analysis to understand the implications of tenure reform scenarios for the forestry sector and communities in forested landscapes	Social science	Stage 3: available/ ready for uptake (AV)	Multinational: Colombia, Indonesia, Kenya, Nepal, Peru, Uganda

Title of innovation, with link	Innovation type	Innovation stage	Geographic scope
2125 – Operational framework to identify intervention points for supporting a tenure- and governance-enabling environment for community forest enterprises in Nepal	Social science	Stage 2: successful piloting (PIL - end of piloting phase)	Sub-national: Nepal
321 – Multistakeholder dialogue tool for cross-border integrated landscape management in Kenya and Somalia	Research and communication methodologies and tools	Stage 4: uptake by next user (USE)	Multi-national: Kenya, Somalia
1455 – Multi-actor platform design guide for improved natural resource governance at landscape level	Social science	Stage 3: available/ ready for uptake (AV)	Multi-national: Cambodia, India, Uganda, Zambia
1988 – "How are we doing?", a tool for participatory monitoring and adaptive learning in multi-stakeholder fora	Social science	Stage 4: uptake by next user (USE)	National: Peru
2055 – "¿Como vamos?", a tool to support indigenous women's participation in the governance of their territories in the Peruvian Andes and Amazon	Social science	Stage 3: available/ ready for uptake (AV)	National: Peru
2056 – Tool for enhancing social inclusion through local dialogues on natural resource management	Social science	Stage 3: available/ ready for uptake (AV)	Global
2123 – Application of the Bayesian Belief Network methodology for analyzing institutional performance and rangeland governance in Tunisia	Social science	Stage 2: successful piloting (PIL - end of piloting phase)	National: Tunisia
Flagship 6 – Cross-cutting Gender Research and Coordination			
1962 – Unite for a Better Life, a gender-transformative educational intervention targeting prevention of intimate partner violence and HIV risk behaviors in Ethiopia	Social science	Stage 3: available/ ready for uptake (AV)	National: Ethiopia
381 – Project-level Women's Empowerment in Agriculture Index for Market Inclusion (with Flagship 3)	Social science	Stage 2: successful piloting (PIL - end of piloting phase)	Multi-national: Bangladesh, Benin, Honduras, Malawi, the Philippines
1768 – Experimental methods for measuring individual decision-making power within households in Ghana and Uganda	Social science	Stage 2: successful piloting (PIL - end of piloting phase)	Multi-national: Ghana, Uganda

Title of innovation, with link	Innovation type	Innovation stage	Geographic scope
1748 – A method to predict women's empowerment using call detail records in Uganda	Research and communication methodologies and tools	Stage 2: successful piloting (PIL - end of piloting phase)	National: Uganda
1750 – Agricultural information videos to increase women's empowerment in agriculture in Uganda	Research and communication methodologies and tools	Stage 3: available/ ready for uptake (AV)	National: Uganda
1803 – Guidance note for gender-inclusive agro-advisories in Vietnam (with Flagship 1)	Research and communication methodologies and tools	Stage 2: successful piloting (PIL - end of piloting phase)	National: Vietnam
Cross-cutting			
2024 – Methods to reduce fatigue-induced quality reduction in household surveys tested in Ghana	Social science	Stage 1: discovery/proof of concept (PC - end of research phase)	National: Ghana

Table 5: Summary of status of planned outcomes and milestones

FP	2022 outcome	Sub-IDs	Progress against 2022 outcome in 2020	2020 milestone	Status of 2020 milestone	Justification for status of 2020 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"> • {primary} CC Improved forecasting of impacts of climate change and targeted technology development • CC Enhanced individual capacity in partner research organizations through training and exchange 	The impacts of climate change in LAC were assessed with the Inter-American Development Bank and CCAFS, informing recommendations for adaptation. LAC was also the focus of a World Bank report which used PIM modeling results to identify 20 actions to achieve desired agriculture and food system outcomes. Estimates of the costs of adaptation options in the agricultural sector at regional and global scales were updated, informing decision making of the Bill & Melinda Gates Foundation as part of the Global Commission on Adaptation.	Foresight models and results are used by 4 research organizations, government agencies or global development organizations as inputs to their priority-setting	Complete	<p>Contribution of foresight modeling to decision making for climate-smart investment planning of the World Bank and national stakeholders in Burkina Faso, Ghana, Ivory Coast and Mali.</p> <p>Contribution to the World Bank's strategy to unlock transformation and innovation in agrifood systems in LAC.</p> <p>Contribution to the Inter-American Development Bank's decision-making processes through providing estimates of the potential impact of climate change on agricultural productivity and trade of key crops in LAC.</p> <p>Estimation of the costs of key agricultural investment options to support climate change adaptation at regional and global scales informed decision making of the Bill & Melinda Gates Foundation as part of the Global Commission on Adaptation.</p> <p>Contribution to CGIAR Initiative on Crops to End Hunger (USAID and other donors).</p>	<p>World Bank: https://www.worldbank.org/en/topic/agriculture/publication/climate-smart-agriculture-investment-plans-bringing-climate-smart-agriculture-to-life; http://documents1.worldbank.org/curated/en/942381591906970569/pdf/Future-Foodscapes-Reimagining-Agriculture-in-Latin-America-and-the-Caribbean.pdf</p> <p>IADB: https://blogs.iadb.org/sostenibilidad/en/five-adaptation-measures-to-reduce-the-vulnerability-of-latin-america-and-the-caribbeans-agriculture-sector-to-climate-change/; https://publications.iadb.org/publications/english/document/Vulnerability-to-Climate-Change-and-Economic-Impacts-in-the-Agriculture-Sector-in-Latin-America-and-the-Caribbean.pdf; https://cgspace.cgiar.org/bitstream/handle/10568/108150/IDB%20Methodology%20Brief%202020.pdf?sequence=1&isAllowed=y https://www.dropbox.com/s/cewldsjq072lip4/INV-008565_BMGF-GCA_Costing_Report.v12.docx?dl=0</p> <p>Crops to End Hunger: https://osf.io/preprints/socarxiv/h2q6r/</p>

FP	2022 outcome	Sub-IDOs	Progress against 2022 outcome in 2020	2020 milestone	Status of 2020 milestone	Justification for status of 2020 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"> • {primary} CC Conducive agricultural policy environment • CC Enhanced institutional capacity of partner research organizations 	<p>Research on efficient seed systems in Uganda, with application of information and communication technologies and intensive training program for farmers on uptake of improved maize seeds.</p> <p>Ex ante economic assessment of TELA, a drought tolerant and insect resistant maize in Ethiopia.</p> <p>Expansion of Direct Seed Marketing in Ethiopia in collaboration with Ethiopia's Agricultural Transformation Agency and the Integrated Seed Sector Development Programme.</p> <p>Registration of farmers seed varieties in Nepal.</p>	Genetic resource, biosafety, biotechnology or seed system policies, regulations, guidelines, standards, or procedures are improved in 3 countries	Complete	<p>Adoption of Direct Seed Marketing in Ethiopia.</p> <p>Registration of farmers seed varieties in Nepal.</p> <p>Seed regulations and certification system strengthened in Afghanistan. Improved seed systems policy in Uganda.</p>	<p>Direct Seed Marketing in Ethiopia: OICR 2735 in 2020 AR</p> <p>Farmers' seed registration in Nepal: OICR 4071 in 2020 AR</p> <p>Seed regulations in Afghanistan: OICR 3311 in 2019 AR</p> <p>Improved seed policy in Uganda: OICR 4068 in 2020 AR</p>
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"> • {primary} CC Increased capacity of partner organizations, as evidenced by rate of investments in agricultural research • CC Conducive agricultural policy environment 	Lao PDR, Myanmar, Papua New Guinea, The Philippines and Vietnam (among other countries) have used evidence from the Agricultural Science and Technology Indicators Initiative (ASTI) to support budgetary discussions.	Studies on impacts from increased investment and capacity in national agricultural research are used in strategy and programming decisions by governments in 5 countries (cumulative total)	Complete	As described in a 2018 independent evaluation of the outcomes of the Agricultural Science and Technology Indicators (ASTI) initiative, ASTI outputs were used in various strategic decisions of governments in Algeria, Ethiopia, Kenya, Lesotho, Mauritania, Nepal, Nigeria and Pakistan. In Myanmar, ASTI information is being used as input into the 5-year Research Master Plan Road Map of the Ministry of Agriculture and Livestock to advocate for higher investment in R&D, increased focus on postgraduate training for scientists and increased scientist salaries.	<p>Myanmar: https://www.dropbox.com/s/w34gsp8ca8altom/TOR%207%20Research%20Capacity%20Projectio n%20WGs%20Oct%2018.docx?dl=0</p> <p>Other countries: Independent evaluation of ASTI - http://ebrary.ifpri.org/cdm/ref/collection/p15738coll2/id/133207</p>

FP	2022 outcome	Sub-IDs	Progress against 2022 outcome in 2020	2020 milestone	Status of 2020 milestone	Justification for status of 2020 milestone	Links to evidence of milestone completion; explanation for extended milestones
1	In 3 CGIAR countries of collaboration, adoption of selected promising technologies and management practices is 20% above counterfactual without supportive technology dissemination innovations and policies	<ul style="list-style-type: none"> • {primary} Closed yield gaps through improved agronomic and animal husbandry practices Increased conservation and use of genetic resources • CC Technologies that reduce women`s labor and energy expenditure adopted 	PIM research provided insights into systems to facilitate adoption of hybrid rice in India and stress-tolerant maize in Kenya, production and supply of cassava planting materials in Nigeria, regulatory frameworks to advance access to vegetatively propagated crops in Vietnam, and extension innovations to spur adoption in India, Kenya, Malawi, Peru, Tanzania and Uganda. The CGIAR Community of Excellence on Seed Systems Development was launched in 2020.	In 3 countries, innovations to increase adoption are used by government, development, or private sector organizations	Complete	<p>The collaboration between IFPRI and Digital Green on a video-mediated approach to extension strongly influenced the Government of Ethiopia's investment to create a digital platform for agricultural advisory services.</p> <p>Research from a PIM team working as part of the Cereal Systems Initiative for South Asia informed the modification and improvement of India's Soil Card Scheme.</p> <p>PIM research informed Malawi's National Agricultural Extension and Advisory Services Strategy and more specifically contributed to the emphasis on M&E of extension services - including indicators on technology adoption - in this document.</p>	<p>Ethiopia: OICR 3261 in 2019 AR</p> <p>India: OICR 2644 in 2018 AR</p> <p>Malawi: OICR 4079 in 2020 AR</p>

FP	2022 outcome	Sub-IDOs	Progress against 2022 outcome in 2020	2020 milestone	Status of 2020 milestone	Justification for status of 2020 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"> • {primary} CC Conducive agricultural policy environment • CC Gender-equitable control of productive assets and resources • CC Enhanced institutional capacity of partner research organizations 	<p>Lessons from the impact evaluation of Egypt's cash transfer "Takaful and Karama" program conducted by PIM contributed to the decision of the Government of Egypt to adopt several of the evaluation's recommendations.</p> <p>Other policy changes informed by PIM research include a reform of Tanzania's policies on the sunflower value chain and scaling up of the School Gardens project by the Government of Papua New Guinea.</p> <p>Assessments of the short- and medium-term economic effects of COVID-19 were disseminated in over twenty countries, helping to inform policy and investment decisions in many of them.</p>	Stakeholders and researchers in 3 countries use political economy tools and analysis on policy processes in order to influence government receptivity to evidence-based policy recommendations related to agricultural growth	Complete	<p>Research supporting Nepal's federal transition was carried out upon request from Nepal's Ministry of Agricultural Development and highlighted successful cases of institutional reforms in other devolved countries and the political economy factors that facilitated those reforms.</p> <p>In Uganda, as part of a large public policy program implemented by the Office of the Prime Minister to improve the delivery of public services, PIM supported an evaluation of the impact of alternative ways to involve local communities in government decisions on public services. The recommendations of the study are used to increase the program's cost-effectiveness and inclusivity.</p> <p>Research on the challenges faced by informal food traders in Ghana, Nigeria, Senegal and Zambia was summarized in a brief, highlighting that a better understanding of how food systems intersect with cities' institutional structures and political dynamics is needed for cities to effectively play their role in bolstering food security. The work on Zambia, which emphasized the need for a more accountable approach to taxing informal traders, was presented to the Zambian Revenue Agency and the Ministry of Finance. Findings are also being integrated into projects on African urbanization and food systems led by AGRA and Global Alliance to Improve Nutrition (GAIN).</p>	<p>Nepal chapter of IFPRI 2019 book: https://doi.org/10.1007/978-981-32-9648-0_19</p> <p>Impact evaluation of Uganda program on public service delivery: OICR 4073 in 2020 AR</p> <p>Informal food trade in Ghana, Nigeria, Senegal and Zambia: https://ebrary.ifpri.org/digital/collection/p15738coll5/id/7487; https://pim.cgiar.org/2020/10/31/informal-food-retail-in-african-cities-governance-politics-policy-issues/</p>

FP	2022 outcome	Sub-IDs	Progress against 2022 outcome in 2020	2020 milestone	Status of 2020 milestone	Justification for status of 2020 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"> • {primary} CC Conducive agricultural policy environment • CC Increased capacity of partner organizations, as evidenced by rate of investments in agricultural research 	<p>In Egypt, PIM research played a role in the improvement of the targeting of the food subsidy system.</p> <p>In Nigeria, studies on public expenditures and investments in agriculture (including on R&D and irrigation dams) completed in 2017-19 were presented to stakeholders in 7 states and to high-level officials of the Federal Ministry of Agriculture and Rural Development and are being used to inform the reform of the seed sector and other policies.</p>	Public sector agencies in 1 country adapt their institutional and organizational mechanisms to improve public resource allocation for service delivery	Complete	<p>Ghana: The 2018 study on the Agricultural Mechanization Service Enterprise Center program (AMSEC) and the PIM book on mechanization informed program design and led to the adoption of more inclusive eligibility criteria for machinery and applicants, greater support for multifunctional use of machines, and skill enhancement for repair and maintenance; this is likely to make the program more inclusive, efficient, demand-driven and complementary to the private sector. New agricultural mechanization training centers were established in a few Farm Institutes and Colleges since the start of AMSEC Phase 2.</p> <p>Nepal: PIM research informed the restructuring of the Ministry of Agricultural Development in a context of public sector reform. PIM research examined the impacts of the reform on staffing and incentives for agricultural research and extension agencies. Ministry staff acknowledged PIM's input into the Ministry's proposal for a 3-tiered structure and followed PIM's advice to organize a study tour in Kenya to understand the reform process there.</p>	<p>Ghana: OICR 2189 in 2019 AR; book on agricultural mechanization: https://www.ifpri.org/blog/ifpri-book-what-africa-can-learn-asia-about-agricultural-mechanization</p> <p>Nepal: https://www.dropbox.com/s/wbzocku2viyoj09/FP2_Table%205_Nepal.docx?dl=0</p>

FP	2022 outcome	Sub-IDOs	Progress against 2022 outcome in 2020	2020 milestone	Status of 2020 milestone	Justification for status of 2020 milestone	Links to evidence of milestone completion; explanation for extended milestones
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"> • {primary} Increased livelihood opportunities • Improved capacity of women and young people to participate in decision making 	<p>The COVID-19 Policy Response Portal was set up to analyze the impacts of governments' responses to COVID-19.</p> <p>The Rural Investment and Policy Analysis model (RIAPA) has been used to evaluate large-scale national programs (expansion of Bangladesh's national food grain storage capacity; Egypt's cash transfer program; Ghana's Planting for Food and Jobs program).</p>	Tools and evidence on the economywide factors affecting rural transformation are used by 3 countries to modify policies or expenditures that are better targeted towards raising agricultural growth and rural incomes	Complete	<p>Training on SAMs and CGE modeling has been provided to governments, universities and research institutes, e.g. in Bangladesh, Egypt, Ethiopia, Ghana, Kenya, Jordan, Rwanda, Uganda.</p> <p>PIM has supported the design of national development strategies and investment plans in multiple countries, e.g. Kenya (Agricultural Sector Transformation and Growth Strategy 2019-2029 and National Agricultural Investment Plan 2019-2024), Ethiopia (Growth and Transformation Plan III), Malawi (National Agricultural Investment Plan), Myanmar (Agricultural Research Master Plan), Rwanda (Fourth National Plan for Agricultural Transformation, Vision 2050, National Economic Recovery Plan), Nigeria (Medium-Term National Development Plan).</p> <p>Building on PIM's CGE modeling tools and SAMs, the PIM teams assessed the impacts of COVID-19 for over 20 countries and worked with governments in Egypt, Myanmar, Nigeria, Rwanda and South Africa to identify responses.</p> <p>The AIDA tool, designed to help governments and analysts draw agricultural investment plans, was launched in Egypt and Tunisia.</p> <p>MAP Egypt provides an overview of the state of food and nutrition security in Egypt in order to effectively allocate funds.</p>	<p>Agricultural investment strategies in Malawi and Rwanda: OICR 2676 in 2018 AR</p> <p>Kenya's Agricultural Sector Transformation and Growth Strategy and National Agricultural Investment Plan: OICR 3212 in 2019 AR</p> <p>Rwanda's National Strategy for Transformation and Vision 2050: OICR 3260 in 2019 AR</p> <p>OICRs 4087, 4077, 4038, 4082 and 4070 in 2020 AR on COVID-19 in Egypt, Myanmar, Nigeria, Rwanda and South Africa</p> <p>SAM and CGE model trainings: https://www.facebook.com/events/gulsan-2-hotel-amar/introduction-to-economywide-analysis-using-sams-and-cge-models/327360041521997/; https://essp.ifpri.info/2020/05/15/covid-19-and-its-impact-on-ethiopias-agri-food-system-food-security-and-nutrition/; 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/</p> <p>AIDA: Innovation 431 in 2020 AR</p> <p>Map Egypt: Innovation 2002 in 2020 AR</p>

FP	2022 outcome	Sub-IDOs	Progress against 2022 outcome in 2020	2020 milestone	Status of 2020 milestone	Justification for status of 2020 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	• {primary} CC Conducive agricultural policy environment	The work on trade negotiations pivoted to address COVID-19. A food export restrictions tracker was developed and the regional policy dialogue series “Food and Agricultural Trade in the New Policy Environment: How Can WTO Members Support Economic Recovery and Resilience?” was organized. Work to support changes in trade policy for Africa continued through several channels around the African Continental Free Trade Agreement (AfCFTA) while considering the impact of the pandemic on the region’s formal and informal trade. These efforts included working with the Moroccan government, improving regional agricultural trade data and training negotiators.	Evidence is used to support changes in trade policy and/or regulations with global and regional implications in three instances (cumulative total)	Complete	<p>PIM research has directly contributed to the trade talks and current outcomes of the ECOWAS-Morocco agreement.</p> <p>PIM developed an online course on economic modeling for researchers and government/NGO staff from 10 African countries, funded by PIM, UNECA and the African Trade Policy Centre and hosted by the African Institute for Economic Development and Planning, at the end of which each trainee completed a paper on the economic and trade consequences of the AfCFTA for African countries using a single-country CGE model.</p> <p>Improvement of agricultural trade statistics in Africa.</p>	<p>ECOWAS: http://trade.ec.europa.eu/doclib/docs/2016/april/tradoc_154422.pdf; http://www.ifpri.org/publication/european-unionwest-africa-economic-partnership-agreement</p> <p>AfCFTA training: https://www.youtube.com/channel/UCJQ2Hn2EHhjvzZA1gdq3W0A/videos; https://www.dropbox.com/sh/4suegz80pomrigz/AADs-gtcyCXI6txEr6o78oxa?dl=0; https://www.uneca.org/idep/ [Training->Elearning Portal->AfCFTA (requires log in)]</p> <p>Improvement of agricultural trade statistics in Africa: https://www.ifpri.org/event/virtual-event-informal-african-trade-hidden-world-food-flows; http://www.eco-icbt.org/</p>
3	Research and development organizations use PIM tools to address postharvest losses in 10 countries	• {primary} Reduce pre- and post-harvest losses, including those caused by climate change	<p>Collaboration with FAO as the custodian of SDG 12.3 on food losses continued. The PIM methodology on measurement of food losses was implemented with FAO in Tanzania and Mozambique.</p> <p>Research on innovations to reduce postharvest losses is ongoing in Ethiopia, Guatemala, Honduras, Nigeria, Tanzania and Uganda, with delays in Guatemala, Honduras and Uganda due to COVID-19.</p>	Tested innovations to reduce postharvest losses are used by development organizations in 2 countries	Complete	<p>Test of an intervention used by an NGO to reduce postharvest losses in maize in Tanzania (improved storage facility + training on best practices in postharvest management)</p> <p>Test of the effects of reusable plastic containers used by traders on postharvest losses in tomato in Nigeria</p>	<p>Maize in Tanzania: https://ebrary.ifpri.org/digital/collection/p15738coll9/id/854/rec/1; https://ebrary.ifpri.org/digital/collection/p15738coll2/id/134355</p> <p>Tomato in Nigeria: https://cdm15738.contentdm.oclc.org/digital/collection/p15738coll2/id/134041</p>

FP	2022 outcome	Sub-IDOs	Progress against 2022 outcome in 2020	2020 milestone	Status of 2020 milestone	Justification for status of 2020 milestone	Links to evidence of milestone completion; explanation for extended milestones
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"> • {primary} Reduced market barriers • CC Gender-equitable control of productive assets and resources • CC Enhanced institutional capacity of partner research organizations 	Several studies launched in 2019 and 2020 to test value chain innovations were ongoing in 2020. In some cases work on these studies was delayed by COVID-19. The tested innovations include contracts, certification, business models and storage technologies, with the aim of improving food quality, efficiency and inclusion of smallholders.	Value chain innovations are tested in 8 countries	Complete	<p>Tests of value chain innovations in 2020 include:</p> <ol style="list-style-type: none"> 1) Quality incentives in the Indonesian dairy value chain 2) Innovative contract farming scheme and introduction of Aflasafe in Senegal 3) Improved storage of cooking bananas in small retail shops in Uganda 4) Fish certification in Nigeria 5) Improving market participation in the chickpea value chain in Ethiopia and Eritrea 6) Inclusive business models for access to quality fish seed in Ghana 7) Wheat certification kiosks in Ethiopia 8) Contracts in women's name for sugar in Uganda (completed in 2019) 9) Use of the WEAI and LINK methodology in Honduras 	<ol style="list-style-type: none"> 1. https://onlinelibrary.wiley.com/doi/10.1111/ajae.12176 2. http://tools4valuechains.org/node/577; https://pim.cgiar.org/2020/10/15/strengthening-food-value-chains/ 3. https://www.dropbox.com/sh/sh49t3o36c9n9j/AACBC2oJ-K_acq8x5dai7_rYa?dl=0&preview=READ+ME.docx 4. https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/SXQKZ0; https://www.sciencedirect.com/science/article/pii/S2352340920304340?via%3Dihub 5. https://data.mel.cgiar.org/dataset.xhtml?persistentId=hdl:20.500.11766.1/FK2/BQEHQL 6. https://cdm15738.contentdm.oclc.org/digital/collection/p15738coll2/id/133804 7. https://www.atai-research.org/atai-announces-funding-to-four-randomized-evaluations-and-four-pilots/; https://academic.oup.com/erae/advance-article/doi/10.1093/erae/jbab018/6217339?guestAccessKey=d0e72879-b79e-4c8e-9eea-8820ed81f479 8. https://www.ifpri.org/publication/quality-sugarcane-registered-women-evidence-intervention-uganda 9. https://www.dropbox.com/s/evjv622ra9gcfns/bolet%C3%ADn%20informativo%20no.%2020.pdf?dl=0

FP	2022 outcome	Sub-IDs	Progress against 2022 outcome in 2020	2020 milestone	Status of 2020 milestone	Justification for status of 2020 milestone	Links to evidence of milestone completion; explanation for extended milestones
3	Earnings of smallholder male and female farmers from specific value chains increase by 20% as a result of interventions in these value chains in 3 countries	<ul style="list-style-type: none"> • {primary} Increased value capture by producers • Increased livelihood opportunities 	PIM's research on value chain innovations is carried out in collaboration with partners who are in a position to use these innovations at a broader scale. Evidence of this is being compiled and will be available in 2021.	Value chain innovations are used by public and private sector agents in 2 countries	Extended	Several value chain innovations are being piloted; evidence is being collected in 2021 to document their use by partners (this activity was delayed because of COVID-19). Examples: Introduction of Aflasafe through contractual mechanisms in Senegal (piloted through private sector partnerships) and use of livestock sheds in Ethiopia (through the public sector).	<p>Aflasafe in Senegal: http://tools4valuechains.org/nod/e/577</p> <p>Livestock market sheds in Ethiopia: https://www.icarda.org/media/bl/og/market-sheds-ethiopian-livestock-markets-boost-farmers-participation-and-income; https://www.icarda.org/media/bl/og/market-services-ethiopian-livestock-farmers-are-willing-pay</p>
3	New insurance products are being used by smallholder farmers in 3 countries	<ul style="list-style-type: none"> • {primary} Improved access to financial and other services 	<p>In Ethiopia, 2020 was the first year that smartphone images were used by the R4 Rural Resilience Initiative in participatory index insurance design, resulting in improved insurance products to be offered in 2021.</p> <p>In India, the insurance work in the state of Haryana continued. HDFC ERGO General Insurance expanded coverage of picture-based insurance beyond Haryana to include farmers in Tamil Nadu state and is preparing to enroll farmers in Odisha state.</p> <p>In Kenya, ACRE Africa worked with local insurance companies to underwrite new insurance policies for about 2,000 farmers, and the Satisfy project kept providing risk-contingent credit.</p>	New insurance products are developed for offer to farmers in 3 countries	Complete	PIM research has led to large-scale testing and adoption of picture-based crop monitoring by HDFC ERGO General Insurance (India), Dvara E-Registry (India), the Government of India, ACRE Africa (Kenya), the R4 Rural Resilience Initiative (Ethiopia) and the Centre for Agriculture and Bioscience International (CABI) (India, Kenya), creating opportunities to strengthen crop insurance, financing and agro-advisories for millions of farmers.	OICR 3905 in 2020 AR

FP	2022 outcome	Sub-IDOs	Progress against 2022 outcome in 2020	2020 milestone	Status of 2020 milestone	Justification for status of 2020 milestone	Links to evidence of milestone completion; explanation for extended milestones
4	National social protection programs and policies are modified based on evidence in 3 countries	<ul style="list-style-type: none"> • {primary} Conducive environment for managing shocks and vulnerability, as evidenced in rapid response mechanisms • CC Enhanced institutional capacity of partner research organizations • CC Enhanced individual capacity in partner research organizations through training and exchange 	<p>In Egypt, research on the Takaful and Karama national cash transfer program led to improved targeting of transfers and awareness raising for the program; the Ministry of Social Solidarity approached PIM researchers for another impact evaluation of the program as well as an evaluation of the new FORSA graduation program; finally, the country's food subsidies program was modified based on PIM research.</p> <p>In other countries where researchers have longstanding relationships with government and implementing agencies, many of the resources and efforts were diverted into COVID-19 responses.</p>	National social protection programs and policies are modified based on evidence in 3 countries	Complete	<p>In Egypt, research on the Takaful and Karama national cash transfer program led to improved targeting of transfers and awareness raising for the program; the Ministry of Social Solidarity approached PIM researchers for another impact evaluation of the program as well as an evaluation of the new FORSA graduation program; finally, the targeting of the country's food subsidies program was modified based on PIM research (the number of beneficiaries was reduced and the amount per beneficiary was increased).</p> <p>An impact assessment of the Vulnerable Group Development program in Bangladesh identified ways of making the program more effective; four of the five changes recommended were implemented.</p> <p>Preventive nutrition packets in randomly assigned villages were added to Mali's Jigisémèjiri national cash transfer program based on recommendations from PIM research.</p>	<p>Egypt: OICR 2171 and OICR 4086 in 2020 AR</p> <p>Bangladesh: OICR 2661 in 2018 AR</p> <p>Mali: OICR 2659 in 2018 AR</p>

FP	2022 outcome	Sub-IDOs	Progress against 2022 outcome in 2020	2020 milestone	Status of 2020 milestone	Justification for status of 2020 milestone	Links to evidence of milestone completion; explanation for extended milestones
4	Improved social protection innovations provide food security and nutrition benefits to poor households in 3 countries	<ul style="list-style-type: none"> • {primary} Increased access to diverse nutrient-rich foods • Increased household capacity to cope with shocks • CC Gender-equitable control of productive assets and resources 	<p>Egypt's food subsidies program was modified based on PIM research.</p> <p>In a collaborative effort with PIM and A4NH, the World Food Programme and the government of Sri Lanka improved their Food for Assets programming to be more nutrition-sensitive.</p> <p>In response to COVID-19, many governments and implementing agencies diverted resources to respond to the socio-economic shocks created by the lockdown and PIM research also pivoted to help inform these responses.</p>	Improved social protection innovations are adopted in 2 countries by at least 4 partner organizations in total	Complete	<p>In Bangladesh, World Vision International incorporated a nutrition behavior change communication component into the Nobo Jatra project based on a PIM evaluation of another project.</p> <p>Based on an ongoing evaluation of a Food for Assets program in Sri Lanka, jointly with the World Food Programme, nutrition-sensitive behavior change communication was integrated into the program.</p> <p>In Egypt, research on food subsidies played a role in the change of the organizational mechanism implemented by the government (from a ration card to a smart card system with access to a more diverse set of foods); this research was conducted in collaboration with the Central Agency of Public Mobilization and Statistics and the Ministry of Planning, Monitoring and Administrative Reform.</p> <p>In Mali, a national social protection program adopted cash transfers and nutrition behavior change communication as an integrated approach to reduce child stunting.</p>	<p>Bangladesh: OICR 2660 in 2018 AR</p> <p>Sri-Lanka: https://docs.wfp.org/api/documents/WFP-0000113814/download/ (page 12)</p> <p>Egypt: OICR 4086 in 2020 AR</p> <p>Mali: OICR 2659 in 2018 AR</p>

FP	2022 outcome	Sub-DOs	Progress against 2022 outcome in 2020	2020 milestone	Status of 2020 milestone	Justification for status of 2020 milestone	Links to evidence of milestone completion; explanation for extended milestones
4	Program innovations improve the well being of the poor in fragile and conflict affected settings in 2 countries	<ul style="list-style-type: none"> {primary} Reduced smallholders production risk	<p>The impact of social protection programming to improve agricultural and nutrition outcomes was assessed in Mali and Yemen.</p> <p>Research in Burkina Faso is carried out to understand the intensity of conflict and the potential for an integrated nutrition-agricultural intervention to enhance diets and resilience.</p> <p>A study to inform the transition from emergency to livelihood programs in Somalia started in 2020.</p>	Resilience or livelihood program innovations are tested through collaboration with government or other implementing organizations in 1 fragile or conflict affected country	Complete	IFPRI partnered with Yemen's Social Fund for Development to provide cash transfers and nutrition education to women in rural Yemen. When the civil war broke out, the Social Fund for Development managed to continue and even expand the program. Results from the evaluation of the program showed that cash transfers combined with nutrition education improved maternal and child dietary diversity, child weight-for-height and child height-for-age and that nutrition-sensitive programming was still successful in war-torn areas.	Yemen: https://www.ifpri.org/podcast/research-talks/episode-10-working-amid-war-assessing-cash-transfers-nutrition-yemen ; https://www.ifpri.org/publication/cash-nutrition-intervention-yemen-impact-evaluation-study

FP	2022 outcome	Sub-IDOs	Progress against 2022 outcome in 2020	2020 milestone	Status of 2020 milestone	Justification for status of 2020 milestone	Links to evidence of milestone completion; explanation for extended milestones
5	Evidence informs natural resource governance and tenure policy processes/ Implementation in 12 countries	<ul style="list-style-type: none"> • {primary} CC Conducive agricultural policy environment • CC Enhanced individual capacity in partner research organizations through training and exchange • CC Increased capacity for innovation in partner development organizations and in poor and vulnerable communities 	PIM research informed land-related (forest, rangelands...) policy reforms through work on multistakeholder platforms, land tenure policies, payments for ecosystem services, and inclusion of women, indigenous peoples and minorities in a dozen of countries in Africa, LAC and Asia.	Evidence on tenure security informs African land reform process through African Union Commission, national government, and International Land Coalition member organizations	Complete	PIM research is informing second-level land certification in Ethiopia, reform of forest tenure rights in Kenya, community participation in tenure security in Uganda, projects on gender and pastoralism in Eastern Africa. Collaborating for Resilience (CoRe) teamed up with International Land Coalition (ILC) to strengthen ILC's national engagement strategies Initiative and networks in 29 countries; through workshops and best practices series/guides, CoRe helped national facilitators convene multistakeholder platforms that can advocate effectively for land-related policy reforms. PIM research is informing rangeland policies in Tunisia, land tenure policies for food security in Lao PDR, gender and forest tenure reforms in Indonesia and community land formalization in Africa, LAC, and Asia.	<p>Land certification in Ethiopia: https://doi.org/10.2499/p15738coll2.134083</p> <p>Forest tenure rights in Kenya: https://www.cifor.org/knowledge/publication/7526/</p> <p>Tenure security in Uganda: https://www.cifor.org/knowledge/publication/7522/; https://www.cifor.org/library/7517/; https://www.cifor.org/library/7525/</p> <p>Gender and pastoralism in East Africa: https://hdl.handle.net/10568/108874</p> <p>ILC: https://www.landcoalition.org/en/resources/engaging-policy-makers-influence-policy-guidance-note/</p> <p>Rangeland policies in Tunisia: https://hdl.handle.net/10568/109158</p> <p>Land tenure policies in Lao PDR: https://doi.org/10.1016/j.landusepol.2019.104260</p> <p>Gender and forest tenure reforms in Indonesia: https://www.cifor.org/publications/pdf_files/WPapers/WP258Siscawati.pdf</p> <p>Community land formalization in 15 countries: https://doi.org/10.1016/j.landusepol.2020.104461</p>
				An M&E system to track progress towards tenure security policy reforms is operationalized in an additional 5 African countries	Extended	The Monitoring and Evaluation of Land in Africa (MELA) project planning workshop was held in October 2020 with the African Land Policy Centre and the Inter-Governmental Authority on Development (IGAD).	Delay in signature of contract of MELA project.

FP	2022 outcome	Sub-IDs	Progress against 2022 outcome in 2020	2020 milestone	Status of 2020 milestone	Justification for status of 2020 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"> • {primary} More productive and equitable management of natural resources • CC Gender-equitable control of productive assets and resources 	PIM continued to develop and disseminate methods and tools for collective action and governance solutions to better manage landscape resources and livelihoods (multistakeholder fora, experimental games, frameworks for collaborative planning and management of resources...).	6 landscape level governance institutions are operational in 3 countries	Complete	<p>Use of PIM tools to improve inclusiveness of multistakeholder fora by the Peruvian Service of Protected Areas (SERNANP) and the National Organization of Andean and Amazonian Indigenous Women (ONAMIAP) in Peru.</p> <p>Collective action games in India.</p> <p>Adaptive collaborative management in Nicaragua.</p> <p>Use of the Multistakeholder Dialogue Platforms toolkit in the Biodiversity Management Programme-Inter-Government Authority for Development of the Horn of Africa initiative.</p> <p>Renewal of community forest concessions in Guatemala.</p> <p>Land-use planning approaches in Ethiopia and Tanzania.</p>	<p>PIM tools in Peru: OICR 3965 in 2020 AR</p> <p>Experimental games in India: https://ebrary.ifpri.org/digital/collection/p15738coll2/id/134238; https://pim.cgiar.org/2019/11/14/experimental-games-help-communities-explore-solutions-for-better-water-management/</p> <p>Adaptive collaborative management in Nicaragua: https://doi.org/10.1505/146554820829403504</p> <p>Multistakeholder Dialogue Platforms toolkit in Kenya-Somalia: OICR 3945 in 2020 AR</p> <p>Community forest concessions in Guatemala: OICR 3302 in 2019 AR</p> <p>Woreda participatory land use planning in Ethiopia: OICR 3301 in 2019 AR</p> <p>Joint village land use planing for livestock keepers in Tanzania: OICR 2631 in 2019 AR</p>

FP	2022 outcome	Sub-IDOs	Progress against 2022 outcome in 2020	2020 milestone	Status of 2020 milestone	Justification for status of 2020 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"> • {primary} CC Enhanced individual capacity in partner research organizations through training and exchange • CC Improved capacity of women and young people to participate in decision-making • CC Enhanced institutional capacity of partner research organizations 	<p>As of 2020, 108 organizations in 56 countries are using WEAI-derived products.</p> <p>In Uganda, researchers developed videos for extension campaigns to increase women's empowerment in agriculture.</p> <p>In Southeast Asia, a guidance note was developed on gender inclusive agro-advisory services.</p> <p>Guidelines on collecting gender-sensitive measures of freedom of movement in agricultural value chains were piloted in Benin and Malawi.</p> <p>Researchers published findings from using mobile phone data and phone surveys to predict women's economic empowerment in Uganda.</p> <p>A brief on methods for measuring women's empowerment was disseminated.</p> <p>Eight blog posts were published on the PIM EnGendering Data blog.</p>	PIM gender research methods and guidelines are used by partner research organizations in 3 countries	Complete	<p>As of 2020, 108 organizations in 56 countries are using WEAI-derived products.</p> <p>In Uganda, researchers developed videos for extension campaigns to increase women's empowerment in agriculture.</p> <p>In Southeast Asia, a guidance note was developed on gender inclusive agro-advisory services.</p> <p>Guidelines on collecting gender-sensitive measures of freedom of movement in agricultural value chains were piloted in Benin and Malawi.</p> <p>Researchers published findings from using mobile phone data and phone surveys to train machine learning models to predict women's economic empowerment in Uganda.</p> <p>A brief on methods for measuring women's empowerment was disseminated.</p> <p>A researcher from Central Asia came to IFPRI to collaborate on gender research.</p> <p>Eight blog posts were published on the PIM EnGendering Data blog.</p> <p>A chapter on concepts, frameworks and tools on gender dynamics in agricultural value chains was published in the Routledge Handbook of Gender and Agriculture, which targets young professionals.</p>	<p>Use of WEAI products: https://www.dropbox.com/s/r5d2mxgp1n5a7ef/PMU%202021_WEAI%20Outcomes.xlsx?dl=0</p> <p>Extension videos in Uganda: Innovation 1750 in 2020 AR</p> <p>Guidance note on gender-inclusive agro-advisory services in Southeast Asia: Innovation 1803 in 2020 AR</p> <p>Gender-sensitive measures of freedom of movement in agricultural value chains in Malawi and Benin: https://ebrary.ifpri.org/digital/collection/p15738coll2/id/134048</p> <p>Use of mobile phone data to predict women's empowerment: Innovation 1748 in 2020 AR</p> <p>Brief on methods to measure women's empowerment: https://ebrary.ifpri.org/digital/collection/p15738coll2/id/134044</p> <p>Engendering Data Blog: https://pim.cgiar.org/category/news/engendering-data-blog/</p> <p>Chapter in Routledge Handbook of Gender and Agriculture: https://ebrary.ifpri.org/digital/collection/p15738coll9/id/813</p>

FP	2022 outcome	Sub-IDs	Progress against 2022 outcome in 2020	2020 milestone	Status of 2020 milestone	Justification for status of 2020 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"> • {primary} CC Conducive agricultural policy environment • CC Technologies that reduce women`s labor and energy expenditure adopted 	<p>Guidance on interventions to reduce intimate partner violence was incorporated into the implementation package of the World Health Organization's "RESPECT women" framework.</p> <p>Gender research on patterns of asset ownership in Egypt was shared with partners.</p>	Gender dimensions of policies are strengthened in 1 country	Complete	PIM research informed Nigeria's National Gender Policy on Agriculture. done. IFPRI contributed to the development of the policy's components on training of agricultural officers to address gender issues in agriculture; mainstreaming attention to gender in agricultural extension and climate change adaptation and mitigation efforts; empowering women through building skills of women's groups on financial management, and monitoring and evaluating implementation of the policy and assessing the differential impacts of projects and interventions on women and men.	Informing Nigeria's National Gender Policy on Agriculture: OICR 3191 in 2019 AR
6	Indicators of women's empowerment in agriculture increase in 3 countries	<ul style="list-style-type: none"> • {primary} CC Gender-equitable control of productive assets and resources 	<p>Collaboration with Unite for a Better Life on a gender-transformative, participatory intervention delivered to men, women and couples and aimed at reducing intimate partner violence in Ethiopia.</p> <p>Lessons on how cash transfers affected migration in Mali were shared with the government. Collaboration with Integrated Seed System Development (ISSD)-Africa on the program's gender module.</p> <p>Work on aspirations and their impact on women's decision making in Central Asia was presented to researchers and partners in Central Asia.</p> <p>Work on how to strengthen gender equality in the agricultural sector in the MENA region was widely disseminated.</p>	Results from empowerment studies are used by 1 partner organization in a development initiative	Complete	<p>Collaboration with Unite for a Better Life, a gender-transformative, participatory intervention delivered to men, women and couples and aimed at reducing IPV and promoting more equitable relationships by inviting public group discussions in Ethiopia.</p> <p>Collaboration with Integrated Seed System Development (ISSD)-Africa on the program's gender module.</p> <p>Work on how to strengthen gender equality in the agricultural sector in the MENA region was widely disseminated.</p>	<p>Collaboration with Unite for a Better Life: Innovation 1962 in 2020 AR</p> <p>ISSD: https://issdafrica.org/2020/10/08/webinar-october-15-inclusive-seed-delivery-moving-from-gender-diagnoses-to-testing-solutions/; https://ebrary.ifpri.org/digital/collection/p15738coll5/id/7546; https://ebrary.ifpri.org/digital/collection/p15738coll2/id/134158</p> <p>Work in MENA: https://hdl.handle.net/20.500.11766/12175; https://www.icarda.org/media/blog/vital-contribution-women-livelihoods-resilience-during-covid-19</p>

Table 6: Numbers of peer-reviewed journal articles

	Number	Percent
Peer-reviewed articles	172	100
Open access	110	64
ISI	156	91

Note: Included in this table are 163 articles printed on paper in 2020 and/or made available online in 2020 and eight 2019 articles omitted from the PIM 2019 report.

Table 7: Participants in capacity development activities

Number of trainees	Female	Male
In short-term programs	9,811	15,255
In long-term programs	53	35
PhDs	8	6

Table 8: Key external partnerships

Lead flagship	Brief description of partnership aims	List of key partners in partnership	Main area of partnership
Flagship 1	Evaluating the costs of ending hunger, doubling the incomes of small-scale producers and protecting the climate	<ul style="list-style-type: none"> • Bill & Melinda Gates Foundation • Cornell University (USA) • Federal Ministry for Economic Cooperation and Development (Germany) • International Institute for Sustainable Development • IFPRI 	<ul style="list-style-type: none"> • Research
Flagship 1	Analyzing tradeoffs related to actions to achieve the different SDG targets in Asia and the Pacific, especially for reconciling food and water security with ecosystem health	<ul style="list-style-type: none"> • Food and Agriculture Organization of the United Nations • IFPRI 	<ul style="list-style-type: none"> • Capacity • Research
Flagship 1	CGIAR Community of Excellence on Seed Systems development	<ul style="list-style-type: none"> • Dutch Research Council (NWO) • KIT – Royal Tropical Institute • Wageningen Centre for Development Innovation • All CGIAR Centers except for IWMI 	<ul style="list-style-type: none"> • Capacity • Delivery • Policy • Research
Flagship 1	Interactive guidebook on capacity development for agricultural innovation	<ul style="list-style-type: none"> • Michigan State University (USA) • University of Florida (USA) • USAID • Wageningen University and Research (the Netherlands) • IFPRI 	<ul style="list-style-type: none"> • Capacity
Flagship 1	Study “Engaging Young Agripreneurs: Options to Include Youth in Private Sector Extension and Advisory Services in Rwanda and Uganda”	<ul style="list-style-type: none"> • Digital Green • Global Forum for Rural Advisory Services • Makerere University (Uganda) • Neuchatel University (Switzerland) • USAID • ICRAF • IFPRI 	<ul style="list-style-type: none"> • Delivery • Research

Lead flagship	Brief description of partnership aims	List of key partners in partnership	Main area of partnership
Flagship 2	Support to African-led policy networks to influence policies of African governments and regional organizations	<ul style="list-style-type: none"> • African Union • Alliance for a Green Revolution in Africa • Regional Network of Agricultural Policy Research Institutes • IFPRI 	<ul style="list-style-type: none"> • Capacity • Outreach • Policy • Research
Flagship 2	Impact evaluation of the Baraza program in Uganda	<ul style="list-style-type: none"> • Economic Policy Research Centre • Government of Uganda • University of Ghana (Ghana) • International Growth Centre • International Monetary Fund • Uganda Debt Network • University of Leuven (Belgium) • IFPRI 	<ul style="list-style-type: none"> • Capacity • Delivery • Policy • Research
Flagship 2	Research on youth and employment in Africa	<ul style="list-style-type: none"> • Arizona State University (USA) • International Growth Centre • Michigan State University (USA) • UK Government's Foreign, Commonwealth & Development Office • USAID • IFPRI 	<ul style="list-style-type: none"> • Capacity • Policy • Research
Flagship 2	Structural Transformation of African Agriculture and Rural Spaces (STAARS) Fellowship Program – Creating a cohort of early-career African researchers to deliver high-quality policy research	<ul style="list-style-type: none"> • African Economic Research Consortium • African Development Bank • Cornell University (USA) • Kenyatta University (Kenya) • Partnership for Economic Policy • United Nations University • University of Antananarivo (Madagascar) • University of Bonn (Germany) • University of Dschang (Cameroon) • University of Ilorin (Nigeria) • World Bank • IFPRI 	<ul style="list-style-type: none"> • Capacity • Research

Lead flagship	Brief description of partnership aims	List of key partners in partnership	Main area of partnership
Flagship 2	COVID-19 Policy Response Portal	<ul style="list-style-type: none"> • CEPAD (Timor-Leste) • Egerton University (Kenya) • Indaba Agricultural Policy Research Institute (Zambia) • Institute for Integrated Development Studies • Michigan State University (USA) • USAID • IFPRI 	<ul style="list-style-type: none"> • Research
Flagship 3	Analysis of the impacts of COVID-19 on value chains (rice and potato in Bangladesh, coffee and vegetables in Ethiopia, coffee in Guatemala, fruits and vegetables in Kenya, fish in India, various crops in Malawi, fish in Nigeria, maize in Uganda, cassava in Vietnam and Cambodia)	<ul style="list-style-type: none"> • Agriculture Genetics Institute, Vietnam • Bangladesh Agricultural Research Institute • Bangladesh Agricultural University • Economic Policy Research Centre • Enveritas • European Union • Federacion de Cooperativas Agricolas de Productores de Café de Guatemala • GeoPoll • Government of Bangladesh • Government of Guatemala • Government of Kenya • Government of Uganda • Indira Gandhi Institute of Development Research • Institute of Agricultural Sciences for Southern Vietnam • Mariano Galvez University (Guatemala) • Michigan State University (USA) • MwAPATA Institute (Malawi) • Seafood Solutions • Twiga Foods • UK Government's Foreign, Commonwealth & Development Office • United States Department of Agriculture • USAID • World Bank • Alliance of Bioversity International and CIAT • CIP • IFPRI • WorldFish 	<ul style="list-style-type: none"> • Research

Lead flagship	Brief description of partnership aims	List of key partners in partnership	Main area of partnership
Flagship 3	Study on improving access to agricultural value chain finance for disadvantaged groups in Indonesia, Myanmar and Vietnam	<ul style="list-style-type: none"> • Australian Aid • Australian Centre for International Agricultural Research • Government of Indonesia • Institute for Policy and Strategy for Agriculture and Rural Development (Vietnam) • International Growth Centre • Yangon University of Economics (Myanmar) • University of Sydney (Australia) • IFPRI 	<ul style="list-style-type: none"> • Delivery • Research
Flagship 3	Testing value chain innovations related to quality certification and standards	<ul style="list-style-type: none"> • COOPEDELSI cooperative (Senegal) • COORDID cooperative (Senegal) • Ethiopian Millers Association • Global Aquaculture Alliance • Alliance of Bioversity International and CIAT • CIMMYT • IFPRI 	<ul style="list-style-type: none"> • Delivery • Research
Flagship 3	Modeling impacts of agricultural support policies on emissions from agriculture	<ul style="list-style-type: none"> • World Bank • IFPRI 	<ul style="list-style-type: none"> • Research
Flagship 3	Applied research on picture-based insurance and advisory services	<ul style="list-style-type: none"> • African Risk Capacity • Agriculture Climate Risk Enterprise Africa • Borlaug Institute for South Asia • Centre for Agriculture and Biosciences International • Dvara E-Registry • Ghent University (Belgium) • Government of India • HDFC ERGO General Insurance Company Ltd. • University of Manchester (UK) • World Food Programme • IFPRI 	<ul style="list-style-type: none"> • Delivery • Research
Flagship 4	Study of the ecological impacts of Ethiopia's Productive Safety Nets Programme	<ul style="list-style-type: none"> • City University of New York (USA) • Fordham University (USA) • Smith College (USA) • IFPRI 	<ul style="list-style-type: none"> • Research

Lead flagship	Brief description of partnership aims	List of key partners in partnership	Main area of partnership
Flagship 4	Impact evaluation of the Strengthen PSNP4 Institutions and Resilience (SPIR) Development Food Security Activity in Ethiopia	<ul style="list-style-type: none"> • Ambo University (Ethiopia) • CARE • Columbia University (USA) • Government of Ethiopia • Hawassa University (Ethiopia) • Johns Hopkins University (USA) • Organization for Development and Rehabilitation of Amhara (Ethiopia) • USAID • World Vision International • IFPRI 	<ul style="list-style-type: none"> • Delivery • Research
Flagship 4	Impact evaluation of the R5N social protection program in Sri Lanka	<ul style="list-style-type: none"> • Foundation for Health Promotion • Johns Hopkins University (USA) • Medical Research Institute of Sri Lanka • University of California (USA) • Wayamba University (Sri Lanka) • World Food Programme • IFPRI 	<ul style="list-style-type: none"> • Delivery • Research
Flagship 4	Impact evaluation of the Takaful and Karama cash transfer program	<ul style="list-style-type: none"> • Government of Egypt • IFPRI 	<ul style="list-style-type: none"> • Delivery • Research
Flagship 4	Impact evaluation of the national cash transfer program in Mali	<ul style="list-style-type: none"> • Government of Mali • Institut de Recherche pour le Développement • IFPRI 	<ul style="list-style-type: none"> • Delivery • Research
Flagship 5	Supporting a tenure- and governance-enabling environment for community forest enterprises in Nepal	<ul style="list-style-type: none"> • Forest Resources Studies and Action Team (Nepal) • Tribhuvan University (Nepal) • CIFOR 	<ul style="list-style-type: none"> • Research • Delivery
Flagship 5	Use of the Multistakeholder Dialogue Platform approach for effective participation of local communities in interventions for biodiversity conservation and enhanced livelihoods across the Kenya-Somalia border	<ul style="list-style-type: none"> • European Union • Government of Kenya • Government of Somalia • Intergovernmental Authority on Development • ICRAF 	<ul style="list-style-type: none"> • Capacity • Delivery • Outreach • Research

Lead flagship	Brief description of partnership aims	List of key partners in partnership	Main area of partnership
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"> • Arizona State University (USA) • Collaborating for Resilience • Foundation for Ecological Security • University of Colorado (USA) • Alliance of Bioversity International and CIAT • CIFOR • ICRAF • ICRISAT • IFPRI 	<ul style="list-style-type: none"> • Capacity • Delivery
Flagship 5	Improved rangeland governance in Ethiopia, Tanzania and Tunisia	<ul style="list-style-type: none"> • Government of Ethiopia • Government of Tanzania • Government of Tunisia • Institut de Recherche pour le Développement • Institut des Régions Arides Médenine (Tunisia) • International Fund for Agricultural Development • International Land Coalition • National Land Use Planning Commission (Tanzania) • Office d'Élevage et des Pâturages (Tunisia) • ICARDA • IFPRI • ILRI 	<ul style="list-style-type: none"> • Capacity • Delivery
Flagship 5	Tools for inclusive management of landscapes in Peru	<ul style="list-style-type: none"> • Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (Germany) • Norwegian Agency for Development Cooperation • Organización Nacional de Mujeres Indígenas Andinas y Amazónicas del Perú • Peruvian Service for Natural Protected Areas • Rights and Resources Initiative • UK Government's Foreign, Commonwealth & Development Office • CIFOR 	<ul style="list-style-type: none"> • Capacity • Delivery • Outreach • Research

Lead flagship	Brief description of partnership aims	List of key partners in partnership	Main area of partnership
Flagship 6	Impact evaluation of Unite for a Better Life, a gender-transformative educational intervention targeting prevention of intimate partner violence and HIV risk behaviors in Ethiopia	<ul style="list-style-type: none"> • Abdul Latif Jameel Poverty Action Lab • Ethiopian Public Health Association • University of Addis Ababa (Ethiopia) • IFPRI 	<ul style="list-style-type: none"> • Capacity • Delivery • Research
Flagship 6	Development and piloting of guidance for gender-inclusive weather forecast and forecast-based advice for farmers	<ul style="list-style-type: none"> • CARE • Farmer's Union Ha Tinh (Vietnam) • ICRAF 	<ul style="list-style-type: none"> • Capacity • Delivery
Flagship 6	Syntheses on gender and seed systems	<ul style="list-style-type: none"> • Dutch Research Council (NWO) • KIT – Royal Tropical Institute • Inter-American Development Bank • World Bank • IFPRI 	<ul style="list-style-type: none"> • Research • Outreach
Flagship 6	Coordinated studies on gender dynamics in value chains (Burkina Faso, Ghana, Honduras, India, Indonesia and Vietnam)	<ul style="list-style-type: none"> • Agriculture Genetics Institute (Vietnam) • Australian Centre for International Agricultural Research • Ghana Oil Palm Development Company Ltd. • Global Affairs Canada • Government of Ghana • Government of Honduras • Government of Indonesia • Institute for Policy and Strategy for Agriculture and Rural Development (Vietnam) • Institute of Agricultural Sciences for Southern Vietnam • KIT – Royal Tropical Institute • Obooma Farm Products Ltd. (Ghana) • Oil Palm Research Institute of Ghana • Serendipalm Company Ltd. (Ghana) • Solidaridad (Ghana) • Swisscontact • Tanager • University of Ghana (Ghana) • Alliance of Bioversity International and CIAT • CIP • WorldFish 	<ul style="list-style-type: none"> • Research

Lead flagship	Brief description of partnership aims	List of key partners in partnership	Main area of partnership
Flagship 6	Piloting the project-level Women's Empowerment in Agriculture Index for Market Inclusion	<ul style="list-style-type: none"> • Bill & Melinda Gates Foundation • Centre International de Recherche et de Formation en Sciences Sociales • Cultural Practice, LLC • Data Analysis and Technical Assistance Ltd. • Deutsche Gesellschaft für Internationale Zusammenarbeit • Millennium Challenge Corporation • Swisscontact • Tufts University (USA) • University of San Carlos (the Philippines) • University of the Philippines (the Philippines) • Wadonda Consult Ltd. • Alliance of Bioversity International and CIAT • IFPRI 	<ul style="list-style-type: none"> • Research

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. Three exceptions have been made for the CGIAR foresight report, CGIAR Community of Excellence on Seed Systems Development and CGIAR publication on gender and agriculture, 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, Alliance of Bioversity International and 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
Creation of the CGIAR Community of Excellence on Seed Systems Development	AfricaRice, Alliance of Bioversity International and CIAT, CIMMYT, CIP, ICARDA, ICRAF, ICRISAT, IFPRI, IITA, ILRI, IRRI, WorldFish	Center members bring in the experiences of the different CRPs working on seed systems to compare lessons across crops, forages, trees, fish and livestock
Policy options and regulations to improve access to quality vegetatively propagated seed in Kenya and Vietnam	PIM, RTB	RTB brings in scientists with expertise on seed systems for vegetatively propagated crops while PIM brings in expertise on policy and regulatory frameworks
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 evaluation of Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) scheme (income support for farmers in India)	A4NH, PIM	A4NH and PIM jointly contributed to this activity with a focus on nutritional outcomes
Impact of the revision of the Multilateral System of Access and Benefit Sharing of plant genetic resources	Genebanks, PIM	Genebanks provides technical guidance and data and PIM funds the econometric analysis
New approach and outcome indicator for measuring dietary quality outcomes from agrifood policy choices	A4NH, PIM	A4NH and PIM jointly contribute to this activity with a focus on nutritional outcomes
Analysis of distortions in rice value chains	PIM, RICE	PIM generates distortion data and RICE invests in their analysis and implications

Brief description of the collaboration	Name(s) of collaborating CRP(s), Platform(s) or Center(s)	Optional: Value added, in a few words
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
Managing postharvest losses in potatoes and sweetpotatoes	PIM, RTB	Unified methodology to measure losses, coordinated pilot interventions to reduce losses
Book “ <i>Value Chain Development and The Poor: Promise, Delivery and Opportunities for Increased Impact at Scale</i> ”	MAIZE, PIM	Collection of new and previously published papers on value chain development and the poor – The book contains several PIM-funded papers
Livestock value chains in small ruminants in Eastern Africa and cattle in Western Africa	LIVESTOCK, PIM	LIVESTOCK brings technical expertise on livestock and baseline sectoral data, PIM supplements data collection and contributes methods to deepen the analyses
Analysis of the impacts of COVID-19 on value chains	FISH, PIM, RTB	FISH and RTB are co-financing studies on the impact of COVID-19 on value chains in response to a competitive call issued by PIM
Identification of fish seed business models for socially inclusive tilapia value chains in Ghana	FISH, PIM	This collaboration is part of the Netherlands-CGIAR partnership on seed and breed systems through which the two CRPs provide complementary technical experts and co-financing
Use of smartphone pictures to develop applications for insurance and advisory services	Big Data, CCAFS, PIM	PIM and CCAFS have collaborated on insurance for climate risk throughout Phase 2, with PIM focusing on smartphone picture-based innovation; Big Data is supporting this partnership through an INSPIRE grant to scale up the use of this innovation
Impact assessment of a nutrition-sensitive social protection intervention in Sri Lanka	A4NH, PIM	A4NH and PIM jointly contributed to this activity with a focus on nutritional outcomes
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
Methods and tools for inclusive governance of natural resources at community and multistakeholder platform levels	FTA, PIM, WLE	Scientists from each of the CRPs have provided inputs into the methods and tools and contributed case studies towards syntheses
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
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
Study of migration and gender dynamics in irrigation governance in Nepal	PIM, WLE	PIM and WLE provided co-financing to this grant awarded as part of the 2018 research call on “ feminization of agriculture ” of the Gender platform (then under PIM)
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
Estimating women’s empowerment using mobile phone data in Uganda	Big Data, PIM	PIM brings expertise in measuring women’s empowerment and Big Data brings expertise in acquisition and utilization of mobile phone data
Development and piloting of project-level Women’s Empowerment in Agriculture Index for Market Inclusion	A4NH, PIM	Team members work across PIM and A4NH and supporting bilateral grants are mapped to both CRPs
Use of agricultural information videos to increase women’s empowerment in agriculture in Uganda	MAIZE, PIM	MAIZE contributed content for the videos while PIM researchers designed the impact evaluation study
Guidance for gender inclusiveness of agro-advisories in Southeast Asia	CCAFS, PIM	CCAFS provided co-financing to this grant awarded as part of the 2018 research call on “ feminization of agriculture ” of the Gender platform (then under PIM)
Special Issue on gender in seed systems	GLDC, LIVESTOCK, PIM, RICE, RTB	Production of a joint output following a PIM call for research proposals
(Previous) 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
Research on impacts of COVID-19 on rural women in Burkina Faso	FTA, PIM, WLE	FTA and WLE provided co-financing to this grant awarded as part of the 2018 research call on “ feminization of agriculture ” of the Gender platform (then under PIM)
Publication on cross-CGIAR gender research that aims to rethink gender research and craft a forward-looking research agenda	Africa Rice, Alliance of Bioversity International and CIAT, CIFOR, CIMMYT, CIP, ICRAF, ICRISAT, IFPRI, IITA, ILRI, IRRI, IWMI, WorldFish	Originated through the Gender Platform while under PIM, draws upon representatives from all CGIAR centers as co-authors of chapters

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 social accounting matrices' databases, economy-wide tools and outputs to policy and program decision making	Ongoing	Qualitative outcome study	This study identifies users of PIM-funded national economywide data (social accounting matrices), modeling tools and publications and follows up with them through surveys and interviews to document the use of these products for research, decision making and other outcomes.	Published in March 2021
Impact assessment of Ethiopia's Direct Seed Marketing program	Ongoing	Ex post impact assessment	This study uses existing data from IFPRI-Agricultural Transformation Agency household surveys to assess the effects of Direct Seed Marketing (DSM) on access to quality seeds, on-farm productivity and market participation of smallholders. Earlier PIM studies contributed to the decision to scale up this program.	Published in January 2021
Review of the contributions of PIM-funded research on resource tenure and governance to policy and program decision making	Ongoing	Qualitative outcome study	This external evaluation (qualitative study relying on a 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 strengthening this type of research in One CGIAR.	Forthcoming
The Governance of Natural Resources: A synthesis of PIM Flagship 5 activities during 2017-2019	Ongoing	Program/project evaluation or review	This is a synthesis of findings and outcomes of the flagship's research, which also assesses the alignment of research outputs with the theory of change.	Published in April 2021
Technological innovation and sustainable intensification: Highlights, lessons learned, and priorities for One CGIAR	Ongoing	Program/project evaluation or review	This note contains key findings and lessons learned on theories of change and partnerships at flagship level.	Published in April 2021
Economywide factors affecting agricultural growth and rural transformation: Highlights, lessons learned, and priorities for One CGIAR	Ongoing	Program/project evaluation or review	This note contains key findings and lessons learned on theories of change and partnerships at flagship level.	Published in May 2021

Studies/learning exercises planned for this year	Status	Type of study or activity	Description	Links to MELIA publications, comments
Inclusive and efficient value chains: Highlights, lessons learned, and priorities for One CGIAR	Ongoing	Program/project evaluation or review	This note contains key findings and lessons learned on theories of change and partnerships at flagship level.	Published in May 2021
Social protection for agriculture and resilience: Highlights, lessons learned, and priorities for One CGIAR	Ongoing	Program/project evaluation or review	This note contains key findings and lessons learned on theories of change and partnerships at flagship level.	Published in April 2021
Governance of natural resources: Highlights, lessons learned, and priorities for One CGIAR	Ongoing	Program/project evaluation or review	This note contains key findings and lessons learned on theories of change and partnerships at flagship level.	Published in April 2021
Cross-cutting gender research and coordination: Highlights, lessons learned, and priorities for One CGIAR	Ongoing	Program/project evaluation or review	This note contains key findings and lessons learned on theories of change and partnerships at flagship level.	Published in April 2021
Gender research in the CGIAR Research Program on Policies, Institutions, and Markets in 2018 and 2019	Ongoing	Program/project evaluation or review	The accuracy of gender scores for PIM 2018 and 2019 peer-reviewed publications was assessed. In addition, the study includes a synthesis of lessons learned on several gender themes and make recommendations for improving gender research in PIM and in the future One CGIAR portfolio.	Published in February 2021
Analysis of CGIAR 2018 policy contributions	Ongoing	Synthesis (secondary) study	The purpose of this study, which mainly uses information included in CGIAR Research Programs and Platforms' 2018 annual reports and consolidated database, is to assess CGIAR policy contributions across thematic and geographical areas and to identify ways to strengthen collaborations.	Published in April 2021

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

Evaluation	Rec. #	Text of recommendation	Status of response	Concrete actions taken for this recommendation	By whom	When
PIM Evaluation (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 workshop 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; outputs will be completed in 2021. 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	2019-2021
				The study on the 2018 policy outcomes reported by CRPs and Platforms co-led by PIM and the System Office was published in 2021.	PMU, System Office	2019-2021
				In 2021, lessons learned from PIM’s work on political economy will be synthesized to help inform One CGIAR.	PMU, Flagship 2	2021
PIM Evaluation (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 Seeds of Change conference with the Australian Centre for International Agricultural Research and the University of Canberra; the XVII Biennial Conference of the International Association for the Study of the Commons ; and a workshop on political economy for improved policy analysis and implementation in CGIAR . In addition, PIM hosted an invited panel on the role of institutional capacity development in Africa’s agricultural transformation at the African Association of Agricultural Economists in Abuja, Nigeria.	PMU, flagships, Gender Platform	2019
				Flagship/research teams are regularly holding meetings focused on research topics and design.	PMU, flagships, Gender Platform (2017-2019)	2017-2021
				Diversity of scholarly disciplines is one of the factors taken into consideration for the selection of individuals replacing two outgoing members of the PIM Independent Steering Committee in 2020.	PMU, Management Committee, IFPRI Director, IFPRI Board of Trustees	2019-2020
				In 2020, a series of webinars on publishing in social science journals was co-organized with the CGIAR Standing Panel on Impact Assessment (SPIA) and African Women in Agricultural Research and Development (AWARD).	PMU	2020

Evaluation	Rec. #	Text of recommendation	Status of response	Concrete actions taken for this recommendation	By whom	When
PIM Evaluation (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 early 2021: a foresight report and a publication on gender and agriculture .	Flagships 1 and 6, Gender Platform, PMU	2018-2021
				The Gender Platform hosted in PIM's Flagship 6 in 2017-2019 successfully grew gender research collaboration between CRPs.	Gender Platform, Flagship 6	2017-2019
				PIM continues to foster the development of a CGIAR Value Chains community of practice (workshop held in October 2019, revamped Tools4valuechains website , ongoing review of CGIAR contributions to the discourse on value chains development).	Flagship 3, PMU	2018-2021
				PIM led the launch of a CGIAR community of excellence on seed systems .	Flagship 1	2020-2021
				See Table 9 for examples of partnerships between PIM and other CRPs	All flagships	All years
PIM Evaluation (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 end of CRPs in 2021, this paper is being reworked to reflect a broader CGIAR perspective.	PMU	2019-2021
PIM Evaluation (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 paper on climate change effects in Ethiopia. IFPRI's modeling teams meet regularly to strengthen their suite of tools and engage collectively with external partners. 2020 deliverables include forward-looking assessments of food and agriculture in LAC using the IMPACT and MIRAGRODEP models. IFPRI is also using all its modeling tools jointly for improved prioritization and decision making in Sub-Saharan Africa and South Asia in relation to the impacts of COVID-19 on the agrifood system and wider inclusive agricultural transformation as part of a Bill & Melinda Gates-funded project starting in 2020.	Flagships 1, 2 and 3	2018-2021

Evaluation	Rec. #	Text of recommendation	Status of response	Concrete actions taken for this recommendation	By whom	When
PIM Evaluation (Independent Evaluation Arrangement, 2015)	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 strengthened collaboration with other CRPs . This revised approach of outreach on value chains methods and applications started to be implemented in 2018.	PMU, Flagship 3, other CRPs	2017-2021
PIM Evaluation (Independent Evaluation Arrangement, 2015)	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. At this point, no request for assistance has been received and no evidence of unmet needs has been reported.	PMU, Flagship 3	2016-2019
PIM Evaluation (Independent Evaluation Arrangement, 2015)	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. Starting in 2020 the increased effort on seed systems includes an examination of how policies and regulations can improve women's access to quality seed. Several 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, including a synthesis of evidence relating safety net programs to gender outcomes in Africa published in 2019. The Flagship also launched work to examine the effects of cash transfers on intimate partner violence (now a part of Flagship 6) and the effects of social protection programs on indicators of women's empowerment.	PMU, Flagships 1 and 4	2016-2020

Evaluation	Rec. #	Text of recommendation	Status of response	Concrete actions taken for this recommendation	By whom	When
PIM Evaluation (Independent Evaluation Arrangement, 2015)	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 cycles, PIM's gender team undertakes ex post reviews 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. The most recent of these reviews pertains to the PIM 2018 and 2019 gender deliverables.	PMU, Flagship 6	2017-2021
				Since 2020, the Flagship 6 team systematically reviews the gender scoring of PIM's milestones, policy contributions and outcome/impact case reports as part of the reporting process.	PMU, Flagship 6	2020-2021
Ex-Post Impact Assessment Review of IFPRI's Research Program on Social Protection, 2000–2012 (2015)	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 Collaborative on that topic.	Flagships 4 and 6	2018
				At the IFPRI-FAO conference "Accelerating the End of Hunger and Malnutrition: A Global Event" in November 2018 in Bangkok, Flagship 4 researchers contributed to 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 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
				The flagship team continues to work closely with major social protection implementing agencies (UNICEF, World Bank and World Food Programme in addition to World Vision International) and has generated evidence that has shaped these organizations' programs and approaches.	Flagship 4	2018-2021

Evaluation	Rec. #	Text of recommendation	Status of response	Concrete actions taken for this recommendation	By whom	When
Balancing International Public Goods and Accountability: Exploring the Impact of IFPRI's Policy Research on Science, Technology, and Innovation (2016)	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 ASTI strategy 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 independent review of outcomes based on the PIM-supported foresight work in 2012-2018.	Flagship 1	2018-2019
				See Table 2 (policy contributions) and Table 3 (outcome/impact case reports) for examples of outcomes at country level.	All flagships	2020
IEA Evaluation of Capacity Development activities of CGIAR (2017)	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 end of CRPs in 2021, this paper is being reworked to reflect a broader CGIAR perspective.	PMU	2019-2021
IEA Evaluation of Capacity Development activities of CGIAR (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 ASTI's partnership with the Asia-Pacific Association of Agricultural Research Institutions (APAARI) , collaborations with research and government agencies in Bangladesh, Egypt, Ethiopia, India, Nigeria and Pakistan, and with longstanding partner Foundation for Ecological Security in India under the landscape restoration initiative with FTA and WLE .	Various flagships	2017-2019

Evaluation	Rec. #	Text of recommendation	Status of response	Concrete actions taken for this recommendation	By whom	When
Evaluation of Gender in Research and in CGIAR workplace (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 (now GENDER) Platform.	PMU, Flagship 6	2017-2020
Evaluation of Gender in Research and in CGIAR workplace (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	2017-2020
Evaluation of Gender in Research and in CGIAR workplace (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 achieved by the Gender Platform.	Flagship 6	2017-2019

Evaluation	Rec. #	Text of recommendation	Status of response	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 impact areas highlighted by PIM since 2019. Work in this area, previously limited to social protection (Flagship 4), is expanding to almost all other flagships: promoting fodder tree technology adoption for improved nutrition in Malawi (Flagship 1); evaluation and documentation of vegetatively propagated biofortified seed systems (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	2019-2021
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 funded a study on inefficiencies and innovations in the Ethiopian vegetable value chains, which complements 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. This led to strengthened partnerships between WUR and IFPRI and the development of key research questions that A4NH is using to shape future priorities for One CGIAR.	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 hosted in PIM’s Flagship 6 in 2017-2019 significantly contributed to this.	Gender Platform	2019-2019
				A PIM 2019 brochure highlights several PIM studies on gender.	PMU, all flagships	2019
				The forthcoming PIM publication “Advancing gender equality through agricultural and environmental research: past, present and future” will also contribute to addressing this recommendation.	Flagship 6	2019-2021

Evaluation	Rec. #	Text of recommendation	Status of response	Concrete actions taken for this recommendation	By whom	When
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, to be published in 2021. Complementary work on this topic in 2021 will focus on the strategies used by funding and development agencies to achieve impact at scale through value chain interventions, in order to create a foundation for mutually reinforcing value chain research by One CGIAR and value chain development by funders and practitioners.	Flagship 3	2019-2021
				In October 2019, PIM co-hosted a meeting 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
				PIM co-organized a series of webinars with the CGIAR scaling community of practice and contributed to the resulting briefs .	PMU	2020-2021
				The PIM Flagship 3 co-leader, who is also a Netherlands CGIAR Senior Expert, has co-written a brief on key scaling issues for CGIAR.	Flagship 3	2021
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. A field was added in the MARLO management information system to capture these justifications.	PMU, flagship leaders, cluster leaders, project leaders	2019-2020

Evaluation	Rec. #	Text of recommendation	Status of response	Concrete actions taken for this recommendation	By whom	When
Performance Management Standards Pilot Assessment Report, PIM (November 2019)	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. The flagship-level annual allocation processes follow these guidelines. 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
Performance Management Standards 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

Evaluation	Rec. #	Text of recommendation	Status of response	Concrete actions taken for this recommendation	By whom	When
Performance Management Standards Pilot Assessment Report, PIM (November 2019)	Std 6	<p>Availability of Program information (online)</p> <ul style="list-style-type: none"> 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. (Y) Availability of Program information (to be provided on request) To reach Level 4, all information should be available via link to a public or internal website where the information is regularly updated. 	Ongoing	<p>PIM is in compliance with this. The single exception relates to the PIM Management Committee minutes, which are not publicly available as they occasionally contain confidential information. In addition, a substantial portion of their content 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
PIM independent review (CGIAR Advisory Services Shared Secretariat, 2020)	1.1	<p>Continue to integrate and disseminate political economy analysis in, and beyond, the PIM program portfolio.</p>	Ongoing	<p>In 2021, PIM will continue to fund the political economy research area. Political economy analyses are also planned in other parts of the portfolio. Lessons learned from PIM’s work on political economy will be synthesized to help inform One CGIAR.</p>	PMU, Flagship 2	2021

Evaluation	Rec. #	Text of recommendation	Status of response	Concrete actions taken for this recommendation	By whom	When
PIM independent review (CGIAR Advisory Services Shared Secretariat, 2020)	1.2	Carry out and disseminate, through outreach and communication activities, a review of PIM's overall impact in selected countries, including the program's contribution to analyzing the COVID-19 crisis.	Ongoing	Though PIM had geographical areas of emphasis, e.g. Africa South of the Sahara and South Asia, research teams were given the opportunity to identify geographical priorities based on relevance, need/demand and potential for outcomes and impacts. Therefore, a broader review of PIM's outcomes and impacts across geographies seems more appropriate. This study, which PIM will commission in 2021, could include deep dives into one or two country(ies).	PMU, all flagships	2021
				PIM is co-leading with the System Office an analysis of contributions of CRPs to policy changes in 2018.	PMU, System Office	2019-2021
				PIM's contributions to analyzing the effects of the COVID-19 pandemic will be synthesized.	PMU, all flagships	2021
PIM independent review (CGIAR Advisory Services Shared Secretariat, 2020)	1.3	Carry out an independent review to collect lessons from PIM's partnerships within and outside of CGIAR	Ongoing	The PMU has already solicited internal reflections from flagship leaders on what made some partnerships successful and others less so. These will feed into an external review to be commissioned in 2021.	PMU, all flagships	2021
PIM independent review (CGIAR Advisory Services Shared Secretariat, 2020)	1.4	Carry out an independent review of PIM's collaboration with other CRPs, examining how joint efforts contributed to PIM's impact pathways.	Ongoing	This will be part of the partnerships review (recommendation 1.3).	PMU, all flagships	2021
PIM independent review (CGIAR Advisory Services Shared Secretariat, 2020)	1.5	Review the extent to which PIM has enhanced the capacity of researchers and research organizations through its policy outcomes and innovation (what) and the key factors that enabled or constrained results (how).	Ongoing	The PMU will reflect on different options to address this recommendation in a cost-effective way and with a view to being as useful as possible to One CGIAR.	PMU	2021

Evaluation	Rec. #	Text of recommendation	Status of response	Concrete actions taken for this recommendation	By whom	When
PIM independent review (CGIAR Advisory Services Shared Secretariat, 2020)	1.6	Carry out a thorough reflection on the balance between scientific and public outreach in relation to PIM's partnership approach to achieving policy change, institutional innovation, and capacity development.	Ongoing	As part of the external partnership review, we will aim to assess the usefulness of public outreach activities from the point of view of intended users. In addition, we will consider undertaking short surveys to understand the perceptions of the importance of outreach among scientists and the conditions under which outreach is most useful. Note that this topic was also addressed in the impact assessment of the IFPRI country programs co-led by PIM and IFPRI in 2018. Finally, it is important to recognize that the requirements attached to Window 3 and bilateral grants as well as the incentives given to researchers by center management strongly influence the nature of the outputs produced.	PMU	2021

Table 12: Examples of W1-2 use

Specific examples	Broad area of use
<p>Implementation of COVID-19 studies and development of COVID-19 dashboards and tools:</p> <ul style="list-style-type: none"> ○ Ten new studies selected through two competitive calls (funded through the CRP-level Strategic Investment Fund and a Flagship 3 competitive call) ○ Pivoting of at least 20 existing activities to address COVID-19-related topics ○ COVID-19 Policy Response Portal ○ “Food Export Restrictions during the COVID-19 crisis” dashboard ○ Assessment of the impacts of COVID-19 and policy responses at country level based on PIM computable general equilibrium modeling tools and social accounting matrices ○ Participation in the Asia node of the Word Pandemic Research Network 	<p>Research</p>
<p>Preparation of syntheses at CRP and flagship levels, including</p> <ul style="list-style-type: none"> ○ publication of a collection of PIM Synthesis Briefs: <ul style="list-style-type: none"> ▪ Gender and rural transformation ▪ Gender dynamics in seed system development ▪ Methods for measuring women’s empowerment ▪ The politics and governance of informal food retail in urban Africa ○ Publication of a collection of “Flagship Insights Notes” 	<p>Research</p>
<p>Development/maintenance of tools and websites as global public goods:</p> <ul style="list-style-type: none"> ○ DREAMPy ○ Ag-Incentives ○ Monitoring agricultural production and stocks ○ Trading in macro-nutrients ○ Value chains knowledge portal ○ Project-level Women’s Empowerment in Agriculture Index for Market Inclusion 	<p>Research</p>
<p>Publication of books:</p> <ul style="list-style-type: none"> ○ “Status and Performance of Agricultural Extension Service Delivery at the Global Level and in Several Countries in Africa, Asia and Latin America” ○ “An Evolving Paradigm of Agricultural Mechanization Development” ○ “Value Chain Development and the Poor: Promise, Delivery, and Opportunities for Impact at Scale” 	<p>Research</p>

Specific examples	Broad area of use
Dissemination of findings on youth-related topics: <ul style="list-style-type: none"> ○ Policy Brief on Climate adaptation and job prospects for young people in agriculture ○ Dissemination of the findings of the book “Youth and Jobs in Rural Africa” and other PIM work on youth through blogs (see here, here and here) 	Capacity development
Launch of CGIAR Community of Excellence on Seed Systems Development	Partnerships
Completion of the Special issue of Global Food Security on foresight for agriculture and partnerships with implementing agencies on using PIM foresight tools and results for analyses on Latin America (with the Inter-American Development Bank and CCAFS on assessing the impacts of climate change in Latin America and the Caribbean and informing recommendations for adaptation ; with the World Bank to identify a set of 20 actions to achieve desired agriculture and food system outcomes)	Partnerships
Development and piloting of methods and tools on participatory governance for natural resource management (global, national and local scales): <ul style="list-style-type: none"> ○ Participatory land use development to assess land-use strategies toward multiple ecosystem services (Vietnam) ○ Participatory Prospective Analysis for identifying drivers of tenure insecurity and developing a pathway to a desired future forest tenure system in Kenya, Uganda and Nepal ○ Bayesian Belief Network Analysis to enhance rangeland governance and identify restoration projects in Tunisia ○ Adaptive Collaborative Management to help forest communities manage natural resources in a more equitable and sustainable way in Nicaragua ○ "How are we doing?", a tool for participatory monitoring and adaptive learning in multistakeholder fora ○ Tool for assessing indigenous women’s participation in their communities and territories developed with the Rural Indigenous Women’s Association in Peru ○ Multistakeholder platforms used by International Land Coalition’s National Engagement Strategies’ facilitators for effective engagement in policy reform advocacy and people-centered land governance ○ Tool for enhancing social inclusion through local dialogues on natural resource management 	Partnerships
Launch of a set of six coordinated studies on gender dynamics in value chains	Research
Implementation of impact assessment studies led by the Program Management Unit (see Table 10)	Other Monitoring, learning, evaluation and impact assessment (MELIA)

Table 13: CRP financial report

Amounts in USD (thousands)

	Planned budget 2020*			Actual expenditure 2020**			Difference (planned - actual)		
	W1-2	W3/ bilateral	Total	W1-2	W3/ bilateral	Total	W1-2	W3/ bilateral	Total
FP1: Technological Innovation and Sustainable Intensification	3,746	7,723	11,469	3,766	9,614	13,380	-20	-1,891	-1,911
FP2: Economywide Factors Affecting Agricultural Growth and Rural Transformation	2,711	20,224	22,935	2,974	16,853	19,827	-263	3,371	3,108
FP3: Inclusive and Efficient Value Chains	3,192	9,495	12,687	2,785	6,102	8,887	407	3,393	3,800
FP4: Social Protection for Agriculture and Resilience	1,146	874	2,020	1,340	896	2,236	-194	-22	-216
FP5: Governance of Natural Resources	1,680	961	2,641	1,827	703	2,530	-147	258	111
FP6: Cross-cutting Gender Research and Coordination	1,100	959	2,060	1,363	1,138	2,501	-263	-179	-442
CRP Management & Support Costs	2,716	0	2,716	1,852	205	2,058	863	-205	658
Total	16,291	40,237	56,528	15,908	35,511	51,420	383	4,725	5,108

* Source: PIM Plan of Work and Budget (POWB) 2020. Planned Window 3 and bilateral expenditures reflected firm or likely commitments at the time of POWB submission.

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

Annex: Progress by flagships

Flagship 1 “Technological Innovation and Sustainable Intensification”

The flagship team continued to make progress in the areas of foresight, seed systems, advisory services, and science and innovation policy.

A primary focus of the foresight team was preparing the CGIAR foresight report and portal, to be launched in 2021. A [call for proposals](#) went out for the development of a series of notes that will offer perspectives on various topics relevant for [the future of food, land, and water systems](#) in developing countries; around 50 proposals were received and a dozen notes will be produced. The [special issue of Global Food Security on foresight for agriculture](#) was completed, including several papers published in 2019 and two 2020 papers, on [agricultural growth and sex-disaggregated employment in Africa](#) and the [future of cereal agricultural systems](#). Findings of PIM’s foresight modeling work were published in [numerous high-impact peer-reviewed articles](#), presenting evidence about the impacts of climate change at national ([Ethiopia](#), [Kazakhstan](#), [Malawi](#), [South Africa](#), [Tajikistan](#), [Uganda](#), [Zambia](#)), regional and global levels and helping to inform analysis of [trade-offs between the Sustainable Development Goals](#). A [study](#) in partnership with Flagship 3 found that to end hunger, double the incomes of small-scale producers and protect the climate, donors need to double their effort by 2030. The [impacts of climate change in Latin America and the Caribbean](#) (LAC) were assessed with the Inter-American Development Bank and CCAFS, informing [recommendations for adaptation](#). LAC was also the focus of a [World Bank report](#) which used PIM modeling results (joint with Flagship 3) to identify 20 actions to achieve desired agriculture and food system outcomes. Estimates of the costs of adaptation options in the agricultural sector at regional and global scales were updated, informing decision making of the Bill & Melinda Gates Foundation.

In the area of seed systems, a hallmark was the creation of the [CGIAR Community of Excellence on Seed Systems Development](#) to help shape the One CGIAR strategy on seed systems in partnership with the Dutch Research Council, KIT Royal Tropical Institute and Wageningen University and research. This work is aligned with PIM’s leadership of the “[Enabling Seed Policies](#)” component of the [Integrated Seed Sector Development Africa](#) Initiative and complements PIM-supported collaborative research at regional ([Africa](#)) and country ([Ethiopia](#), [Ghana](#), [India](#), [Myanmar](#), [Nepal](#), [Nigeria](#), [Uganda](#) and [Vietnam](#)) levels. The joint effort with Flagship 6 to apply a gender lens to the study of seed systems produced a [literature review](#), a [webinar](#) and a [brief](#). PIM’s work on seed systems generated several outcomes: improved [seed marketing system scaled up](#) to 1.4 million farmers in Ethiopia (joint with Flagships 2 and 3), [registration of farmers’ varieties of beans and rice](#) in Nepal, and a new [seed policy in Uganda](#) that enables the commercialization of “quality declared” seed to increase smallholder farmers’ access to quality seeds.

PIM research on agricultural advisory services, conducted in partnership with FAO, [Feed the Future’s Developing Local Extension Capacity \(DLEC\) Project](#) and the Global Forum for Rural Advisory Services ([GFRAS](#)), advanced on several fronts, including publication of a book on the [status and performance of agricultural extension service delivery at the global level and in several countries in Africa, Asia and Latin America](#); an [event on the future of extension](#); sharing of insights on [innovations in extension](#) and of [evidence](#) and [recommendations](#) on [engaging youth agri-entrepreneurs in Rwanda and Uganda](#), in-depth studies on gender dimensions of [ICT-enabled extension](#) in [Malawi](#) and [Uganda](#), and reforms of national extension systems and their implementation at State level in [Nigeria](#). Lessons on the role of [advisory services in the COVID-19 crisis](#) were disseminated and a research team applied insights from organizational change theory to examine [how extension organizations are innovating during the pandemic](#). PIM’s research on extension led to two 2020 outcomes: the launch by the Government of Malawi of the [National Agricultural Extension and Advisory Services Strategy](#) (joint with Flagship 2) and the [use of the GFRAS New Extensionist Kit and Global Good Practice Notes on extension in university curricula](#) in India and South Africa.

Research on R&D decision support systems and on science, technology and innovation policy produced several influential outputs. Highlights include a series of notes on [20 years of work conducted by the Agricultural Science and Technology Indicators initiative](#), featuring topics such as the [role of women](#) and [underinvestment in agricultural research](#), and a brief on the [evolution of CGIAR funding](#); a series of webinars co-organized by PIM and FAO on [investing in human capital in agriculture](#); an [interactive guidebook](#) on capacity development for agricultural innovation; ex ante analyses of genetically engineered innovations in banana and cassava in [Uganda](#), maize and cassava in [Tanzania](#), and maize in [Ethiopia](#); and research on agrobiodiversity conservation in [Uganda](#). Insect-resistant cotton was [approved](#) for release in Malawi; IFPRI's Program for Biosafety Systems provided technical support to the government throughout this process.

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

The work of [IFPRI's country program](#) teams generated several outcomes. Research dissemination and engagement with partners [led to a request to support the development of Nigeria's Medium-Term National Development Policy and of the Nigeria Agenda 2050](#) through contributions to a diagnostic report, a review of existing agricultural policies, and prioritization of policies and reforms using the Rural Investment and Policy Analysis ([RIAPA](#)) model. In Rwanda, a new [IFPRI country program](#) building on a strong partnership with the Ministry of Agriculture and broad stakeholder engagement through linkages with the Alliance of Bioversity International and CIAT, CIP, IITA, CCAFS and RTB focused its policy analysis and capacity development activities on public expenditure analysis, with specific reference to the [COVID-19 Economic Recovery Plan and rollout of input subsidy reforms, new agricultural extension system and nutrition-sensitive agriculture strategy](#). Findings from the Myanmar Agriculture Policy Support Activity [informed the Government of Myanmar's response to the COVID-19 pandemic](#). Researchers working under the banner of [“Towards Inclusive Economic Development in Southern Africa”](#) – a research and policy-making initiative led by the South African National Treasury, the South African Revenue Service, the United Nations University and IFPRI – used social accounting matrix-multiplier analysis to [estimate the short-term impacts of the nationwide lockdown on the country's economy and probe different recovery scenarios](#).

In Uganda, PIM supported an evaluation of the impact of a national program implemented by the Office of the Prime Minister to improve delivery of public services. The recommendations of the study [are being used to increase the program's cost-effectiveness and inclusivity](#), with potential impact on millions of citizens. Other policy dialogues informed by PIM research include a reform of Tanzania's policies on the sunflower value chain, reforms of policies for the rice sector in Uganda, and [scaling up of the School Gardens project](#) – aimed at increasing local food production through nutrition education – by the Government of Papua New Guinea.

The [COVID-19 Policy Response Portal](#) was set up to analyze the direct and indirect impacts of governments' responses to the COVID-19 pandemic in a comparative way. Building on PIM's computable general equilibrium modeling tools and social accounting matrices, the PIM teams [assessed the impacts of COVID-19 and policy responses at country level](#) for more than 20 countries and engaged closely with the Governments of Egypt, Ghana, Indonesia, Malawi, Myanmar, Nigeria, Rwanda, South Africa and Tunisia to identify policy priorities to support recovery. Phone surveys were conducted to assess COVID-19 impacts on small and medium enterprises (SMEs) in [China](#), on the agricultural actor and overall food security and welfare of vulnerable households in [Myanmar](#), and on smallholders' food security in [Nigeria](#). The China SME survey questionnaires were translated into several languages, posted online, and used by many other countries and international organizations including the World Bank and the Asian Development Bank.

The flagship team published three books: one on [Ethiopia's agricultural transformation](#), which presents a forward-looking analysis of Ethiopia's agrifood system in the context of a rapidly changing economy; one on [agricultural growth and rural poverty reduction in India](#), which provides insights into the linkages between public expenditures, private investment, rural poverty and agricultural productivity to reflect on spatial differences in the welfare effects of various investments, subsidies, and policies; and one on [agricultural mechanization](#), which documents 13 Asian and African country case studies and provides an updated conceptual framework for research on mechanization and analysis of the new challenges facing late-transforming countries in establishing private-sector led mechanization supply chains and service markets.

A *World Development* [Special Issue](#) investigated the extent to which information can help rural people get access to improved public services and governance and concluded that information is impactful only when beneficiaries deem it relevant and when they have both the incentives and power to act on it. PIM research on youth and employment in Africa, summarized in a 2019 book [launched](#) in 2020, was featured in several news outlets, [revisiting the assumptions often made about youth in rural Africa](#) and [busting the myth of Africa's ageing farmers](#).

A [book chapter](#) highlighted the implications of the political economy of agricultural policy on agrifood systems transformation in Africa, arguing that cooperation across sectors and levels of government is needed to manage the transformation process. The Kaleidoscope Model [continued to be used in universities' curricula](#). Research on the challenges faced by [informal food traders](#) in terms of [taxation](#), food safety and service delivery in Ghana, Nigeria, Senegal and Zambia was summarized in a [brief](#), highlighting that a better understanding of how food systems intersect with cities' institutional structures and political dynamics is needed for cities to effectively play their role in bolstering food security. Findings from this research are being integrated into projects on African urbanization and food systems led by the Alliance for a Green Revolution in Africa and the Global Alliance for Improved Nutrition.

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

A [study](#) assessed how much GHG emissions from agricultural production would change if agricultural support was abolished worldwide. Results indicate that, without subsidies paid directly to farmers, outputs of some emission-intensive activities and agricultural emissions would be smaller. Without agricultural trade protection, however, emissions would be higher.

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.

The work on trade policies and negotiations pivoted to address COVID-19. The [Food Trade Policy Tracker](#) was developed to map food export restrictions implemented by governments in response to the pandemic, showing that such restrictions have [interrupted progress toward economic integration in Africa](#) and [jeopardized food and nutrition security around the world](#). Several virtual events were held, on [how World Trade Organization members can support economic recovery and resilience](#), [COVID-19 and African agricultural trade](#), and prospects for [long-term recovery and resilience in Latin America](#). A brief examined the [impacts of the pandemic on informal cross-border trade](#), arguing that appropriate information and customs regulations are key to protect small-scale and female traders and that the crisis provides an opportunity to increase efficiency at border crossings. The [Africa Agriculture Trade Monitor](#) offered policy recommendations for improving the performance of agricultural exports in the context of the unprecedented uncertainty related to pandemic.

An [impact assessment of Ethiopia’s Direct Seed Marketing \(DSM\) system](#) – an innovation scaled up partly based on PIM research – found that DSM has led to a 26 percent increase in maize yields and a 5 percent increase in the share of maize harvest that is marketed.

[Results](#) from implementation of the [PIM methodology to measure food losses](#) in seven food value chains in six developing countries indicate that losses are highest at the producer level and that most product deterioration occurs before harvest. Losses were assessed in [vegetables in Senegal](#), [potato in Peru](#), [teff and milk in Ethiopia](#), [maize in Tanzania and Mozambique](#), and yam and groundnut in Ghana, and innovations to reduce losses were tested for [tomato in Nigeria](#) and [maize in Tanzania](#). A review of the literature on losses in the [fish value chain](#) was also carried out.

PIM researchers examined how an [innovative contract farming scheme](#) that bundles credit to help purchase Aflasafe (a cost-effective aflatoxin bio-control technology), training and extension on the use of the technology and a guaranteed price premium for products low in aflatoxin can help Senegalese groundnut producers gain access to regional and global markets. A [study](#) conducted in the central Ethiopian highlands revealed that introducing animal sheds in livestock markets can increase farmers’ market attendance and income. [Fish seed and feed business model prototypes](#) for socially inclusive tilapia value chains were identified in Ghana. Using primary data obtained from dairy farmers, traders and processors, a team examined the drivers of the transformation of the dairy sector in Uganda from a USD 2 million industry in 2008 to a USD 150 million industry in 2017; the [insights](#) gained can guide policy and investment decisions for upgrading other value chains prioritized for agro-industrialization in Uganda. A journal [article](#) explored avenues to facilitate better functioning and interconnectedness of the multiple SMEs active in the « hidden middle » (storage, logistics, transportation and distribution) of food value chains and help smallholder farmers better connect to this “hidden middle” to increase their incomes. A [study](#) drew lessons from five programs in Latin America on the best practices for taking climate change into account in the efforts to strengthen agricultural value chains.

Several studies were launched to analyze [the impacts of COVID-19 on value chains](#), with focus on fish in [Nigeria](#), [vegetables in Ethiopia](#), rice in Bangladesh, fish in India, maize in Uganda and cassava in Vietnam and Cambodia. An ongoing study on employment in [Malawi](#) included several rounds of surveys to assess the impacts of the pandemic.

The [Value chains knowledge portal](#) was updated. A [book](#) shed light on how value chain concepts and ideas are translated into development programming and interventions for achieving greater impact at scale.

Research on [innovative risk management products](#) continued to make progress, especially on the demand side. New [estimates](#) of farmers’ willingness-to-pay for crop insurance in India were generated, pointing to a sizeable demand provided that insurance products are customized to farmer requirements. A paper provided unique [evidence](#) on the ways in which heterogeneity in farmers’ risk exposure affects their demand for insurance. Another [study](#) found evidence that farmers value the complementarities inherent in a well-calibrated bundle of risk management tools (weather index insurance bundled with a drought-tolerant rice variety). Picture-based crop monitoring has now been [adopted by six institutions to improve their agricultural insurance and financing services](#) in Ethiopia, India and Kenya.

[Flagship 4 “Social Protection for Agriculture and Resilience”](#)

PIM researchers continued to collaborate with governments and implementing partners to assess the impacts of social protection programs on a variety of outcomes in Bangladesh, Egypt, Ethiopia, Ghana, India, Kazakhstan, Mali, Sri Lanka, Tanzania and Yemen.

In Egypt, PIM research led to improvements in the modalities of the [national cash transfer program](#) and of the [food subsidy system](#).

Evidence was generated on multiple aspects of Ethiopia's Productive Safety Net Programme (PSNP). An [evaluation of the nutrition-sensitive features of the PSNP](#) did not find significant impacts of these features on children's and mothers' nutrition outcomes, likely because of constraints in their implementation. Research demonstrated the potential of the [PSNP to mitigate adverse impacts of the COVID-19 pandemic](#) on food security. At the onset of the pandemic, household food insecurity increased by 11.7 percentage points and the duration of the food gap by 0.47 months. For PSNP households, the likelihood of becoming food insecure increased by only 2.4 percentage points and the duration of the food gap increased by only 0.13 month. PSNP participants were also less likely to reduce expenditures on health, education and agricultural inputs. An [evaluation of the environmental impacts of the PSNP](#) found that the program increased tree cover in rural areas and sloped terrains. A study showed that [PSNP beneficiaries prefer food to cash as part of their benefit transfer](#); though changes in the level of preference occur depending on food prices, the preference for food applies to all years.

In [Bangladesh](#), researchers continued to build on evidence from the Transfer Modality Research Initiative – a pilot program that provided food or cash transfers with or without group-based nutrition behavior change communication (BCC). A follow-up survey of participants conducted four years post-program was analyzed to understand longer-term impacts of the different transfer modalities on poverty; preliminary evidence indicates that households that received a combination of transfers with group-based BCC continued to experience sustained reductions in poverty four years after the program ended. Preliminary evidence from a six-month post-program survey on child development showed sustained improvements in children's home environment for households that received a combination of transfers and group-based BCC.

A study on the effectiveness of [Mali's social safety net "Jigisémèjiri" program](#), a multi-component cash transfer program, found that the program increased resilience by strengthening households' savings and asset base; cash transfers with communication activities on social protection, education, health and nutrition led to significant improvements in household welfare. Both women and men reported being happier as a result of the cash transfer component and reported learning new things as a result of the communication component.

A brief summarizing research on [India's National Rural Employment Guarantee Scheme](#) outlined its achievements and limitations, highlighting high heterogeneity across states in the program's effectiveness at targeting the poor.

New research on effects of social protection programs on education outcomes in [Tanzania](#) found that social protection programs boost educational outcomes for children with multiple indicators of vulnerability. The educational benefits of cash transfers were lower for children from poorer households than for children from less-poor households. In [Ghana](#), two years of participation in a government-led school feeding program resulted in improvements in children's schooling, cognition, and nutrition.

As part of the flagship's work on fragile settings, [results](#) on Yemen's Cash for Nutrition program showed that cash transfers and monthly group nutrition education sessions led by locally recruited community health volunteers significantly improved knowledge and practices for poor women with young children. A [study](#) found that in Rohingya refugee camps in Bangladesh, households' receipt of an electronic food voucher instead of a food ration is associated with improvements of the linear growth of Rohingya children between 6 and 23 months but not of measures of acute undernutrition or other anthropometric outcomes.

Social safety net policies expanded considerably during the COVID-19 pandemic, helping to prevent vulnerable populations from falling further into poverty and supporting households' recovery. A [brief](#) was produced to summarize the patterns that have emerged, using data from the [COVID-19 Policy Response Portal](#) (a Flagship 2 output) to identify how governments are targeting their efforts, which groups they are prioritizing, and whether citizens are satisfied with these interventions. Recommendations for implementing gender-sensitive social protection programming as a critical component of the response to COVID-19 were provided in a [brief](#) and [blog](#). A [short piece](#) in *Nature Food* outlined key conditions for social protection schemes to successfully buffer the effects of economic slowdowns and downturns on food security caused by pandemics or other crises.

[Surveys on the impacts of COVID-19 restrictions on delivery of health services in Ethiopia](#) revealed that Health Extension Workers spent significant time providing guidance on coronavirus protective measures and addressing immediate threats to human life (severe malnutrition, HIV/AIDS) while reducing time allocated to antenatal care and family planning – with potential adverse long-term effects.

[Flagship 5 “Governance of Natural Resources”](#)

PIM research on tenure continued to focus on three themes:

- Analysis of land tenure reforms: Research in [Ethiopia](#) showed that second stage land certification has stimulated land rental markets but reduced land access by women and youth. A study in [Uganda](#) highlighted the lack of resources for implementation of forest tenure reforms. A [review of land reforms](#) found that such reforms can lead to broader growth but that they are generally unsuccessful unless accompanied by complementary investments.
- Research on women's land rights: PIM's [conceptual framework](#) on women's land tenure security and poverty reduction shows the importance of clearly measuring women's tenure security. Analysis of gender outcomes following forest tenure reforms in [Indonesia](#) showed differences in approaches and outcomes between the national, provincial and local levels. A [framework for monitoring and evaluating land governance in Africa](#), containing multiple gendered indicators, was prepared for piloting in Intergovernmental Authority on Development (IGAD) countries. A guidance note on [gender and pastoralism](#) was produced in collaboration with the International Fund for Agricultural Development.
- Studies of community resource rights: outputs include global syntheses ([review](#) of the challenges faced by communities in 15 countries in preventing their land from being allocated to investing companies, brief proposing solutions for [securing land rights for indigenous peoples](#) in partnership with the International Land Coalition and Global Land Programme, toolkit on [preventing land use conflicts in pastoral areas](#)) as well as regional and country level outputs: analysis of the [hybrid tenure approach for water allocation](#) in Sub-Saharan Africa, assessment of land tenure rights of local communities and indigenous peoples in [Kenya](#), implementation of land use planning to secure villagers' customary land rights for enhanced community livelihood and food security in [Laos](#), lessons on linkages between collective tenure and investment in [Guatemala, Mexico, Namibia and Nepal](#) and operationalization of a tool for identifying intervention points to support the tenure- and governance-enabling environment for community forest enterprises in [Nepal](#). The [Promise of Commons](#) initiative, which is supported by PIM activities, received a [Co-Impact design grant](#) for scaling work on securing tenure and improving governance of the commons in nine states in India.

PIM's contributions to the topic of landscape governance spanned a range of participatory approaches, such as: [participatory land use development](#) to assess land-use strategies toward multiple ecosystem services (Vietnam); Participatory Prospective Analysis for identifying drivers of tenure insecurity and developing a pathway to a desired future forest

tenure system in [Kenya](#), [Uganda](#) and [Nepal](#); [Bayesian Belief Network Analysis](#) to enhance rangeland governance and identify restoration projects in Tunisia; [Adaptive Collaborative Management](#) to help forest communities manage natural resources in a more equitable and sustainable way in Nicaragua; [tool for assessing indigenous women's participation](#) in their communities and territories developed with the Rural Indigenous Women's Association in Peru; [multistakeholder platforms used by International Land Coalition's National Engagement Strategies' facilitators](#) for effective engagement in policy reform advocacy and people-centered land governance; facilitated process of [community engagement to enhance social inclusion through local dialogue](#). Synthesis pieces were published on [multistakeholder fora](#), especially on [how context affects the outcomes of these fora](#). Researchers examined the influence of [community seed banks](#) on the socio-ecological resilience of communities in Guatemala. [Lessons](#) from implementation of [payments for agrobiodiversity services](#) (PACS) in Latin America were reviewed and the potential of PACS to safeguard crop varieties in [Guatemala](#) was assessed.

The lessons from the flagship's work on collective action were applied to [COVID-19 responses](#), highlighting the challenges of physical distancing as well as the potential and limitations of information and communication technologies as a substitute, especially in contexts of unequal access to such technologies.

Progress was made on a series of synthesis notes that span the flagship's work and its linkages to the five impact areas of One CGIAR, scheduled for publication in 2021. PIM joined forces with FTA and WLE to take stock of [CGIAR's work on restoration](#) to support the design of future restoration projects and help scale up restoration efforts and deliver enhanced impact from CGIAR research on this topic. Dissemination activities included virtual meetings with partners and webinars on [migration and gender dynamics in irrigation governance in Nepal](#), [restoration of degraded land for food security and poverty reduction for East Africa and the Sahel](#), and [institutional innovations to improve rangeland governance in Tunisia](#).

The use of participatory approaches helped generate several outcomes. A toolkit was used to facilitate a Multistakeholder Dialogue Platform that triggered [advances in biodiversity conservation and enhanced livelihoods across the Kenya-Somalia border](#). "[How are we doing?](#)" – a PIM tool for self-monitoring of effectiveness of multistakeholder fora – was adapted by the [Peruvian Service for Natural Protected Areas](#) to [enable more equitable co-management of 76 protected areas](#). Foundation for Ecological Security [deployed guidance on the use of multi-actor platforms for landscape governance and restoration](#) among partner networks across six states in India.

Flagship 6 "Cross-cutting Gender Research and Coordination"

The flagship team delivered high-quality research products, supported incorporation of gender analysis in other flagships, and managed the transition from the [CGIAR Collaborative Platform on Gender Research](#) to the new self-standing [GENDER Platform](#).

The flagship's work on methods for gender research continued to generate new tools. The [project-level Women's Empowerment in Agriculture Index \(WEAI\) for Market Inclusion](#) was deployed for monitoring and evaluating the gendered effects of inclusive agricultural interventions along value chains. Compared to 2019, in 2020 five new organizations and two new countries used a version of the WEAI (WEAI, Project WEAI, Abbreviated WEAI or pilot version of project-level WEAI for Market Inclusion), bringing the total number of WEAI users to 108 organizations in 56 countries. Guidelines on collecting [gender-sensitive measures of freedom of movement](#) in agricultural value chains were piloted in Benin and Malawi. In Southeast Asia, a [guidance note](#) was developed for gender-inclusive agro-advisory services. Researchers published [results](#) from using mobile phone data and phone surveys to train machine learning models to predict indicators of women's economic empowerment (joint work with the Big Data Platform). Results from a study in Bangladesh showed that [disagreement](#)

[between spouses in household surveys](#) is both economically meaningful and systematic; women were much more likely to report that they owned assets or made decisions than men were to recognize these roles, with variable levels of disagreement across categories of assets and types of decisions. A [brief](#) assessed the ways in which gender concepts have been operationalized in practice in agricultural development projects in Latin America. Eight blog posts on new approaches to collecting gender data were published on PIM's [Engendering Data blog](#).

PIM continued to work with [Integrated Seed Sector Development \(ISSD\)-Africa](#) on the project's [gender module](#). Joint work with Flagship 1 in Uganda highlighted that [providing agricultural information directly to women](#) (as opposed to male heads-of-household) through videos can increase women's agricultural knowledge and significantly improve yields on plots managed by women. Work on [aspirations and their impact on women's decision making in Central Asia](#) was presented to partners in Central Asia. A [study](#) in Papua New Guinea found that economic conditions and especially perceptions of relative poverty can influence gender attitudes. In Ethiopia, research on the [gendered impacts of decentralizing service delivery](#) and policy lessons for ensuring that service providers meet the needs of women farmers were shared with partners. In Mali, work on the [gendered effects of a government cash transfer program on migration](#) provided lessons for implementation by the government. A joint study with Flagship 5 in Nepal shed light on strategies to ensure women's participation in irrigation management decisions. Findings on [gendered patterns of asset ownership in Egypt](#) and on [ways to strengthen gender equality in the agricultural sector in the MENA region](#) were disseminated. Results on interventions to reduce intimate partner violence (IPV) were incorporated into the [implementation package](#) of the World Health Organization's "RESPECT women: Preventing violence against women" framework, and researchers in Ethiopia contributed to [Unite for a Better Life](#), a gender-transformative participatory intervention delivered to men, women, and couples to reduce IPV.

Several outputs focused on the intersection of gender research and COVID-19. [Insights](#) were collected on [safeguarding gender research during the pandemic](#) and on the use of [phone surveys to understand gendered impacts of COVID-19](#). Journal articles drew out potential [gendered effects of COVID-19 and of the responses to COVID-19](#) and offered perspectives on [how the COVID-19 crisis and responses to the crisis could either be a setback or offer opportunities to strengthen gender equality](#) in food systems.

Several synthesis products were published as part of the ongoing effort to package PIM's legacy for future use. A [chapter](#) drawing on CGIAR gender and value chain research was published in the *Routledge Handbook of Gender and Agriculture*. Three synthesis briefs were disseminated, on [methods for measuring women's empowerment](#), [gender and rural transformation](#), and [gender dynamics in seed systems development](#). Progress was made towards publication in 2021 of the book "*Advancing Gender Equality through Agricultural and Environmental Research: Past, Present and Future*", which will lay the foundations of the next generation of CGIAR gender research. A [webinar](#) discussed key gender issues and entry points for policy research and outreach, focusing on ways to integrate gender into each stage of the research process. A [review of PIM 2018-2019 gender research publications](#) analyzed 391 peer-reviewed publications, highlighting key gender findings and discussing the challenges faced by researchers in conducting gender analysis with a view to documenting lessons learned and improving practices.