2021 PIM Partnership Evaluation

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List of Acronyms

AR4D	agricultural research for development
CRP	CGIAR Research Program
CSO	civil society organization
CP	Country Programs
DSM	direct seed marketing
FAO	Food and Agriculture Organization of the United Nations
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GPG	global public good
IDO	intermediate development outcome
IEA	Independent Evaluation Arrangement
IFPRI	International Food Policy Research Institute
INGO	international nongovernmental organization
IP	impact pathway
ISPC	Independent Science and Partnership Council
MARLO	Managing Agricultural Research for Learning and Outcomes
MSP	multistakeholder partnership
NARES	national agricultural research and extension systems
NGO	nongovernmental organization
OICR	outcome impact case report
PI	principal investigator
PIM	Policies, Institutions, and Markets
PSNP	Productive Safety Net Programme
SDG	Sustainable Development Goal
SLO	system-level outcome
SSA	Africa south of the Sahara
SSP	Strategy Support Program
Sub-IDO	sub-intermediate development outcome
ToC	theory of change
W1, W2, W3	Funding Windows 1, 2, and 3

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Executive Summary

Background and Context

Background

The CGIAR Research Program (CRP) on Policies, Institutions, and Markets (PIM) operated from 2011 to 2021. It was a global, agricultural, research-for-development program led by the International Food Policy Research Institute, with contributions from all 15 CGIAR research centers and four external managing partners. PIM's research priorities were focused on addressing a set of core constraints related to policies, institutions, and markets through four main channels of influence: global agenda-setting, national policy support, program and market innovations, and longer-term capacity development. The aims of the policy-oriented research led by PIM included: improving the livelihoods of poor farmers, both men and women; increasing the supply of nutritious and affordable foods; and protecting soil, water, and biodiversity in rural landscapes. Research and capacity strengthening activities were undertaken in Africa south of the Sahara (SSA), in South Asia, in selected countries in East and Southeast Asia, Latin America, the Middle East and North Africa, Central Asia and the Caucasus, and in Papua New Guinea. PIM Projects were embedded within six overarching areas of emphasis called flagships:

- Flagship 1: Technological innovation and sustainable intensification
- Flagship 2: Economywide factors affecting agricultural growth and rural transformation
- Flagship 3: Inclusive and efficient value chains
- Flagship 4: Social protection for agriculture and resilience
- Flagship 5: Governance of natural resources
- Flagship 6: Cross-cutting gender research and coordination

Purpose

The evaluative study focuses primarily on PIM's external partners; this includes partnerships where PIM is engaged by another organization as a service provider and trusted advisor. The objective is to undertake an in-depth analysis of PIM partnerships and to elicit lessons on the key factors contributing to their success in achieving outcomes. The aim is to generate: (1) an inventory of partnerships; (2) an understanding of the motivations for partnership formation, and of the partnership dynamics in promoting innovations and policy change; and (3) an assessment of strengths, weaknesses, and opportunities to foster stronger future partnerships.

This evaluative study serves the dual purposes of accountability to CGIAR partners and funders and of learning. The primary intended users are CGIAR researchers and partners. The findings and lessons learned will also provide input into the implementation of new initiatives under One CGIAR.

Method

A predominately mixed methods design is implemented. It draws upon: (1) a desk review of existing data; (2) data from two different online questionnaires administered to PIM researchers and external partners; and (3) virtual interviews with PIM researchers and administrators. The qualitative method uses (descriptive) narrative analysis, and the quantitative data collection and

analysis—which is applied concurrently when such data are available—uses basic statistical techniques.

Limitations

Several limitations were noted and were mitigated to the extent possible. Little could be done, however, to overcome the greatest limitation, which was the timing of the evaluation. As it was undertaken in the final two months of PIM's operation, PIM's key internal and external stakeholders had only a limited time to participate in the interviews and/or surveys. The evaluation team also had less than the optimal amount of time to identify information gaps and obtain feedback from follow-up questions. The other major limitations were inconsistencies in how partnership information was collected and stored over time, and a lack of detailed information on what did and did not work, and why. While these limitations affected the depth of the analysis, they do not bring into question either the fundamental findings or the recommendations.

Analysis of Evaluative Evidence

Theme I: Partnership design at activity, flagship, and program level

Main types of partnerships and partnership modalities

Number and geographical location of partners

PIM was a highly collaborative global research program that made a concerted effort to work with many research and delivery partners. During Phase 2, PIM researchers collaborated with at least 677 unique partners. The key partner types were universities (23.6 percent), government agencies (19.1 percent), national and local research institutes (13.4 percent), international and national/local NGOs (12.9 percent), and private companies (6.5 percent).

The number of partners and the composition of partners by type varied significantly across geographic regions. Of the 677 partners, 228 (33.7 percent) have their headquarters in SSA, 115 (17.0 percent) in North America, and 106 (15.7 percent) in Europe. PIM also collaborated with 146 partners (21.6 percent) in Asia as a whole. The remaining 12.1 percent of PIM partners have headquarters in Latin America (and Jamaica), the Middle East and North Africa, Central Asia and the Caucasus, Australia, and Papua New Guinea.

In SSA, 25.0 percent of partners are classified as government, 21.5 percent are national/local research institutes, and 11.0 percent are universities. In contrast, 47.0 percent of PIM's North American partners are universities, 13.9 percent are international nongovernmental organizations (INGOs), and 9.6 percent are private companies. In Europe, in a ratio similar to that of North America, 34.0 percent of PIM's European partners are universities and 16.0 percent are INGOs; however, unlike North America, the third-largest percentage (16.0 percent) is made up of international/regional research institutes rather than private companies. Among PIM partners whose headquarters are in Asia, 28.1 percent are classified as government, 19.9 percent are universities, 17.1 percent are national/local research institutions, and 10.3 percent are national/local NGOs. In Latin America, 26.1 percent of partners are government, 13.3 percent are universities, and 15.2 percent are private companies.

Multistakeholder partnerships

Since the 2008 CGIAR reform, there has been an increased push for all CRPs to develop more innovative multistakeholder partnerships. Recognizing the importance of partnership for policy

innovation and impact, PIM actively collaborated with multiple research and delivery stakeholders along impact pathways; it also engaged in public–private partnerships by collaborating with both national and international private sector partners. In 2021, the average number of partners per PIM Project was 23 and the average number of partner types was 7.2; moreover, 71.1 percent of the 45 PIM Projects had 5 or more partner types and 31.1 percent of Projects engaged with more than 10 partner types.

Partnership modalities

This study used 2021 PIM partnership data to obtain an indication of whether the multistakeholder partnership (MSP) is a research partnership or an agricultural innovation delivery partnership, and the extent to which regional and/or international organizations are engaged in the MSP. Even allowing for data and analysis limitations, the results indicate that PIM primarily engaged in MSP modalities that prioritized impact at a local level, and in partnership structures that linked to global scales. Engagement in these types of partnership modalities increases the likelihood that PIM research has, or will, contribute to the achievement of the Sustainable Development Goals (SDGs) through CGIAR system-level outcomes (SLOs).

Partnerships and budgets

Across CGIAR, uncertainties associated with funding were expected to significantly constrain partnering and thus the delivery of CGIAR SLOs. PIM, however, proved to be adaptive and innovative in addressing the financial challenges to partnership; this is evidenced by the increase in the number of its research and delivery partners despite a significant decline in its budget from 2018 to 2020.

Factors considered for partner selection

PIM recognized that the contribution of partnerships to the quality, dissemination, and adoption of research outputs (policy recommendations, tools, frameworks, innovations) is dependent on selecting partners that have the necessary skillsets, knowledge, experience, and other attributes that help to ensure that the requirements of the next-stage and end users are met and that scaling is optimized. In addition to the scope of the research and capacity strengthening activities and geographic focus, PIM researchers considered a range of specific factors when selecting partners. These factors included: (1) the added value a partner could bring to the agricultural research for development (AR4D) activity; (2) the partner's capacity and willingness to develop, engage in, and maintain strong long-term relationships; (3) the strength of the partner's incentive to undertake research and/or delivery activities; and (4) the partner's capacity and willingness to share information and credit for success.

PIM's partner selection process is broadly aligned with the literature on partnerships for sustainable development with one exception; issues of accountability and of monitoring and evaluation do not appear to have been considered. Moving forward, One CGIAR should promote the implementation of a transparent, accountable, and participatory monitoring systems because addressing the challenges of complex and systemic change requires the development of partnership structures that have the capacity to evaluate partnership performance and the flexibility to revise and modify partnership roles and structures based on lessons learned.

Theory of change impact pathways and partner selection

PIM's theory of change (ToC) and the nested flagship impact pathways (IPs) provided a useful conceptual framework for identifying major constraints to achieving impact, the validity of underlying assumptions, and the key actors along the impact pathway. The relevance and usefulness of these frameworks would nevertheless be increased if:

- All intended outcomes were clearly defined and charted in a detailed pathway, one that more fully describes the sequence of logically linked causal relationships and clearly sets out how the research process contributes to development outcomes. Without this level of detail, the ToC is a limited tool for measuring success.
- More granulated, context-specific sub-ToCs and IPs for research activities and geographies are needed to guide implementation and to measure and communicate success. These sub-ToCs and associated IPs should provide information on the role of partners from design to delivery, the requirements and limitations of end users, the actions necessary to address the needs of next-stage and end users, and the underlying assumptions and risks.
- The dual contribution of policy outputs and production of global public goods (GPGs) should be reflected in the ToCs and associated IPs.
- ToCs and IPs should be developed in partnership with key stakeholders as they can provide valuable on-the-ground information; a more inclusive process will also increase the stakeholders' understanding of how their efforts contribute to the change process.
- ToCs and IPs should be revisited and revised regularly throughout the project life cycle as progress is made, and new opportunities and obstacles are identified.

Adjustments in partnerships

Despite budget shortfalls and uncertainty, between 2019 and 2021 there was a substantial increase in the number of innovation and delivery partners. This counterintuitive result was driven by PIM's ability to leverage resources from internal and external partners; however, there are three key reasons why this is not sustainable in the long run. First, the reduction in core funds and the subsequent influence of donor funding limits the freedom to engage in innovative/exploratory partnerships. Second, developing and maintaining effective partnerships requires resources and finances; as a result, funding sources, rather than science, can drive decisions on where and with whom to engage. Third, from a partner perspective, the decline in CGIAR funding results in less funding going to partners; this may adversely impact the quality of their research and/or their willingness to engage with CGIAR.

Moving forward, therefore, One CGIAR needs to prioritize stakeholder engagement and provide enough resources to create and maintain innovative and adaptive public and private sector partnerships that both inform research priorities and accelerate the progression from research design and implementation to development outcomes and impacts at scale. One CGIAR currently has the chance to engage more closely with partners in the early implementation phase of the new initiatives. Every effort should be made to seize this opportunity.

Theme II: Partnerships for policy influence

Collaboration between PIM researchers and a variety of external partners was key to influencing decision-making through research. Without active inputs from a diverse set of external organizations that can contribute with relevant expertise and resources, it would have been

exceedingly difficult for PIM researchers to produce research outputs that influence the decisions and practices of the intended end users. In that sense, it is encouraging to see that PIM partnerships between researchers and external partners received increased attention over the life of the program.

According to the results of the online questionnaire to PIM researchers, the most common avenue that they pursue to influence end user behavior is "changes in government investment priorities and budget allocations related to rural development research and interventions" (33 percent); this is followed by "changes in laws, regulations, and property rights related to rural development" (24 percent).

The documented increase in partnerships is encouraging as it increases the likelihood of PIM research influencing public policy. This increase notwithstanding, a larger number of partnerships does not necessarily mean that PIM research outputs will have greater influence. In fact, the review found no evidence of a causal link between the total number of external partners and policy influence. What does seem to matter more than the total number of partners is the diversity of partner types. When a PIM study has a variety of partner types (including government, research, community, and private sector), there is a significantly increased likelihood that it will produce influential research outputs.

With inputs from a large number of PIM researchers, the evaluation team identified 10 enabling conditions for effective PIM research partnerships. This resulted in a quantitative index of "enabling partnership conditions" for PIM research. The regression analysis in Section 2.2. finds that the higher a PIM-supported study scores on the enabling partnership index, the more likely it is that it will influence end user decisions (as measured by three different measures of influence).

There are opportunities for diversifying partnerships so that they encompass a greater variety of partner types in future versions of PIM research in One CGIAR. The average number of different partner types per PIM study was two, and 46 percent of all sampled PIM studies reported having just one partner or none at all. The results suggest that PIM research would benefit from investing in enhanced diversification of partners.

Theme III: Partnerships for scaling innovations

Effective partnership arrangements

PIM engaged with a range of key stakeholders along the AR4D pathway and developed MSP modalities that were designed to disseminate innovation at the local and global scale. There is a disconnect between the time to impact and the lifespan of a research activity or even a CRP; PIM, however, has had some success in contributing to scaling up innovations, largely through forming innovative partnerships around those innovations with, for example, the private sector, NGOs, civil society organizations (CSOs), farmer advisory or extension organizations, and government agencies. Key examples, all of which are in Ethiopia, include: direct seed marketing; case studies of Digital Green's use of video to introduce innovative agricultural practices, and the Productive Safety Net Programme to reduce vulnerability to food insecurity.

The outcome impact case reports (OICRs) document PIM's "spheres of influence"; they also track (positive) changes among key actors along the impact pathway and highlight any impacts at scale or beyond CGIAR's direct province. Of the 76 reports, 40.8 per cent are examples of a change in the key actors' dialogue and/or the behavior among key actors that was induced by PIM research; 57.9 percent are examples of documented changes in policy or practice by the

key actors. Only one OICR provided evidence of impact at scale. Next-user uptake was noted in 18.5 percent of the 108 innovations listed in PIM annual reports for 2018 to 2020.

While these examples provide indications of successful collaborations with national and international implementation and delivery partners, they do not provide a comprehensive measure of partnership effectiveness. More detailed evaluative studies are needed on the types of partnerships and partnership modalities required to establish an enabling environment for change, and on the effectiveness of those partnerships; such studies can help guide future partnership selection, processes, monitoring, and evaluation.

Missed opportunities to form partnerships

While PIM made a concerted effort to develop and strengthen strategic partnerships and partnership modalities, there were still missed opportunities where potential strategic partnerships around research programs related to PIM innovations did not develop. These partnership shortfalls and missed opportunities limited the dissemination of policy advice and innovations.

To reduce the incidence of missed opportunities in future and to increase the value of partnerships, One CGIAR will need to give more attention to: (1) the essential roles that a range of different partners play along the impact pathway; (2) the priorities of partner organizations and the needs of the intended beneficiaries; (3) the resources and commitment required to fully develop and strengthen long-term partnerships; and (4) the increasing need for more strategic and innovative partnership modalities.

Theme IV: Attracting key partners

Too much focus on increasing the total number of partners can be detrimental to the cost-effectiveness of future CGIAR research. In the online questionnaires, both the sampled PIM researchers and the external partners indicated that the main constraint/cost associated with PIM-led partnerships was the time required for collaborative activities. As researchers seek to attract new strategic partners, it is important to be cognizant of the time requirements of partnership work; for effective collaborations, the time commitment is considerable. For these reasons, as researchers seek to enhance the diversity of partner types, it is important that the overall numbers of partners are managed carefully to avoid imposing an even greater workload on all parties without necessarily adding value.

Downstream, external partners can play an important role in defining future partnership strategies. The results presented in Section 2.4 suggest that partner organizations may play a key role in the analysis of strategic partnership development. Downstream partners are often closer to end users and thus know how their decision-making works; these downstream partners' social knowledge of political networks and influencers may help CGIAR researchers identify new partner organizations that could help shape and disseminate research outputs for greater impact. According to the external partners' perspective that is analyzed here, future CGIAR partnership activities would become even more effective and influential if these research partnerships could find ways for rural communities and national researchers to be more directly engaged in partnership activities. It is imperative that One CGIAR initiatives be codeveloped with a variety of external partner organizations.

One of the most important assets that all CGIAR centers possess when it comes to attracting strategic research partners is the center brand. A CGIAR center, such as the International Food Policy Research Institute (IFPRI), for example, is a prestigious partner to have by your side. As

One CGIAR moves forward with its numerous initiatives, it seems important to find ways to capitalize on this well-established brand recognition. It is possible that using new acronyms for each new initiative may hamper efforts to attract key partners to new One CGIAR initiatives.

Theme V: Reporting on and evaluating partnerships

A disaggregated framework for understanding partnership effectiveness was recently developed and implemented. This framework is based on the premise that the contribution of a specific research and innovation partnership is realized through a set of intermediate pathways. The two key intermediate pathways along which to trace and measure the increased capacity to influence policy among CGIAR partners are the external collaboration pathway and the social, economic, and environmental impact pathway.

The results from the PIM partner survey suggest that the cost-effectiveness of partnerships would improve if existing partner organizations were involved more closely in the strategic analysis of external partners and their potential contribution to CGIAR research.

Strengths and Weaknesses

Key strengths that facilitated PIM's achievements include:

- Its ability to develop and engage in innovative partnership modalities;
- Its adaptive and innovative culture in partner engagement; and
- Its pragmatic approach to building partnerships.

Key weaknesses that could have limited PIM's achievements include:

- Incomplete monitoring and evaluation systems for partnerships;
- Limited information on unsuccessful partnerships; and
- Failure to capture lessons learned during the OICR selection process.

Recommendations

Recommendation 1: One CGIAR should prioritize stakeholder engagement in the design, development, and early implementation phases of new research, innovation, and capacity strengthening activities and initiatives.

Recommendation 2: One CGIAR should strengthen the capacity for measuring partnership effectiveness through a coherent, participatory approach to monitoring and evaluating partnerships.

Recommendation 3: To reduce the incidence of missed opportunities and increase the value of partnerships, One CGIAR should give more attention to developing a consultative partnership strategy that addresses the increasing need for more strategic and innovative partnership modalities, including the long-term engagement of a diverse set of partners that complements the skills and resources of One CGIAR researchers.

Recommendation 4: One CGIAR should promote the development and use of detailed, granulated, context-specific ToCs and IPs that are: (1) developed in partnership with key stakeholders in an inclusive, participatory process; (2) revisited and revised regularly; and (3) used for measuring progress, capturing lessons learned, and communicating results**.**

Recommendation 5: One CGIAR should promote the documentation and widespread use of lessons learned from annual analyses of progress toward outcomes.

1 Background and Context

1.1 Background

In 2008, CGIAR underwent a major reform that aimed to address a number of challenges, including "the lack of a clear mission-oriented research focus, the proliferation of uncoordinated CGIAR entities and programs, and the growing dependence on bilateral funding, often with a strong focus on development at the expense of science" (Birner and Byerlee, 2016, p. ix). The key result of this reform was the development of large multipartner entities called CGIAR Research Programs (CRPs), which commenced operations in 2011. Each CRP was jointly managed by several CGIAR centers, with the aim of creating new research synergies between CGIAR centers that had not previously collaborated in a systematic fashion. In most cases, co-management also included external partnerships. The explicit intention of this reform process was the full integration of CGIAR centers' research portfolios around one strategic results framework that articulated its overarching system-level outcomes (SLOs); these included reduced rural poverty, improved food security, improved nutrition and health, and sustainably managed natural resources. "This re-shaping of CGIAR included a more explicit conceptualization of CGIAR as a partnership, and making partnership more central to research planning and implementation" (CGIAR–IEA, 2017b, p. 1).

The CRP on Policies, Institutions, and Markets (PIM) was established in 2011 and operated over the two CRP funding phases; Phase 1 extended from 2011 to 2016 and Phase 2 from 2017 to 2021. PIM was a global program led by the International Food Policy Research Institute (IFPRI) with contributions from all 15 CGIAR research centers and four external managing partners; the latter included the KIT Royal Tropical Institute, Michigan State University, University of Oxford, and Wageningen University & Research (WUR). The CRP led "action-oriented research to provide support for policies that help poor farmers, both men and women, improve their lives; produce nutritious and affordable foods; and protect the soil, water, and biodiversity in rural landscapes"[1] Research activities and capacity strengthening were undertaken in Africa south of the Sahara, South Asia, and selected countries in East and Southeast Asia, Latin America, the Middle East and North Africa, and Central Asia and the Caucasus, and in Papua New Guinea. Being an integrated, interdisciplinary research program, PIM Projects were embedded within six overarching areas of emphasis called flagships:

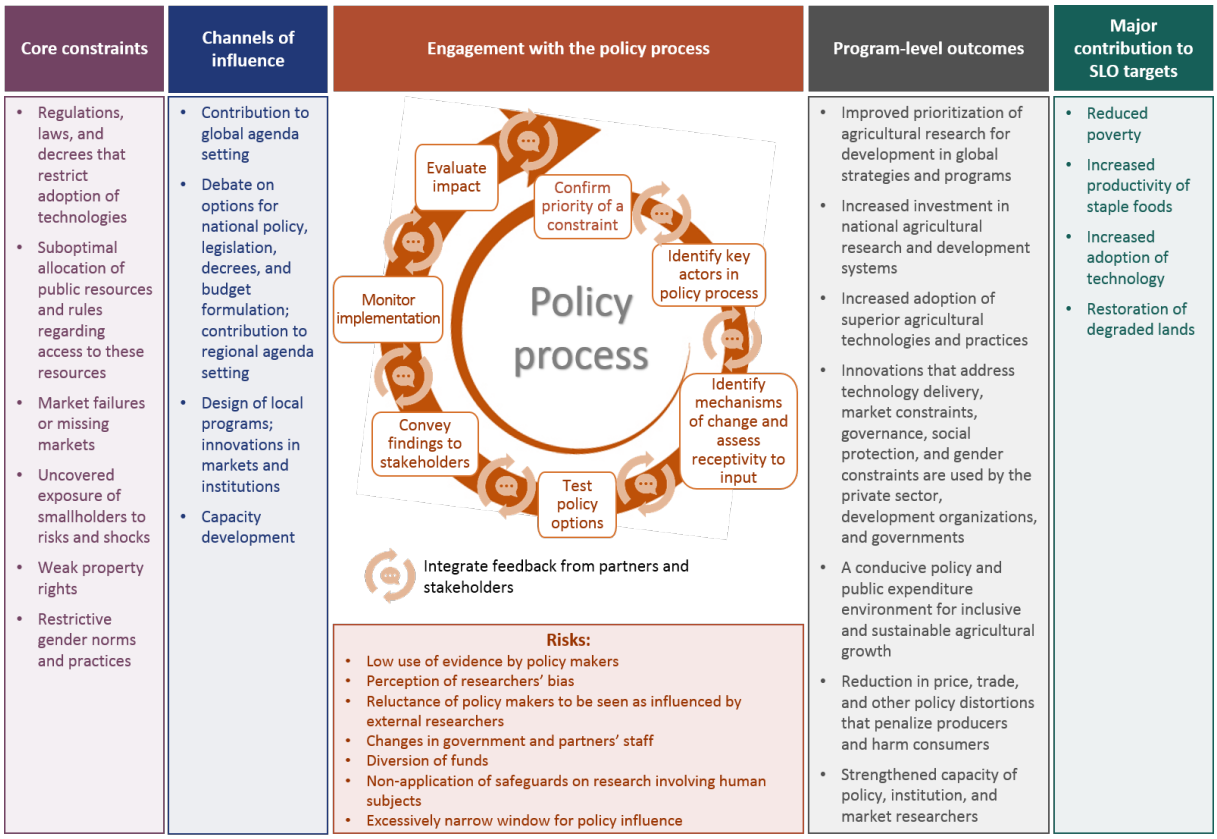
- Flagship 1: Technological innovation and sustainable intensification
- Flagship 2: Economywide factors affecting agricultural growth and rural transformation
- Flagship 3: Inclusive and efficient value chains
- Flagship 4: Social protection for agriculture and resilience
- Flagship 5: Governance of natural resources
- Flagship 6: Cross-cutting gender research and coordination

(For more information on the flagships, see Tables A.1 to A.6.)

[1] CGIAR. n.d. *Policy Research for a Food Secure Present and Future*. Washington, DC: CGIAR Research Program on Policies, Institutions, and Markets. https://www.cgiar.org/research/program-platform/policies-institutions-and-markets/

As the CRPs moved into Phase 2, they became more familiar with the concept of theory of change (ToC) and its components, including outputs, sub-intermediate development outcomes (sub-IDOs), intermediate development outcomes (IDOs), SLOs, risks, and assumptions. With this familiarity, there was an increased capacity of the CRPs to develop ToCs and their nested impact pathways (IPs). Figure 1 depicts an abridged version of PIM's ToC. PIM's research priorities were focused on addressing a set of core constraints related to policies, institutions, and markets through four main channels of influence: global agenda setting, national policy support, program and market innovations, and longer-term capacity development (left-hand columns). Diagnostic studies of constraints and opportunities in policy processes increase the likelihood of success (central spiral and list of risks). The columns on the right describe the major program-level outcomes that PIM sought to achieve and 4 of the 10 CGIAR SLO targets to which PIM contributed.

Figure 1. Policies, Institutions, and Markets (PIM) theory of change



Source: CGIAR. n.d. *Theory of Change and Impact Pathways*. Washington, DC: CGIAR Research Program on Policies, Institutions, and Markets. https://pim.cgiar.org/impact/theory-of-change-impact-pathways/.

Nested under PIM's ToC are six flagship IPs. In each case, the progression from flagship outputs to flagship-specific outcomes, to sub-IDOs to IDOs is articulated. (For completeness, the PIM ToC is also presented in Figure B.1 and the flagship IPs are presented in Figures B.2 to B.7.)

PIM activities are carried out with support from the CGIAR Trust Fund through funding windows 1, 2, and 3 (W1/2, W3), as well as through bilateral funding agreements. Key supporters of PIM during Phase 2 are presented in Table C.1. The average annual PIM expenditure for Phase 2 (2017–2021) was almost US$60 million, with around 28 percent coming from W1/2 (see Table D.1). The relative sizes of the flagships are evident from the expenditure data provided in Table

D.2, with average annual expenditure ranging from US$2.5 million (Flagship 6) to US$22.7 million (Flagship 2).

1.2 Purpose

Along with the other CRPs, PIM was evaluated twice, once toward the end of Phase 1 and again in 2020. The 2020 PIM review concluded that,

> PIM would benefit from intensifying its efforts to research and learn from its past experiences with regard to how effective partnerships and networks are built and maintained and how they have affected the planning, organizing, and outcomes of its policy influence, institutional innovation, and capacity-strengthening efforts (CGIAR Advisory Services Shared Secretariat [CAS Secretariat], 2020, p. 27).

A key recommendation of the 2020 PIM review was, "Recommendation 1.3: Carry out an independent review to collect lessons from PIM's partnerships within and outside of CGIAR and the extent to which these contributed to achievement of policy changes and other outcomes" (ibid, p. 29).

In response to Recommendation 1.3, PIM management commissioned this evaluation to undertake an in-depth analysis of PIM partnerships and to elicit lessons on the key factors contributing to their success in achieving outcomes. The aim is to generate: (1) an inventory of partnerships; (2) an understanding of the motivations for partnership formation and of the partnership dynamics in promoting innovation and policy change; and (3) an assessment of strengths, weaknesses, and opportunities to foster stronger partnerships in the future. As such, this study serves the dual purpose of learning, and accountability to CGIAR partners and funders. The primary intended users are CGIAR researchers and partners. The findings and lessons learned will also be useful in implementing new initiatives under One CGIAR.

1.3 Method

In line with the 2017 evaluation of CGIAR partnerships, a PIM partnership is defined throughout this evaluative study as a recognized relationship between PIM and other institutions, within or external to CGIAR, to jointly undertake activities that contribute to each institution's mandate (CGIAR Independent Evaluation Arrangement [CGIAR–IEA], 2017b). In this study, the primary focus of the evaluation is on PIM's external partners and includes partnerships where PIM is engaged by another organization as a service provider and trusted advisor.

As noted above, the CGIAR reform process continued even after the formation of the CRPs. CGIAR, for example, went through two cycles of developing its Strategy and Results Framework (SRF), one in 2011 and another in 2015 (CG Space, 2015). This resulted not only in revisions to the CGIAR goals and research agenda; CRPs were required to continuously evolve within and across the two funding phases, particularly in terms of the CRPs' management structure, their ToCs, the organization of their individual research portfolios, and changes in CGIAR reporting and monitoring requirements.

In 2020, in another ambitious reform, One CGIAR began to further streamline the governance, operational structures, and processes across CGIAR. It is guided by the 2030 Research and Innovation Strategy, with a completely new research modality being launched in 2022 (CGIAR System Organization, 2021). The continuously evolving CGIAR has implications for the context in which this evaluative study on partnerships was conducted. In light of the prominence given

in the new strategy to policy outcomes, policy advice, and policy research, it was important to adopt a summative and formative approach and to look backward over the life of PIM as well as forward to One CGIAR, with recommendations having a strong formative element.

A predominately qualitative mixed-methods design is implemented drawing upon a desk review of data. While the qualitative method uses (descriptive) narrative analysis, quantitative data collection and analysis is applied concurrently with the qualitative analysis and uses basic descriptive statistics for themes where quantitative data are available (e.g., data from CGIAR reporting systems, and PIM researcher and non-CGIAR partner surveys).

Synthesis of evidence relies on an examination of purposely selected data and documents and of key informant feedback obtained through interviews and questionnaires. The primary sources of the evaluative evidence used in this study include:

- CGIAR Managing Agricultural Research for Learning and Outcomes (MARLO) data on PIM partners;
- PIM CRP reviews, evaluations, annual reports, outcome impact case reports (OICRs), case studies, activity plans, and flagship insights;
- CGIAR system-wide reviews, evaluations, and syntheses;
- relevant non-CGIAR evaluations of partnerships;
- interview data collected from PIM researchers; and
- survey data collected from PIM and partner questionnaires.

A list of the PIM researchers who were interviewed is provided in Table H.1, and a bibliography of the source material is provided in Annex I.

The evaluative evidence is collected, aggregated, and reported around a set of themes and key evaluation questions that are set out in Table 1.[2]

Table 1. Evaluation themes and key evaluation questions

Themes	Key evaluation questions
I. Partnership design at activity, flagship, and program level	a. What were the main types of partnerships and partnership modalities used by PIM scientists in contributing to outcomes and impacts, and how common were the different types used? b. What were the main factors considered for selecting different types of partners (public, private, NGO)? c. Did the program theory of change and the flagships' impact pathways influence the choice of partners and partnership modalities? If so, how? Conversely, did the choice of partners and partnership modalities influence the program's theories of change and the flagships' impact pathways? If so, how? d. Were there any adjustments in partnerships (at the activity, flagship and/or program level) over the years, and which lessons learned or external factors triggered them?
II. Partnerships for policy influence	a. Looking at selected cases of success in translating research into policies, strategies, or investments, what were the key success factors

[2] All themes described in the original terms of reference are explicitly included in the evaluative study with the exception of "Partnerships and capacity building"; nevertheless, where appropriate, this topic is captured under some of the other five themes, such as Theme IV, "Attracting key partners."

Themes	Key evaluation questions
	(choice of partners, alignment of objectives, complementarity of skill sets and roles, modalities of engagement, availability of resources, etc.)?
III. Partnerships for scaling innovations	a. Which partnership arrangements were particularly effective for scaling innovations? b. Were there missed opportunities to form strategic partnerships around research programs related to PIM innovations? Which factors prevented these opportunities to be realized? How can they be overcome in the future?
IV. Attracting key partners	a. What are the main benefits associated with being a PIM partner? b. What factors inhibited the engagement of different types of partner organizations? c. Which future partnership strategies are most important for continuing the impact of PIM research outputs?
V. Reporting on and evaluating partnerships	a. What indicators can be used to measure the performance of partnerships in the policy research area? How could increased capacity to influence policy among CGIAR partners be measured? b. Forming and nurturing partnerships has costs in terms of financial and time commitment. How should the cost-effectiveness of partnerships be evaluated and improved?

1.4 Limitations

During the evaluative study, several limitations were noted and were mitigated as much as possible. Key limitations included:

- Inconsistencies in how partnership information was collected and stored over time;
- Timing of the study, which limited the availability of PIM's key internal and external stakeholders for participating in the interviews and surveys and for providing feedback to follow-up questions;
- Limited time to collect and correct original data and undertake analysis;
- Absence of key data and documents (for example, a lack of reports of unsuccessful research and/or delivery partnerships);
- Difficulty in identifying and measuring program outcomes that are directly attributable to partnerships; and
- The desk-based nature of the study, which precluded firsthand observations in field settings and regular face-to-face contact with key stakeholders.

Overall, these limitations resulted in some necessary adjustments to the original key evaluation questions listed in the inception note (see Tables E.1 and E.2). Other specific limitations, and the steps taken to mitigate them, are address within each of the Themes. These limitations affected the depth of the analysis; however, they do not bring into question either the fundamental findings or the recommendations.

2 Analysis of Evaluative Evidence

2.1 Theme I: Partnership design at activity, flagship, and program level

CGIAR has a long history of working with a wide range of global, regional, national, and local partners. Since the early 2000s, CGIAR reforms have highlighted the importance of effective partnerships to the achievement of outcomes at scale. Recognizing that multidisciplinary, multistakeholder partnerships (MSPs) are key to delivering on grand challenges in food and agriculture, the CRPs strengthened and extended the number and type of internal and external partnerships. While the 2016 synthesis of the evaluation of CRPs "found that the choice of partners was often based on legacy research and on seizing opportunities, rather than on a systematic and strategic selection process" (Birner and Byerlee, 2016, p.49), the 2021 synthesis and lessons from a decade of CRPs found that the programs had added value to CGIAR through the increased breadth, depth, and strength of partnerships, and that the partnership selection process had become increasingly more strategic (CAS Secretariat, 2021).

2.1.1 What were the main types of partnerships and partnership modalities used by PIM scientists in contributing to outcomes and impacts, and how common were the different types that were used?

At the beginning of Phase 2, PIM adopted the CGIAR MARLO online platform. It was developed to assist CRPs, platforms, and centers in their strategic results-based program planning and reporting of research projects. In MARLO, partner-type classifications range from advanced research institutions such as universities and international research institutes to delivery partners such as those that provide agricultural advisory and extension services to NGOs and private companies (Table 2).

Table 2. Partner-type classification

Number	Partner type
1	Agricultural advisory and/or extension service
2	Association (other than regional organizations, extension services, and farmer/community-level organizations)
3	Bilateral development agency/bank
4	CGIAR center
5	Farmer/community-level organization
6	Foundation
7	Government (including ministries, authorities, departments, and bureaus)
8	International NGO (INGO)
9	International organization (other than financial or research)
10	International/regional financial institution
11	International/regional research institution
12	National/local financial institution
13	National/local NGO
14	National/local research institution

Number	Partner type
15	Other
16	Private company (other than financial)
17	Regional organization
18	University

Source: CGIAR MARLO online platform.

The partnership data from MARLO suggest that PIM's engagement with partners increased by 130.6 percent from 255 partners in 2017 to 588 partners in 2021 (Table F.1). However, caution is required when interpreting the differences between the 2017 and 2021 data for three reasons.

First, partner numbers for 2017 and 2018 were incomplete because it took time for those responsible for submitting activity templates to become familiar with the reporting requirements. In the later years of Phase 2, program management also became more vigilant in capturing the full breadth of partners. These two factors partly explain why the number of partners rose by only 6 from 2017 to 2018, but then by 83 from 2018 to 2019, by 178 from 2019 to 2020, and by 66 from 2020 to 2021.

Second, there is a natural increase in the number of partners listed in MARLO due to the accumulation of activities over time, as some activities—and hence partnerships—are carried forward to complete the intended deliverables.

Third, according to information obtained during PIM researcher interviews, the use of short-term service providers increased over time because of funding shortfalls and uncertainty. For the sake of administrative ease, some short-term service providers were listed as partners. It could thus be argued that the number of partners in the later years may be inflated; however, only 6.4 percent of PIM partners were listed as being active for just a single year.[3] This doesn't mean that all those entries were service providers because a significant number could have been meaningful short-term partners. As one PIM researcher explained during the interviews, the level of funding and the length of the partnership should not dictate the classification of partners. Some partners may only have a small part to play but they are an important component in the ToC and IP and, therefore, should be included in MARLO.

Despite these limitations, partner data extracted from MARLO provide a considerable amount of information that is useful for this evaluation. The data limitations are mitigated by:

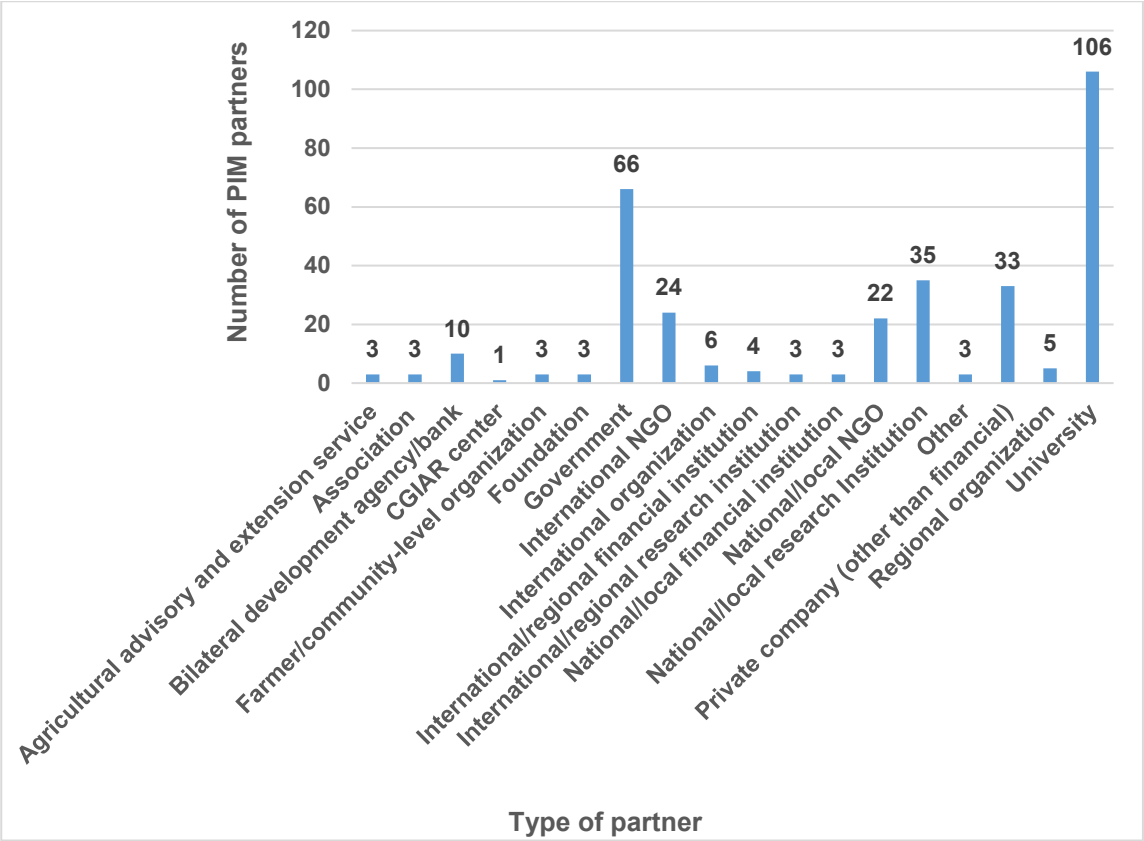
- Restricting the examination of temporal changes in partner numbers and partner types by comparing 2019 data with 2021 data, instead of comparing 2017 with 2021;
- Assuming that all entries over the five-year period are partners, regardless of the length of the relationship; and
- Calibrating the analysis of MARLO data with information obtained from the PIM survey and from interviews.

[3] Partners listed for one year in 2017 and 2021 are not included in this calculation because it is not possible to determine if these organizations were PIM partners prior to that year (in the case of 2017), or after it (in the case of 2021).

Number and type of partners

From 2017 to 2021, PIM researchers collaborated with at least 677 unique partners[4] covering all 18 partner types (Figure 2). Around 23.6 percent of these partners were universities, 19.1 percent were government agencies, 13.4 percent were national or local research institutes, 12.9 percent were international and national/local NGOs, and 6.5 percent were private companies (Table F.2).

Figure 2. Number of PIM partners by partner types, 2017 to 2021



Source: CGIAR MARLO online platform.
Note: There are 18 different entities listed as CGIAR centers in MARLO because the CGIAR System Office was listed from 2018, and Alliance of Biodiversity and CIAT–Headquarters (Biodiversity International) and Alliance of Biodiversity and CIAT–Regional Hub (Centro Internacional de Agricultura Tropical) were listed from 2020. In any given year, however, there were 15 CGIAR centers plus the System Office.

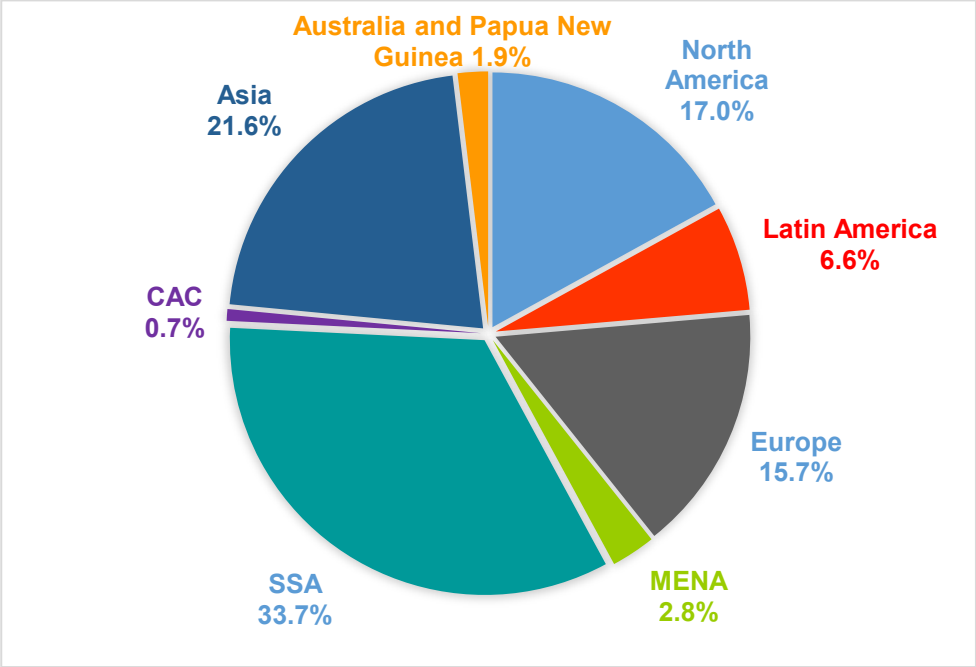
The number of partners and the composition of partners by partner type varied significantly across the regions (Table F.3). Of the 677 partners, 228 (33.7 percent) have their headquarters in SSA, 115 (17.0 percent) in North America, and 106 (15.7 percent) in Europe. Taking Asia as a whole, PIM collaborated with 146 partners (21.6 percent) whose headquarters are in East Asia (20), South Asia (65) and Southeast Asia (61). The remaining 12.1 percent of PIM partners have

[4] The term "unique" is used here to signify that if a partner collaborated on more than one Project or for more than one year, it is counted only once.

headquarters in Latin America (and Jamaica), Middle East and North Africa, Central Asia and the Caucasus, and Australia and Papua New Guinea (Figure 3).

In SSA, 25.0 percent of partners are classified as government, 21.5 percent are national/local research institutes, and 11.0 percent are universities. In contrast, 47.0 percent of PIM's North American partners are universities, 13.9 percent are INGOs, and 9.6 percent are private companies. In Europe, in a ratio similar to that of North America, 34.0 percent of PIM's European partners are universities and 16.0 percent are INGOs; however, unlike North America, the third-largest percentage (16.0 percent) is made up of international/regional research institutes rather than private companies. Of the PIM partners whose headquarters are in Asia, 28.1 percent are classified as government, 19.9 percent are universities, 17.1 percent are national/local research institutions, and 10.3 percent are national/local NGOs. In Latin America, 26.1 percent of PIM's partners are government entities, 13.3 percent are universities, and 15.2 percent are private companies (Table F.4).

Figure 3. Percentage of PIM partners by region, 2017 to 2021



Source: CGIAR MARLO online platform.
Note: SSA = Africa south of the Sahara; MENA = Middle East and North Africa; CAC = Central Asia and the Caucasus.

Multistakeholder partnerships

In line with the 2008 CGIAR reform guidelines, there was an increased push for all CRPs to develop more innovative MSPs. MARLO data provide information on partnerships at a sub-research-cluster level through Project IDs (Table F.5).[5] These data clearly show that PIM engages in MSPs. In 2021, for example, the average number of partners per PIM Project was 23 and the average number of partner types was 7.2 (Table F.6). Moreover, 71.1 percent of the 45 PIM

[5] In this report, Project—with a capital "P"—refers to a sub-research cluster. A Project may comprise any number of research activities funded through W1, W2, or W3, or through bilateral projects.

Projects had 5 or more partner types and 31.1 percent of Projects engaged with more than 10 partner types.[6]

Project-level data can be aggregated to examine the total number of partners, the average number of partners, and the partner types per Project at the flagship level (Table 3; see also Tables F.8 to F.13.). There is significant variation across flagships in terms of number of Projects and size of budget. Flagship 2 is clearly the largest in terms of both number of Projects and size of budget; Flagship 5, on the other hand, is the smallest flagship in terms of number of Projects and has the second-smallest budget, after Flagship 6. The data show, nevertheless, that each flagship Project collaborates with a significant number of partner organizations. The total number of partners that are unique to a particular flagship ranges from 81 (Flagship 4) to 252 (Flagship 2). The average number of partners per Project ranges from 12.6 to 76 and the average number of partner types ranges from 6 to 14.[7] The flagships' multistakeholder approach to partnerships is also evident from the 17 Projects with 20 or more partners and/or 10 or more partner types (Table F.7).

Table 3. Number of Projects, partners, partner types, and planned expenditure by flagship, 2021

Flagship	Number of Projects	Number of partners	Number of partner types	Average number of partners per Project	Average number of partner types per Project	Flagship budget of US$1,000
Flagship 1	6	229	52	38.2	8.7	12,913
Flagship 2	20	252	119	12.6	6.0	20,168
Flagship 3	8	157	56	19.6	7.0	11,358
Flagship 4	3	81	26	27.0	8.7	7,482
Flagship 5	2	152	28	76.0	14.0	3,635
Flagship 6	6	162	44	27.0	7.3	2,881

Source: CGIAR MARLO online platform.
Note: Excludes PIM and flagship project management/management support.

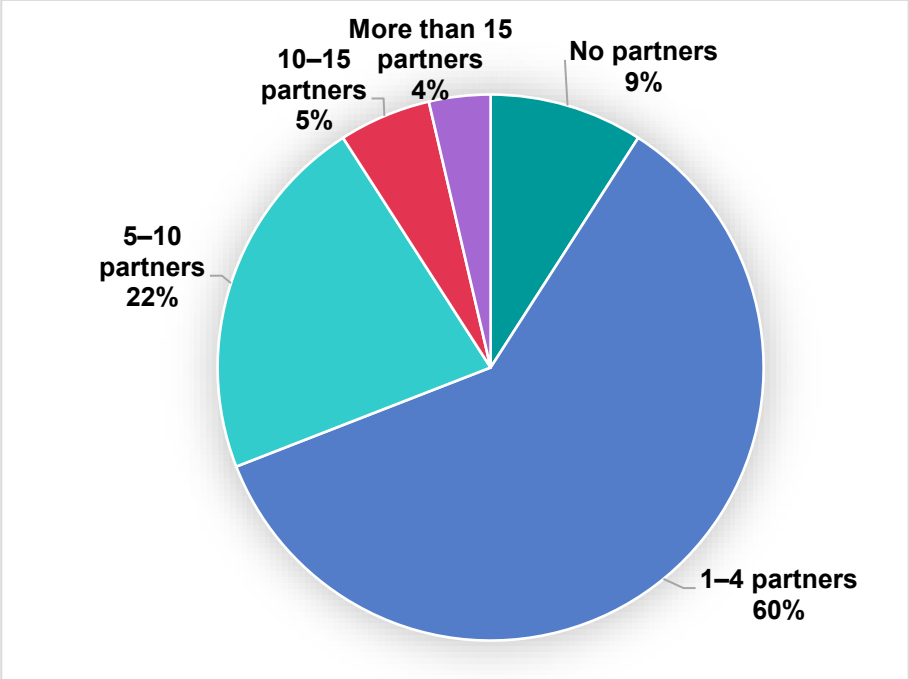
More granulated information was sought through the PIM researcher survey conducted in 2021. In this survey, respondents were asked to answer questions regarding the number of external partners and the number of external partner types for up to three studies with which they were familiar. Out of a total of 55 studies, 9 percent had no external partners, 60 percent had 1 to 4 external partners, 22 percent had 5 to 10 external partners, 5 percent had 10 to 15 external partners, and 4 percent had more than 15 external partners (Figure 4).

A more direct comparison of MSPs at Project level and study level is provided in Table 4. All PIM Projects have 2 or more partners, with 62.2 per cent of the Projects having 10 or more partners.

[6] Excludes PIM and flagship project management/management support.
[7] These averages are largely driven by the variation in the number of flagship Projects. Flagship 2, for example, is clearly the largest flagship in terms of the number of Projects (20); therefore, even though it has the largest number of partners, the average number of partners and partner types is significantly smaller than the corresponding numbers for Flagship 5, which has only two Projects.

In contrast, 9.1 percent of the studies were undertaken solely by CGIAR researchers and 60 percent of the activities had 1 to 4 external partners.

Figure 4. Number of partners per study



Source: PIM researcher survey conducted in 2021.

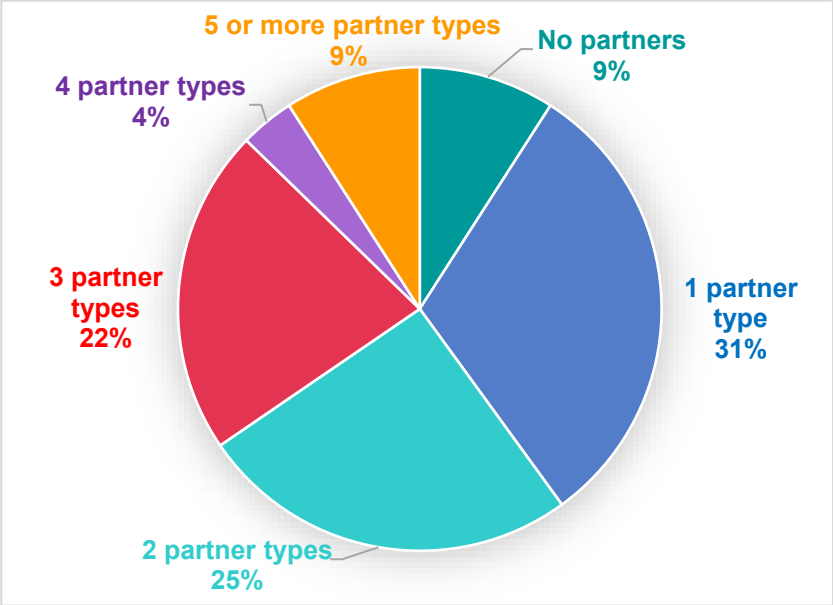
Table 4. Number and proportion of partners by Project and study, 2021

Partnership category	Project[a]		Study[b]	
	Number	Percent	Number	Percent
Number of partners	0	0.0	5	9.1
1–4 partners	6	13.3	33	60.0
5–10 partners	11	24.4	12	21.8
10–15 partners	6	13.3	3	5.5
More than 15 partners	22	48.9	2	3.6
Total/sample size	**45**		**55**	

Source: [a] CGIAR MARLO online platform; [b] PIM researcher survey conducted in 2021.

With regard to the number of external partner types engaged in the studies, 9 percent had no external partners, around 31 percent had one external partner type, 25 percent had two external partner types, 22 percent had three external partner types, 4 percent had four external partner types, and 9 percent had five or more external partner types (Figure 5). In contrast, around 11 percent of Projects had four partner types and 71 percent had five or more partner types (Table 5).

Figure 5. Number of partner types per study



Source: PIM researcher survey conducted in 2021.

Table 5. Number and proportion of partner types by Project and study, 2021

Partnership category	Project		Study	
	Number	Percent	Number	Percent
Number of partners	0	0.0	5	9.1
1 partner type	1	2.2	17	30.9
2 partner types	3	6.7	14	25.5
3 partner types	4	8.9	12	21.8
4 partner types	5	11.1	2	3.6
5 or more partner types	32	71.1	5	9.1
Total/sample size	45		55	

Source: [a] CGIAR MARLO online platform; [b] PIM researcher survey conducted in 2021.

There are three main reasons for the difference in partnership landscapes. First, Project data derived from MARLO include both CGIAR and non-CGIAR partners, whereas PIM researcher survey data focus only on external partners. Second, each of the Projects comprises several studies which, when added together, result in a large number and broad range of partners and partner types per Project. Third, there is significant variation in the size and scope of PIM studies; some are small with very focused research outputs and no delivery partners.

To summarize, in recognition of the importance of partnerships for policy innovation and impact, at the program and flagship levels PIM actively collaborated with multiple research and delivery stakeholders along the impact pathway. PIM also engaged in public-private partnerships by collaborating with both national and international private sector partners. MSPs are not as prevalent at the study level, which is mainly due to the relatively narrow focus and scope of these activities.

Partnership modalities

In 2015, the Independent Science and Partnership Council (ISPC) commissioned a study to analyze good practice in agricultural research for development (AR4D) partnerships. The aim of the study was "to assist the CGIAR in identifying effective AR4D partnership practices, roles, and strategies in a rapidly evolving context of stakeholders and global development initiatives" (Independent Science and Partnership Council [ISPC], 2015, p. IX).

The ISPC study assessed MSP practices and effectiveness within AR4D and global domains using a framework based on four distinct innovation and partnership modes:

- *Partnership and Innovation Mode 1* - Research consortia: Priorities framed by public policy imperatives or by private industry sponsored funding.
- *Partnership and Innovation Mode 2* - Delivery*:* Priorities framed by the convergence of technology push from research, demand pull from farmers and markets, and by public policy imperatives.
- *Partnership and Innovation Mode 3* - Food/Agri system: Priorities framed by negotiation between public and private sectors and articulated in national development plans.
- *Partnership and Innovation Mode 4* - Global development: Priorities framed by global negotiation and agreement in the SDGs (ibid, p. X).

The 2015 ISPC study found an increase in the number of partnerships involving multiple stakeholders; they further found that most of the MSPs could be classified as agricultural research partnerships (Mode 1) and agricultural innovation delivery partnerships (Mode 2). Even though each of the partnership and innovation modes has a legitimate role to play in the agricultural development domain, impact at scale will be limited if agricultural research partnerships and agricultural innovation delivery partnerships do not have functional links to national agrifood systems innovation partnerships and global development innovation partnerships. Addressing the challenges of complex and systemic change requires the development of partnership structures that not only link local to global scales but are built on a foundation of: (1) clearly defined partner roles; (2) the capacity to evaluate partnership performance; and (3) the capacity and flexibility to revise and modify partnership roles and structures based on lessons learned.

While, in theory, the framework of partnership and innovation modes could be used to assess the effectiveness of PIM's partnership strategy, in practice this is not the case because of data and time limitations. At the Project level, however, 2021 MARLO data can be used to obtain at least an indication of whether or not the MSP is a research partnership or an agricultural innovation delivery partnership, and the extent to which regional and/or international organizations are engaged in the MSP.

While acknowledging the multifunctional nature of many partner organizations, a number of simplifying assumptions are needed when using MARLO data to obtain base-level information on whether an MSP is an agricultural research partnership, an agricultural innovation delivery partnership, or a wider scaling partnership. These simplifying assumptions are:

- Each partner organization contributes to only one area along the research-to-impact continuum (that is, they are either financial partners contributing to inputs, research organizations contributing to outputs, or delivery/boundary partners engaged in dissemination and scaling activities);

- All the bilateral development agencies/banks, foundations, and international/regional and national/local financial institutions are input partners;
- All associations (other than regional organizations, extension services, and farmer/community-level organizations), CGIAR centers, research institutes, and universities are research partners;
- All agricultural advisory and extension services, farmer/community-level organizations, government agencies (including ministries, authorities, departments, and bureaus), INGOs and NGOs, private companies, and the category classified as "other" in MARLO are delivery partners; and
- The role of all regional and international organizations (other than financial or research institutions) is to disseminate PIM outputs beyond national borders; as such, they are classified here as cross-border scaling partners.

Under these assumptions, MSP modalities are defined as: 1 = research partnership; 2 = research and delivery partnership; 3 = research and cross-border scaling partnership; and 4 = research, delivery, and cross-border scaling partnership. Based on these classifications and on their underlying assumptions, most PIM Projects are classified as modality 4 (42.2 percent) or modality 2 (37.8 percent), with 13.3 percent classified as modality 3 and only 6.7 percent as modality 1.

Table 6. PIM research modalities by flagship, 2021

Flagship	Modality			
	1	2	3	4
1	0	2	0	4
2	2	10	2	6
3	0	2	3	3
4	0	0	0	3
5	0	0	0	2
6	1	3	1	1
Total	**3**	**17**	**6**	**19**
Percentage	**6.7**	**37.8**	**13.3**	**42.2**

Source: CGIAR MARLO online platform.

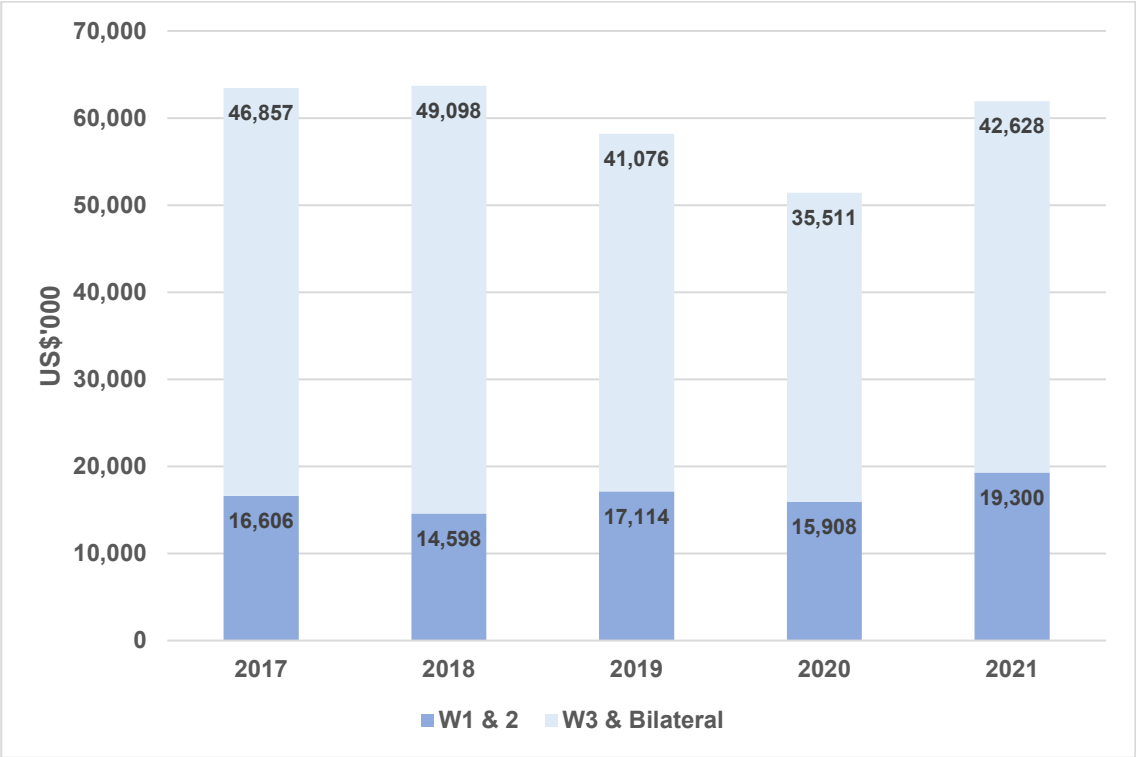
While acknowledging the imprecise nature of this analysis and allowing for errors in the modality classifications, the data show that PIM engaged not only in MSP modalities that prioritized impacts at a local level, but also in partnership structures that linked to global scales; this thereby increases the likelihood that PIM research has, or will, contribute to the achievement of the SDGs through the CGIAR SLOs. This finding was confirmed during interviews with PIM researchers, who commented that partnerships are effective in situations where large international organizations in the development arena engaged PIM to provide technical input into a strong initiative for change. Examples include the Foundation for Ecological Security in India (Promise of the Commons initiative), the International Land Coalition (Rangeland Initiative), and various collaborations with the World Food Programme.

Partnerships and budgets

While CGIAR recognizes the vital role of partnerships in achieving inclusive and sustainable development, the level and reliability of funding to support partnerships did not meet the post-2008 reform expectations. The uncertainties associated with funding—particularly core funding

through W1/W2—were expected to significantly constrain partnering and hence the delivery of CGIAR SLOs, as "CRPs have had a narrow margin to support and experiment with new or innovative partnerships. Fund-sharing between Centers and external partners has been less than was expected, and it has been affected negatively by budget cuts" (CGIAR–IEA, 2017b, p. viii). Nevertheless, PIM proved to be adaptive and innovative in addressing the financial challenges to partnership, as evidenced by the increase in the number of PIM's research and delivery partners despite a significant fall in its budget from 2018 to 2020 (Figure 6 and Table D.1); for example, the number of partners increased by 178 in 2020 even though PIM's total expenditure was US$5.5 million below its 2019 expenditure and W1/2 funds fell by US$1.2 million.

Figure 6. PIM budget, 2017 to 2021

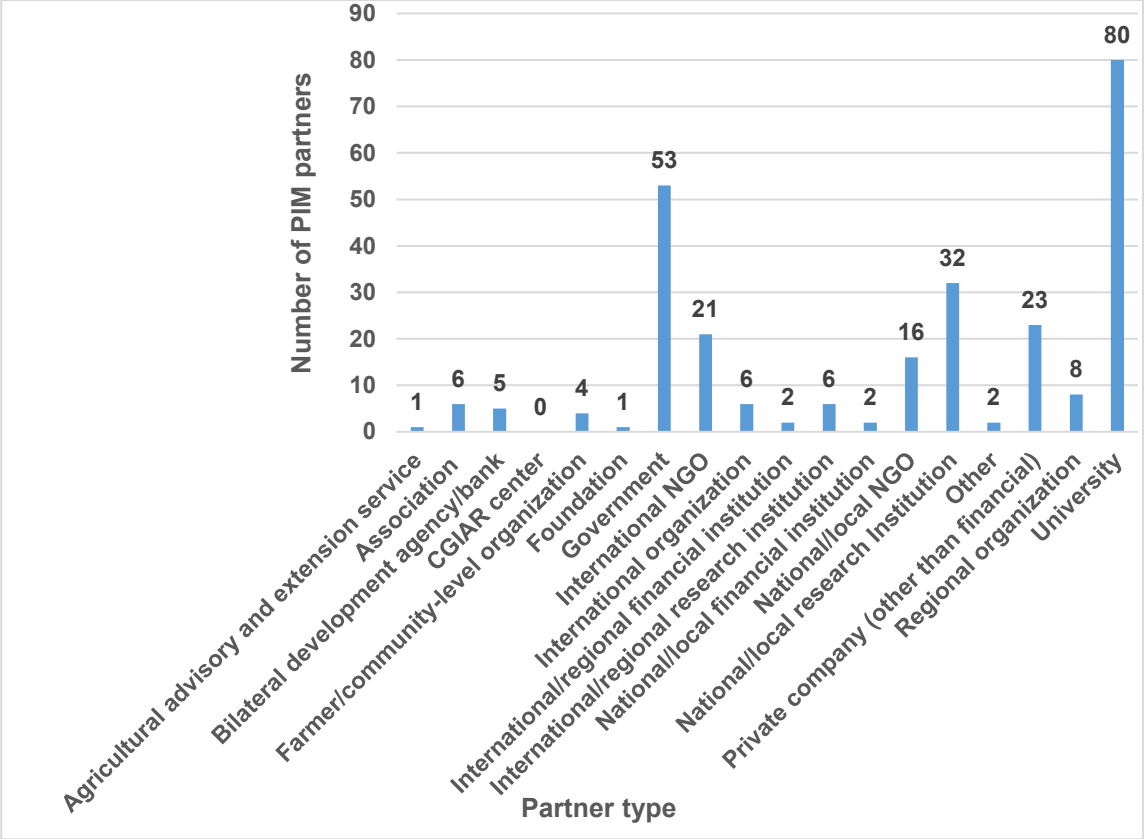


Source: CGIAR. n.d. PIM annual reports for 2017 to 2020. Washington, DC: CGIAR Research Program on Policies, Institutions, and Markets. (https://pim.cgiar.org/about/key-documents/); CGIAR. n.d. PIM Plan of Work and Budget 2021. Washington, DC: CGIAR Research Program on Policies, Institutions, and Markets. (https://pim.cgiar.org/about/key-documents/).
Note: The figures for 2017 to 2020 (inclusive) are actual expenditures; the figures for 2021 are planned.

One reason for the counterintuitive relationship between the number of partners and PIM's budget is that some research activities needed an extension of time to deliver the agreed research outputs. As such, while the partnerships were carried forward into subsequent years, there was either no, or a very modest, increase in the budget associated with that extension. This is not the only possible explanation, however. In 2020 and 2021 (combined), PIM established partnerships with an additional 268 new and unique partners. In other words, almost 40 percent of the 677 partners that PIM collaborated with from 2017 to 2021 did not become partners until 2020 or 2021. As can be seen from Figure 7, the bulk of the new partners comprised 80 universities (29.9 percent), 53 government ministries or agencies (19.8 percent), 37 national research institutes (11.9 percent), 23 private companies (8.6 percent), and 21 INGOs

(7.8 percent). A tentative conclusion that can be drawn from these figures is that in the last two years of Phase 2, PIM was able to leverage resources internally such as from other CRPs, or externally from, for example, new national and international partners. This was confirmed during the PIM researcher interviews and is discussed further in Section 2.1.4.

Figure 7. Number of new and unique PIM partners by partner types, 2020 and 2021



Source: CGIAR MARLO online platform.

2.1.2 What were the main factors considered for selecting different types of partners (public, private, NGO)?

The 2020 PIM review stated that,

> PIM's approach to building partnerships is pragmatic, using existing networks built over years of collaboration to involve next users and other important stakeholders in relevant research, policy, and/or implementation processes. To a large degree, partnerships are demand driven, whereby multilateral agencies, governments, NGOs, funders, and others approach researchers to help test the effectiveness of policies or innovations or assist with priority setting (CAS Secretariat, 2020, p. 12).

PIM recognized that the contribution of partnerships to the quality, dissemination, and adoption of research outputs (policy recommendations, tools, frameworks, innovations) is dependent on selecting partners that have the necessary skillsets, knowledge, experience, and other attributes that help ensure that the requirements of the next-stage and end users are met and that scaling is optimized.

In the first instance, selection of the number and type of partnerships and partnership modalities is dependent on the research endeavor from investigation through to delivery, and on the comparative advantage that the various partners can bring to the project. The geographic scope of the research is also an important consideration when selecting partners; for example, INGOs and international agencies such as the Food and Agriculture Organization of the United Nations (FAO), World Bank, World Food Programme, and multinational companies are seen as essential partners in research that has a global or regional focus because these organizations have a wide geographic scope that enables PIM outputs to be distributed to a broader range of countries. On the other hand, local NGOs, national agricultural research and extension systems (NARES), private companies, and cooperatives are valued partners in projects with a national or subnational agenda because the local knowledge, reputation, and field presence of these local delivery agents can be instrumental in facilitating CGIAR research and local adoption.

In addition to the scope of the research, capacity strengthening activities, and geographic focus, PIM researchers provided information on a range of specific factors that were considered when selecting partners. This information was drawn from the PIM researcher survey and interviews, as well as from flagship insights (CRP on Policies, Institutions, and Markets [PIM] 2021a; PIM 2021b; PIM 2021c; PIM 2021d; PIM 2021e; PIM 2021f). In the PIM researcher survey, respondents were asked to quantify the importance of the five specific partnership selection criteria depicted in Figure 8. The results show that the organizations expressed interest in collaborating and existing contacts in the organization are considered very to extremely important partner selection criteria; the official mandate of the organization and recommendation of existing partners are considered moderately to very important; and PIM's ToC is considered to be only moderately important.

Figure 8. Factors that PIM researchers consider when selecting partners

Source: PIM researcher survey conducted in 2021.
Note: 1 = not at all important; 2 = slightly important; 3 = moderately important; 4 = very important; 5 = extremely important.

Narratives contained in the flagship insights and in the PIM researcher survey and interviews provide four additional common factors to be considered when selecting partners to increase the effectiveness of MSPs. These are:

1. The added value a partner can bring to the AR4D activity:

   Partnerships are more likely to produce high quality scientific outputs and deliver development outcomes if there is coherent complementarity across a broad range of knowledge, skills, interests, resources, and connections. Given an agreed upon AR4D pathway, it is important that the types of partners required to achieve the stated outcomes match the types of partners selected; for example:

   - Advanced research institutions are important for adding rigor to PIM research activities, particularly when there is a need to fill PIM knowledge and skills gaps;
   - Partners that operate in a decision-making space in the target geographies are needed because they can directly provide policy support;
   - It is not necessary that one of the partners act as a lead partner or project champion, but having a partner that has the capacity to convene other partnerships/meetings with key stakeholders in the policy and innovation domain can increase partnership effectiveness;
   - A range of local partner organizations, including NGOs and civil society organizations (CSOs), is needed to increase the legitimacy of the research. Without local partners, the research activity may fail to address issues that are prioritized by partners or may not deliver results that align with the best interests of the intended beneficiaries; simply put, partnership should be demand driven; and
   - Regional and global partners add significant value through far-reaching scaling activities.

2. The partner's capacity and willingness to develop, engage in, and maintain, strong long-term relationships:

   Trust-building is an important aspect of partnership. Since trust is built through action and not words, it takes time to develop a reliable and inclusive partnership that encourages partner input into the shaping and implementation of the research agenda.

   In new partnerships, it also takes time to develop relationships, align different interests, learn how to work well together, learn how to navigate the different legal frameworks (such as intellectual property rights), and come to understand different research management procedures and processes. In one example provided by a PIM researcher, the Tanzanian government required basic capacity strengthening to ensure that the necessary financial and administrative systems were in place, so that the partners could effectively implement and manage the components of the research activity for which they were responsible. Given the initial high transaction and opportunity costs of these engagements to both PIM and the partner organization, the returns to partnership are greater if it is maintained and/or strengthened over time.

   This is not to say that short-term partners do not play an important role. There may be some relatively small, specialized components of an activity that require short-term partner engagement (for example, capacity strengthening activities, survey work, or development of specialized models and tools); moreover, engaging short-term partners

adds a level of flexibility and adaptability as they can fill unanticipated research and delivery knowledge and skills gaps. They should, however, incur lower transaction costs.

The difficulties associated with building and maintaining development partnerships are, of course, common to many organizations beyond CGIAR. Nelson (2017), drawing on more than 100 examples of collaboration and after examining the literature on building public–private partnerships, business alliances, and multistakeholder initiatives, found that, "most partnerships are difficult to build and challenging to sustain and scale. They often entail high transaction costs, and there is a need in many cases to strengthen partnership governance and accountability, as well as operational efficiency and effectiveness" (ibid, p.8).

3. The strength of the partner's incentive to undertake the research and/or delivery activities:

   A strong incentive to collaborate does not mean that all partners must have a common development agenda. Just as it is not necessary for all partners to contribute significant resources or to gain substantial value, it is not necessary for all partners to have the same goals. Some partners, for example, may be more interested in the scientific endeavor than in the overarching development outcomes, while others may be more interested in delivery for development than in scientific rigor. Regardless of each of the partner's primary objectives, in a well-designed research activity, all partners have a vital role to play.

4. The partner's capacity and willingness to share information and credit for success:

   When the data collection task is too large for a single organization, large databases can be populated and used efficiently if partners have the ability and willingness to share information. Conversely, some organizations may wish to form partnerships because it allows them to access databases and/or because it enhances the organization's research capacity and reputation.

The common partnership selection factors suggested by PIM researchers are broadly in line with the "enduring truths" presented in Table 7 and they also mostly align with the literature on partnerships for sustainable development. There is, however, one significant exception. While reporting systems and research management processes and procedures were discussed, the issues of accountability and of monitoring and evaluation were not mentioned; these did not come up during researcher interviews, in the survey results, or in the flagship insights. This may have been an oversight, since IFPRI's approach to partnerships does incorporate monitoring and evaluation of partnerships, including activities, performance, costs and benefits, and impacts (International Food Policy Research Institute [IFPRI], 2013).

Table 7. Multistakeholder partnerships: reality versus myths

Issue	Endearing myths	Enduring truth
Aims	Partnerships are shaped around a common vision	The partners see the partnership activities as delivering their individual organizational aims
Drivers	Partner organizations are drawn together by a common goal	Partner organizations are drawn together by the complementarity of what they bring to the table

Issue	Endearing myths	Enduring truth
Context	Partners know each other well and partnerships benefit from a stable context	Partnerships are often most effective in fractured contexts where – by their very operation – they are building bridges and filling gaps
Champions	Individual champions are key to a partnership's success	Champions have a very limited function in partnerships – systems and structures are ultimately far more valuable
External inputs	Partnerships work best when locally owned and driven	Even local partnerships can benefit hugely from external inputs and interventions – in terms of sharing knowledge and experience as well as leveraging further resources
Boundaries	Ring-fenced partnerships are likely to be most successful	Innovation in partnerships depends on a more fluid structure if new ideas are to evolve and new opportunities are to be seized
Costs	Partnering costs are so high they are likely to be unattractive to many	Managed well, and with early investment in partnership building, costs can be shared and reduced by coordinating, and not duplicating, efforts
Wider benefits	...occur when the partnership itself reaches scale or is replicated	...occur when all those involved take the lessons and outputs from the partnership and apply them in their own spheres of operation and influence

Source: R. Tennyson and T. Harrison. 2008. *Under the Spotlight: Building a Better Understanding of Global Business–NGO Partnerships* (London: International Business Leadership Forum).

One CGIAR, as it moves forward, should promote the implementation of a transparent, accountable, and participatory monitoring system, at least on all large and/or new innovative MSPs. This would provide stakeholders with the information needed to encourage, achieve, measure, and learn from effective partnerships. As stated in Section 2.1.1, addressing the challenges of complex and systemic change requires the development of partnership structures that have the capacity to evaluate partnership performance and the flexibility to revise and modify partnership roles and structures based on lessons learned.

2.1.3 Did the program theory of change and the flagships' impact pathways influence the choice of partners and partnership modalities? If so, how? Conversely, did the choice of partners and partnership modalities influence the program theory of change and the flagships' impact pathways? If so, how?

The 2017 CGIAR partnerships evaluation found that the 2008 reform and the development of the CRPs' respective ToCs led to a more strategic approach to partnership engagement and greater consideration of partner roles along the CRPs' impact pathways. The evaluation found that not only were partnerships spread along impact pathways, but there was also considerable overlap. Feedback from the CRPs suggested that 70 percent of the partnerships contributed to upstream research and over 80 percent to delivery of research results; furthermore, 86 percent of partnerships participated in more than one area along the research-to-impact continuum, and nearly 90 percent of partnerships operated at the research-to-development interface,

undertaking adaptive research or piloting new innovations (CGIAR–IEA, 2017b). This level of overlap is noteworthy as the literature on partnerships for development suggests that partnership overlap is a key enabling factor for widespread uptake and impact (Horan, 2019).

The evidence provided by the 2015 PIM evaluation survey and interviews found that the CRPs employed a range of partnership models to fit different research activities and that they made a credible effort to ensure that their partnerships were spread along the research-for-development impact pathway. For example, even though throughout Phase 1 there was still an evolving link between PIM's choice of partners and its ToC, through its 2012 "Statement of Partnerships" PIM,

> adopted an approach to identifying and fostering partners that is based on the most effective partners for the impact pathways associated with the different kinds of research. The identification of the most appropriate partners would flow from the most probable agents of change along each impact pathway. That is, for research that aimed to set agendas, clarify trends and identify issues requiring the attention of the global community—such as the foresight work in Flagship 1—the partnership statement viewed partners who could influence public opinion as important. For research involving new analytical tools and methods—such as much of the value chain work in Flagship 5—the partnership statement viewed research partners and the professional community as important in providing regular feedback on the usefulness of the tools and methods. For location-specific research relevant to policy decisions in specific jurisdictions—such as the country-level CGE (computable general equilibrium) modeling work in Flagship 4—the partnership statement viewed the identification of implementation partners at an early stage as important to ensure that the work undertaken would be useful to them CGIAR–IEA, 2015, p. 63.

PIM's management unit and management committee also:

- More closely aligned research tasks with their intermediate development outcomes (IDOs); this led to the removal of tasks that were not aligned with IDOs.
- Added a new section on partnerships to the 2013 PIM activity reporting template; this encouraged researchers to document the intended applications of their research, their selection of partners, and their interaction with partners in the relevant policy processes.

At the beginning of PIM Phase 2 (2017), and then again during the 2019 priority-setting round, each of the flagships formulated key research questions and identified ToCs and IPs to achieve impacts. These ToCs and IPs incorporated the use of PIM innovations by partners and other stakeholders.

The purpose of PIM flagship insights was to document and draw lessons from what worked well and what did not. Based on this evaluation, suggestions for future One CGIAR research priorities were generated. Broadly speaking, the flagships found that the ToCs and IPs provided a useful conceptual framework for identifying the major constraints on impacts, the underlying assumptions and risks, and the key actors along the impact pathway. In terms of improving the usefulness of these frameworks for monitoring and evaluation and for partner selection, the main lessons drawn from the flagships' experiences were that:

- All intended outcomes need to be clearly defined. A detailed pathway to achieving them should be charted in a way that more fully describes the sequence of logically linked

causal relationships and better explains how the research process contributes to development outcomes. Without this level of detail, the ToC has limited usefulness as a tool for measuring success.

- Not only should the program ToCs and flagship IPs be more detailed, there is also a need for more granulated sub-ToCs and IPs around specific research topics and/or geographies to guide implementation and to measure and communicate successful outcomes. These sub-ToCs and associated IPs should provide context-specific information on the role of partners from design to delivery, the requirements and limitations of the end users, the actions necessary to address the needs of next-stage and end users, and the underlying assumptions and risks.[8]
- All underlying risks and assumptions should be made explicit and should be revisited regularly so they can be updated and addressed as necessary.
- The dual contribution of policy outputs and the production of global public goods (GPGs) should be reflected in the ToCs and associated IPs. This will help to ensure a balance between the attention to achieving policy impact and the contributions to filling research gaps through production of GPGs. In some countries, for instance, work may result in policy impacts through strong relationships with stakeholders, while in other countries work may result in GPGs without generating policy impacts.
- ToCs and IPs should be developed in partnership with key stakeholders as these stakeholders can provide valuable on-the-ground information; a more consultative process will also increase the stakeholders' understanding of how their efforts contribute to the change process.
- ToCs and IPs should be living documents. Throughout the project life cycle, as progress is made and new opportunities and obstacles are identified, they should be revisited and revised regularly.

In summary, PIM's ToC and the flagship IPs were useful frameworks for identifying core constraints, underlying assumptions and risks, and key types of actors along the impact pathway; however, they were not a useful tool for measuring or enhancing progress. At the research study level, much more granulated and context-specific ToCs and IPs were needed to guide design and implementation and to measure and communicate all positive, negative, intended, and unintended outcomes. To build ownership and encourage use, ToCs and IPs should be developed by the research team (CGIAR and partner researchers) in an inclusive, participatory process, with input from other key stakeholders and with the support of management. The roles of partners and the underlying assumptions and risks should be clearly articulated and should be revisited and updated as needed. Finally, ToCs and IPs should be reexamined annually or at other crucial stages in the research activities, and should be revised as necessary.

As One CGIAR moves forward, it should promote the development and use of detailed, granulated, context-specific ToCs and IPs that are (1) developed in partnership with key

[8] These comments are in line with the PIM researcher survey results that showed that the PIM ToC was only a moderately important factor in partner selection (Figure 8).

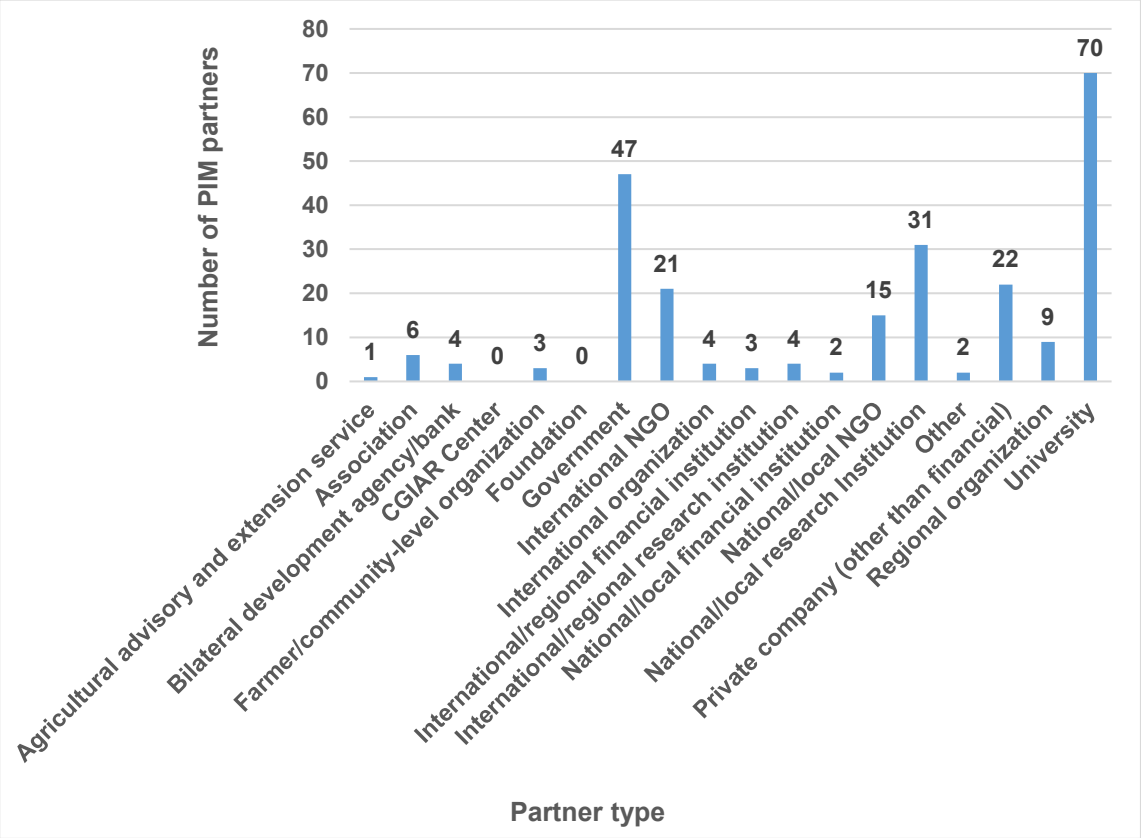
stakeholders in an inclusive, participatory process; (2) revisited and revised regularly; and (3) used for measuring progress, capturing lessons learned, and communicating results.

Due to timing constraints, it was not possible to determine if the choice of partners and partnership modalities had influenced the program theory of change and the flagships' impact pathways.

2.1.4 Were there any adjustments in partnerships (at the activity, flagship, and/or program level) over the years, and which lessons learned or external factors triggered them?

The 2017 CGIAR partnerships evaluation stated that, "[if] CGIAR is expected to focus on being a strong research partner, it must collaborate with organizations that have a strong capacity for scaling and their own sources of funding. This may increasingly include developing country governments and private sector" (CGIAR–IEA, 2017b, p. viii). As shown in Figure 9, the increase in the number of PIM partners by 244 (expanding from 344 partners in 2019 to 588 partners in 2021) is largely in line with this edict (Tables F.1 and F.2). While there was a substantial increase in the number of university collaborators (70) and national/local research institutions (31), there were also significant increases in the number pf delivery partners such as government agencies (47), private companies (22), INGOs (21), and NGOs (15).

Figure 9. Increase in the number of PIM partners by partner types, 2019 to 2021



Source: CGIAR MARLO online platform.

As stated in Section 2.1.1, the increase in the number of partners occurred despite budget shortfalls and uncertainty. PIM researchers were asked during the interviews to provide their insights on this counterintuitive result. Their key insights were that:

- The number of partners funded through W1/W2 has remained very stable because of a lack of funds. However, there has been a push across CGIAR to emphasize partners. This is the result of an increased recognition of the vital role played by partners in development; it is also a response to donors' expectations that CGIAR will develop meaningful partnerships for delivery and impact.
- W3 funds were used to support partnerships. In Flagship 2, for example, W3 funds contributed to IFPRI's Country Programs (CPs). The addition of new country-level Strategy Support Programs (SSPs) led to an increase in the total number of partners. These included the Egypt SSP (2016), the Myanmar SSP (2018) and the Rwanda SSP (2019).[9]
- New bilateral projects brought new partnerships. These partners were identified at the start of the project. The key partners for bilateral projects in Flagship 2 are researchers from CGIAR centers, universities, and national research institutes.
- While it was difficult for some non-IFPRI centers to get sufficient funds from PIM for partnerships, some funds—and hence partnerships—were leveraged from other CRPs through joint research. Flagship 1's foresight research, for example, was in part supported by the CRP on Wheat (WHEAT) and the CRP on Maize (MAIZE), which in turn increased the number of PIM's partners.
- PIM researchers sought no-cost partnerships with organizations already working in the policy-for-development arena. In the Nigeria SSP, for example, PIM funding was used to extend the research on land tenure policies. To get the results of this research into the Nigerian government's gender and agriculture policy domain, PIM researchers sought new partners who were already working in that space.
- The number of partners working on an AR4D activity can increase over time without any increase in the research budget; this is because, as the project progresses, a number of additional grassroots partners may get involved with the project with no change in the budget. Even though these additional grassroots organizations were not originally listed as partners in the research proposal, they were very important in terms of increasing the likelihood of scaling and impact.
- PIM's capacity strengthening budget was small, but the program was able to reach many partners through connections with the flagships. These partners may not have been formalized partners in terms of being provided with a budget, but they were still PIM partners in that they were able to use PIM's materials, tools, and techniques and, in return, they undertook PIM research activities.
- Towards the end of Phase 2, PIM engaged in several collaborative research activities in which other CRPs co-invested; this brought PIM into new partnerships.[10]

The reduction in PIM's W1/2, W3, and bilateral funds motivated PIM researchers to seek new sources of funds and new partnerships; however, this comes at a cost and, for several reasons, is not sustainable in the long run. First, the reduction in W1/2 funds and the influence of donor

[9] The Sudan Strategy Support Program started in September 2021, but no Sudanese partners were listed as PIM partners in MARLO.
[10] This last point was provided by the PIM Director in subsequent communications.

funding limits the freedom to engage in innovative/exploratory partnerships. Second, developing and maintaining effective partnerships requires resources and finances; because of this, funding sources—rather than science—can drive decisions on where and with whom to engage. During the researcher interviews, one researcher also noted that there is a need to partner with more national/local researchers from the target geographies as national universities and national research institutes are under-represented.[11] Third, from a partner perspective, the decline in CGIAR funding will result in less funding going to partners. This may have adversely impacted the quality of their research and/or their willingness to engage with CGIAR.

Another important issue raised during the researcher interviews was that, while One CGIAR articulated the vital role that partnerships play in AR4D in the background and strategy documents, there was a missed opportunity to fully engage development partners in the design of the new initiatives because of the rush to get the new initiative proposals completed. There is now an opportunity to engage more closely with partners in the implementation phase of the new initiatives, but the expectation to show results at the end of the first three years can have a detrimental effect on developing meaningful, long-term partnerships.

As One CGIAR moves forward, it needs to prioritize stakeholder engagement and provide enough resources to create and maintain innovative and adaptive public and private sector partnerships that both inform research priorities and accelerate the progression from research design and implementation to development outcomes and impacts at scale.

2.2 Theme II: Partnerships for policy influence

PIM researchers conducted action-oriented research that sought to inform and influence public policy and practice related to rural development in developing countries. The idea is that with better policies in place—policies that support rural poverty reduction, land tenure security, and environmental management—rural people will have a better chance at improving their lives (PIM 2016a). Achieving policy influence is at the core of PIM's ToC and is an integral part of its stated IPs. If the program falls short of influencing policy and practice, its research will have limited effects on development outcomes such as improved economic opportunities, more nutritious food, and a healthier natural environment. The impacts of PIM research on such outcomes hinged significantly on its ability to influence government policy processes.

The challenge PIM researchers faced was that there were many factors beyond the researchers' control that affect the likelihood of their research influencing policy decisions. To influence public policy, it is rarely sufficient for researchers to produce high quality research (Resnick 2021), and it is rarely possible for CGIAR researchers to influence policy by acting alone (CGIAR–IEA, 2017b). PIM, along with other CRPs, chose to address this challenge by emphasizing the coproduction of research through partnerships. The 2017 evaluation of partnerships in CGIAR underscores the importance of partnerships for policy influence; it states that, "CGIAR is totally dependent on partnerships for getting its research disseminated and scaled for development impact." (CGIAR–IEA, 2017b, p xiii)

[11] Sixty percent of partner universities are in North America, Europe, and Australia, and only 12 percent of total partners are national or local research institutions situated in the target countries.

The idea behind the CGIAR general partnership strategy is that researchers will be more effective in influencing policy if they develop their research with active inputs from partners who are more directly connected to the public policy processes that the research seeks to inform and influence. This partnership-based vision of policy research allows researchers to do what they do best (produce high quality scientific evidence) while engaging policy stakeholders in the research process to help ensure that the research findings are perceived as relevant, credible, and legitimate by the targeted end users (Emmelhainz and Andersson 2021). Through such partnerships, future iterations of PIM can remain focused on its comparative advantage as a policy-relevant research program and can more readily meet the demands for new knowledge from decision-makers.

The recent increase in partnerships, as discussed above, is encouraging in terms of the prospect of PIM research influencing public policy; measuring such possible improvement in influence, however, is beyond the scope of the current study. The goal here is to propose methods, measures, and approaches that would make such an analysis of policy influence possible. The purpose of this section is to take a closer look at several specific PIM-supported research partnerships in order to identify conditions and factors related to their effectiveness in exerting influence on policy decisions. Some of these partnerships have had significant influence on public policy and others have fallen short of this goal.

The section starts out with a discussion of different types of policy influence; it follows with a breakdown of PIM research projects into the different avenues of policy influence. Drawing on existing literature on research partnerships as well as on the PIM researcher survey and interviews, the section presents a list of 10 candidates for enabling partnership conditions. At the end of the section, statistical techniques are used to test the extent to which these partnership conditions are systematically linked to a higher probability of achieving policy influence. A simulation model illustrates the partnership conditions that are conducive to producing influential research outputs.

2.2.1 What were the key success factors (choice of partners, alignment of objectives, complementarity of skill sets and roles, modalities of engagement, availability of resources, etc.)?

Possible avenues for policy influence

Renkow (2018) identifies five possible avenues by which CGIAR research can affect policymaking. Adapting these categories to the context of PIM, these avenues are: (1) changes in laws, regulations, and property rights related to rural development; (2) creation of new programs and organizations that promote the generation and use of scientific evidence in governmental decision-making; (3) changes in government investment priorities and budget allocations related to rural development research and interventions; (4) innovations in operations and management for government agencies and projects related to rural development; and (5) creation and modification of international treaties, declarations, or agreements reached at major international policy conferences. The survey that was sent to all PIM principal investigators (PIs) asked respondents to consider a given study and identify all the possible avenues for influencing end users' decision-making that were applicable for that study. Table 8 provides a breakdown of the answers of the 29 PIs who responded to this question.

Table 8. Principal investigators' stated avenues for seeking to influence end user actions and decisions

Types of policy influence sought by PIs	Percent	Count
Changes in laws, regulations, and property rights related to rural development	24	12
Creation of new programs and organizations that promote the generation and use of scientific evidence in governmental decision-making	20	10
Changes in government investment priorities and budget allocations related to rural development research and interventions	33	17
Innovations in the operations and management of government agencies or other organizations related to rural development	21	11
Creation and modification of international treaties, declarations, or agreements reached at major international policy conferences	2	1

Source: PIM researcher survey conducted in 2021.

According to the surveyed PIs, the most common avenue for seeking to influence end user behavior is "Changes in government investment priorities and budget allocations related to rural development research and interventions"; this is followed by "Changes in laws, regulations, and property rights related to rural development." Thus, more than half of PIM-supported studies pursue one of these two avenues for achieving changes in end user behaviors. The fact that only one survey respondent reported international treaties and agreements to be the main avenue suggests that the sampled researchers participating in this study are mostly focused on influencing national, regional, or local decision-making processes. The results of the subsequent analyses should be interpreted with this possible sampling bias in mind.

Enabling conditions that support effective research partnerships

The particular avenue that a CGIAR researcher is pursuing is likely to influence the choice of partner type. Research that seeks to influence governmental laws and policies is likely to have partner types that are quite different from a study that seeks to influence international treaties. Recognizing such differences, CGIAR researchers must also decide how and when they will engage the different partners. Given limited resources of time, expertise, contacts, and money, CGIAR researchers rely to a great degree on a variety of external partner organizations to produce research outputs. Without active inputs from a diverse set of external organizations that can contribute with relevant expertise and resources, it is exceedingly difficult for CGIAR researchers to produce research outputs that influence the decisions and practices of the intended end users.

In addition to developing a diverse set of partnerships, there are several other conditions and factors that are likely to affect the ability of a research partnership to exert positive influence on end users' decision-making. Do the researchers and partners trust one another? Are their goals compatible? Are partners invited to participate in the early stages of planning or do they merely perform dissemination functions? A recent qualitative review of a number of PIM research

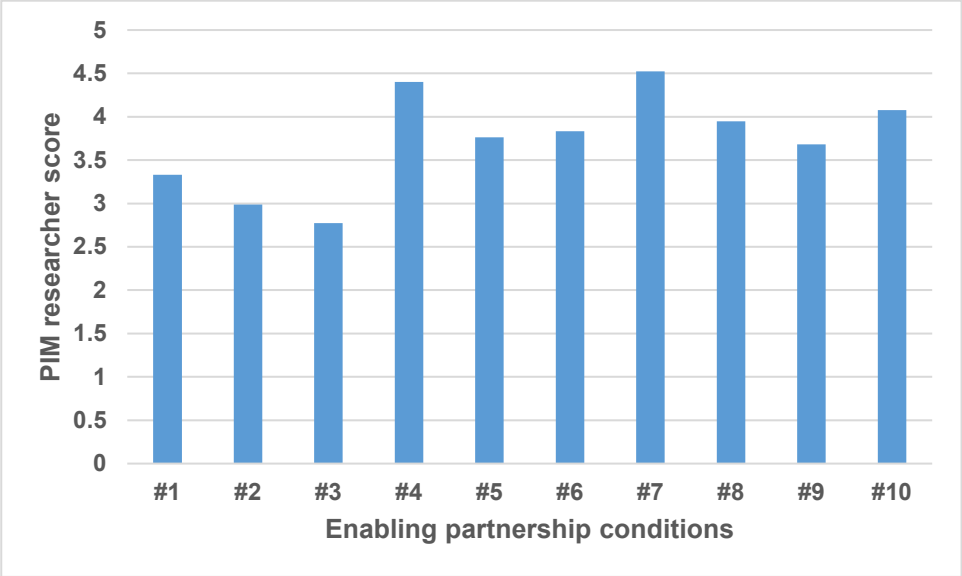
partnerships identified several conditions and factors which appear to contribute to an increased likelihood of external partnerships influencing end user behavior, including governmental policy and practice (Andersson and Emmelhainz 2021). The evaluation team combined the conditions identified in Andersson and Emmelhainz (2021) with three additional conditions proposed in Andonova et al. (2021). Combining these into one list of enabling conditions for effective research partnerships, we ended up with a list of 10 components:

1. One of the partners acts as the lead partner organization, leading the various local activities related to the study.
2. The activity includes at least one partner that has expertise in networking and communications, including social media platforms and contacts with news media.
3. Training activities offered by the project improve the effectiveness of the partnerships in this activity.
4. Researchers engage partners at the initial stages of the research.
5. The partners in this activity are critical to the timing of engagement with policymakers or other next-stage users.
6. Researchers and partners have developed trusting relationships with one another.
7. The goals of the partner organizations are highly compatible with the development goals of the research.
8. Partners gain substantial value through this activity in, for example, human resources, knowledge, and/or social status.
9. Partner organizations contribute significant resources of their own to partnership activities.
10. At least one of the partner organizations represents the perspectives of the intended end users of the research.

Investigating the prevalence of enabling partnership conditions in PIM research

In the online questionnaire, the evaluation team asked all PIM researchers to assess the degree to which their current research studies enjoyed each of these 10 components of enabling partnership conditions. The 35 PIs who responded to the survey coded a total of 55 studies, assigning each of the 10 hypothesized enabling conditions a score of importance from 1 to 5. A high score of importance meant that the researcher perceived this partnership condition to be very prevalent in a given study; a low score meant that the partnership condition was not very prevalent or was entirely absent. Figure 10 displays the average scores for each of the 10 conditions for the sample of 55 PIM studies.

Figure 10. Prevalence of enabling partnership conditions in 55 studies



Source: PIM researcher survey conducted in 2021.

Researcher validation of partnership conditions

To validate these measures as reasonable components of enabling partnership conditions, the evaluators presented this list to the participants in three group meetings in early December 2021; a total of 23 PIM researchers were present. Most researchers found the list to be a reasonable reflection of several important dimensions of research partnerships in PIM, and some researchers suggested refinements to the proposed list of conditions. The discussions at the meeting clarified several of the proposed conditions on the list and noted some redundancies.

To investigate the possible redundancies and overlapping definitions among the 10 factors, the consultants performed a correlation analysis of the survey responses related to these 10 measures. The analysis found that there were several factors that were closely correlated with one another. Out of the 10 factors, 8 were strongly correlated with at least 1 other factor (Pearson's $r > 0.5$), and in one case with as many as 3 other factors. Such high multicollinearity is problematic for statistical analyses because when several causal variables are highly correlated with one another it can severely bias the analysis by suppressing the estimated effects of correlated causal variables.

Creating an index of enabling partnership conditions in PIM

One common way of dealing with multicollinearity in quantitative analysis is to create an index; this reduces the 10 individual components of partnership effectiveness to one composite measure. Since this study seeks to understand the effect of these enabling partnership conditions as a whole on end user decisions and policies (not the effect of each one), it makes sense to create a composite index. The evaluation team created an additive index by adding the ordinal scores of all 10 components and subtracting 10 for the number of studies. The values of the index, which is hereafter referred to as the "enabling partnership index," range from 11 to 40.

Analyzing the links between partnership conditions and policy influence

To analyze the factors and conditions that may help explain variations in policy influence, the evaluation team conducted a statistical analysis; it used variables measured in the online questionnaire as well as MARLO and PIM annual reports. The analysis tested the hypothesized associations of three causal factors to the likelihood of a study influencing the decision-making of the end user. The three causal factors, all measured by the PIM researchers' survey responses, are:

1. Total number of partners in the study;
2. Number of different partner types (for example, government, community, or research organizations); and
3. Enabling partnership index.

As outcome variables, the analysis employs three alternative measures; two are from PIM annual reports and one from the PIM research survey (Table 9). These variables are:

1. Whether or not a study produced an outcome impact case report (OICR);
2. Whether the study's OICR reached an advanced level of documented impact on end user behavior (level 2 or higher); and
3. The degree of claimed influence that the study's research outputs have had so far according to the study's PI.

Table 9. Descriptive statistics for all variables included in statistical analysis

Variable	Observations	Mean	Std. Dev.	Min	Max
Outcomes					
OICR	55	0.18182	0.38925	0	1
OICR (high level, > 2)	55	0.12722	0.33631	0	1
Claimed influence (0–3)	55	0.40000	0.49441	0	1
Causal variables					
Number of partners	55	3.92727	3.73598	0	15
Number of partner types	55	2.10909	1.46152	0	6
Enabling partnership index	49	27.449	7.07576	11	40

Source: Authors' elaboration based on data collected from the PIM researcher survey conducted in 2021.
Note: OICR = outcome impact case report.

Analytical results

We employ regression analysis to examine the extent to which the three hypothesized causal variables can help explain the variation in influence of the research outputs. Since all three outcome variables are binary, we use binary logit regression techniques with robust standard errors to generate the estimated associations between causal and outcome variables. Table 10 presents the results of the logit regression analysis.

Table 10. Logit regression analysis results, showing statistically significant associations (p < 0.10) between two causal variables (number of partner types and enabling partnership index) and three measures of policy influence

Variable	Model 1: OICR		Model 2: OICR (high)		Model 3: Claimed influence	
	Coefficient	Std. Error	Coefficient	Std. Error	Coefficient	Std. Error
Independent variables						
Number of partners	-0.11	0.13	-0.04	0.14	-0.10	0.12
Number of partner types	2.11**	1.46	1.12**	0.50	0.64*	0.35
Enabling partnership index	27.44**	7.08	0.28**	0.13	0.24**	0.08
Constant	-9.60***	3.33	-13.46***	5.02	-8.20***	2.50
Observations	49		49		49	
Prob > chi2	0.0013		0.0015		0.0001	
Pseudo r-squared	0.32		0.38		0.31	

Source: Authors' elaboration based on data collected from the PIM Researcher Survey 2021.
Note: *, **, and *** indicate statistical significance at the p < 0.1, p < 0.05, and p < 0.01 levels; OICR = outcome income case report.

The results of the logit regression support the hypothesis that having greater diversity of partners increases the likelihood of achieving influence on end user policy and practice. The result also shows that there is room for improvement when it comes to the diversification of PIM research partners. The average number of different partner types is just over two, but over 40 percent of the sampled PIM studies reported having just one or no partner at all. The results suggest that PIM research would benefit from diversification of partners.

Scoring higher on the enabling partnership index is associated with a significantly higher likelihood of a study influencing the targeted end user, at least according to the three outcome measures used here. Merely having a higher number of total partners in a study, regardless of type, is not associated with a significantly greater likelihood of the study being influential.

To get a sense of the magnitude of these associations, the statistical model is used to simulate the likelihood of policy influence for two studies with contrasting values for the two causal variables of interest, partner type and enabling partnership condition index. The result of this

exercise is that a study that scores low (one standard deviation below these variables' mean values), according to the model, has a very low probability of achieving significant influence (a probability indistinguishable from zero); on the other hand, a study that scores one standard deviation above the mean values for these two variables has a probability of 0.88 (+/- 0.2) to produce influential research outputs.

One caveat for this analysis is that the sample of PIM studies is not randomly selected. The online questionnaire, which was the main source of the data used in the regression analysis, went out to all 90 PIM principal investigators; over one-third, however, did not take the survey; therefore, since the sample of PIM PIs who took the survey was not random, one should be careful in using its results to make analytical inferences for the entire cadre of PIM researchers. One possible bias is that the sample reflects PIs who are putting a lot of effort into partnerships and who for this reason are more inclined to take the survey. If this is the case, the survey data likely overestimate the amount of work and effort that PIM PIs put into working with their partners. It is impossible to gauge the sample's bias, but it is unlikely to be a completely representative sample of the population of interest: all PIM principal investigators.

While the statistical analysis shows that scoring high on the partnership index is associated with a higher likelihood of a PIM study exerting influence through research, the analysis does not reveal which of the 10 conditions are the most influential. There are two rationales for using an index rather than the 10 individual factors in the analysis; one is that each factor reflects a particular aspect of partnership, and the second is that it is a combination of all 10 factors that affects the three outcome variables and not necessarily any one factor individually. That said, and as a thought experiment to try teasing out which of the 10 variables that comprise the index is most closely correlated with the measures of success in terms of influence on policy, the evaluation team conducted a binary logit regression analysis of each of the 10 partnership conditions, analyzing one factor at a time so as to avoid collinearity problems in the results. The results of these 30 regression models (10 models for each of the three outcome variables) should be interpreted with caution; they are merely suggestive, since each of the 10 conditions measures a somewhat narrow and particular aspect of the partnership. These analyses nevertheless produced some interesting patterns which showed that there were three specific partnership conditions that were consistently associated with the three measures of policy influence; these associations were statistically significant at the $p < 0.10$ level. The results suggest that variation in the following three factors may be particularly important for understanding the variation in outcome variables:

> **Condition # 5:** The partners in this activity were critical to the timing of engagement with policymakers or other next-stage users;
> **Condition #7:** The goals of the partner organizations are highly compatible with the development goals of the research; and
> **Condition #10:** At least one of the partner organizations represented the perspectives of the intended end users of the research.

Finally, it is important to note that the statistical analysis presented here is limited in that it treats all studies in PIM as being equal no matter where the study was conducted, how experienced the PI was, and for how long the study had been ongoing. All sampled studies thus carry the same weight in this analysis. Ignoring the influence of some of these contextual factors can lead to erroneous conclusions. In fact, one potential explanation for the reported results is that more mature studies are the ones that have had enough time to develop favorable partnership conditions; hence, they not only score high on the partnership index, but are also more likely to

have attracted a greater variety of partners and to have produced influential research outputs. Future research would benefit from investigating the effect of such time-variant factors. One way to do so would be to measure the number of years a study has been ongoing and include this as an additional control variable in the regression framework used here.

Conclusions

This section investigated the conditions that enable PIM partnerships to produce research outputs that influence the decisions and actions of targeted end users. Through consultations with PIM researchers and a review of the partnership literature, the evaluation team proposed a list of 10 components of effective partnerships. Measures of these components may be used to periodically monitor and assess how research partnerships are faring.

The empirical analysis of a sample of PIM research studies found that a study's combined score on these 10 components (the enabling partnership index) helps explain why some studies achieve greater influence than others. The analysis found no evidence to support the idea that having a greater number of total partners is linked to a greater likelihood of achieving policy influence. The analysis, in fact, suggests that diversity of partner types is more important than total number of partners; in other words, having fewer but more diverse partners may be a more cost-effective partnership strategy. This finding implies that just because PIM increased the total number of partners over the past four years, policy influence has not necessarily increased for the program as a whole.

This type of index can be engaged to develop a more comprehensive measurement of the essential enabling conditions for effective partnerships; in the process, a more robust theory of partnership effectiveness would be developed through an iterative process that is informed by continuous and refined empirical testing. The index developed here is a simplified illustration of how quantitative indicators may be feasible for future monitoring and evaluation systems related to partnership work.

Future work could also make an effort to measure situation-specific, contextual factors that are likely to affect the degree of influence of PIM research products. Such factors include seniority of the PI, length of study, and the stability of the study country's political environment.

In conclusion, it is important to keep in mind that the effectiveness of research partnerships is highly dependent on the ability of the researchers and their partners to adapt to changing contextual conditions. One should not assume that merely increasing one's enabling partnership index will necessarily increase policy influence because there are numerous other contextual factors at play that cannot be fully accounted for by statistical analysis. The analysis in this section does not intend to contribute a recipe for successful partnership work; rather, through theoretical and empirical approaches, it aims to explore the conditions that appear to be important in explaining why some studies produce research outputs that are more influential than others.

2.3 Theme III: Partnerships for scaling innovations

2.3.1 Which partnership arrangements were particularly effective in scaling innovations?

The process of driving transformational and systemic change toward sustainable development depends on many actors along the impact pathway. This is not something that escaped the attention of PIM as it strove to deliver on its ToC. As discussed in Section 2.1, PIM engaged with

an array of key stakeholders along the research-for-development pathway and developed MSP modalities that were designed to disseminate innovation at the local and global scale.

While there is a disconnect between the time to impact and the lifespan of a research activity or even a CRP, PIM has had some success in contributing to scaling up innovations. This has largely been through forming innovative partnerships around those innovations with, for example, the private sector, NGOs, CSOs, farmer advisory or extension organizations, and government agencies. The 2020 PIM review highlighted two key examples of partnership arrangements that were particularly effective in scaling innovations (CAS Secretariat, 2020*,* pp. 21–22):

- Direct seed marketing in Ethiopia. Building on the legacy of the social capital developed through long-term partnerships, the evaluative research was able to shift the government's willingness, not only to consider the value of private sector involvement in seed production and distribution, but also to eventually promote scaling. The results of an impact assessment conducted by PIM found that, by 2020, the direct seed marketing (DSM) program had reached over 320 districts and nearly two million Ethiopian farmers. The key findings are that: (1) DSM led to improvements in seed availability for maize, wheat, and teff; and (2) the effects on productivity and commercialization were mixed. While there was a 26 percent increase in maize yield and a 5 percent increase in the share of maize harvest that is marketed, DSM had no significant effects on the productivity and commercialization of wheat and teff.
- The Ethiopia Digital Green case study. The three key lessons drawn from this case study on scaling out innovations are that (1) evidence on the effectiveness of a particular extension method contributes to decision-making about scaling investments, programs, and approaches; (2) government investments and donor programs can achieve a broader coverage of beneficiary groups of both men and women in scaling innovations; and (3) through the partnership of NGOs, donors, and national agencies, the original approach can be further developed into a more complete platform such as, for example, FarmStack.

Ethiopia's Productive Safety Net Programme (PSNP) is another example of the positive impact that PIM innovations can have on the well-being of poor women, children, and men in disadvantaged rural communities. The Standing Panel on Impact Assessment (SPIA) study on adoption of CGIAR innovations in Ethiopia found that 12 percent of households benefitted directly from the PSNP (PIM, 2020). Early evidence also suggests that the PSNP has been effective in protecting households from food insecurity in rural areas during COVID-19 (Abay, Berhane, Hoddinott, and Tafere, 2021).

In addition to innovations with documented scaling activities and impacts, lists of innovations were provided in the 2018 to 2020 PIM annual reports. These lists present information on the innovation title, the type of innovation, the innovation stage, and the geographic scope. The innovation stages range from Stage 1 (discovery/proof of concept) to Stage 4 (uptake by next user). While uptake by next users is a necessary but not sufficient condition for impact at scale, the data indicate that 18.5 percent of the 108 innovations listed are ready for scaling.

Since 2017, all CRPs were required to produce a list of OICRs. The main objectives of the OICRs are to document the program's "spheres of influence," to track (positive) changes among key actors along the impact pathway, and to highlight any impacts at scale or beyond the direct CGIAR province. While not limited to innovations, Table G.1 provides information on PIM's OICRs, including title, stage, number, and direct link by flagship for the years 2017 to 2020. As can be seen, the OICRs are categorized according to their "stage of maturity," namely:

- Stage 1: CGIAR research has contributed to changes in 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 have led to impacts at scale or beyond the direct CGIAR sphere of influence.[12]

From 2017 to 2020, PIM produced 76 OICRs (Table 11). Of these, 40.8 percent were examples of a PIM research-induced change in the key actors' dialogue and/or the behavior among the key actors, and 57.9 percent were examples of documented policy or practice change by key actors. Only one OICR provided evidence of impact at scale. While this is a surprisingly low number, the lack of evidence of impact at scale does not prove that PIM research and partnership arrangements lack impact. Progress toward scaling innovations may be limited or not reported for various interrelated reasons.

First, significant progress was noted for several OICRs, but they were not upgraded from Stage 2 to Stage 3 because:

- Their use by end users, while increasing, was still limited (see, for example, OICR 2687, 2657, 3320); and
- Time and/or financial constraints prevented the collection of credible evidence and the implementation of a robust impact assessment (OICR 3261, 2677, 3276).

[12] PIM (2021g); PIM Phase 2 Outcomes Database, November 2021 (internal document).

Table 11. Number of outcome impact case reports documented in PIM annual reports, by stage and flagship

Year	Stage	Flagship						Total
		1	2	3	4	5	6	
2017	Stage 1	1	2	1	1	2	1	8
	Stage 2	0	1	0	0	1	0	2
	Stage 3	0	0	0	0	0	0	0
	Total	1	3	1	1	3	1	10
2018	Stage 1	2	1	1	1	0	1	6
	Stage 2	2	6	1	4	2	1	16
	Stage 3	0	0	0	0	0	0	0
	Total	4	7	2	5	2	2	22
2019	Stage 1	1	1	0	0	2	1	5
	Stage 2	4	5	2	0	4	2	17
	Stage 3	0	0	0	0	0	0	0
	Total	5	6	2	0	6	3	22
2020	Stage 1	1	9	0	0	2	0	12
	Stage 2	5	0	1	2	1	0	9
	Stage 3	0	0	1	0	0	0	1
	Total	6	9	2	2	3	0	22
2017–2020	Stage 1	5	13	2	2	6	3	31
	Stage 2	11	12	4	6	8	3	44
	Stage 3	0	0	1	0	0	0	1
	Total	16	25	7	8	14	6	76

Source: CGIAR. n.d. PIM annual reports for 2017 to 2020. Washington, DC: CGIAR Research Program on Policies, Institutions, and Markets. (https://pim.cgiar.org/about/key-documents/); PIM Phase 2 Outcomes Database, November 2021 (internal document).
Note: 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 have led to impacts at scale or beyond the direct CGIAR sphere of influence.

Second, there may not be a direct line between the project and impact. This is because the pathway to impact is usually very long and can also be very diffuse. A partnership may not lead directly to the stated intended outcomes of a research project; however, the knowledge, skills, connections, and relationships developed as a result of that partnership may lead to spillover effects that enhance organizational learning and/or lead to further research and partnerships outside the sphere of the original project. These may, in turn, result in an eventual impact at scale. In such cases, the impact pathway may be unclear and the link between PIM research and observed changes may be extremely difficult to assess (see, for example, OICR 3260, 3261).

Third, OICRs and case studies focus on goal attainment as the primary measure by which to value partnership arrangements. PIM formed partnerships mainly to reach outcomes (sphere of influence) through outputs (sphere of control); and generally were not significant players in the later evolution of outcomes into impacts (sphere of interest). While the ultimate goal of PIM partnerships was to contribute to IDOs, effective partnerships can also: (1) create value for individual partner organizations; (2) increase internal collaboration between partners; (3) result in spillover effects that can negatively or positively impact on groups other than the targeted stakeholders; and (4) influence collaborations and institutions outside of the partnership, even if

the stated outcomes are not realized (Centre for International Environmental Studies [CIES], 2020).

In summary, it is a commonly held view that partnerships are a valuable instrument for driving change toward more inclusive and sustainable growth. PIM "OICRs and country stories provide indications of successful long-term collaboration with national implementation partners and government authorities (policymakers and institutions)" (CAS Secretariat, 2020, p. 12), but they do not provide a comprehensive measure of partnership effectiveness. More detailed evaluative studies are needed to help guide partnership selection, processes, monitoring, and evaluation in the future; these studies should focus on the types of partnerships and partnership modalities required to establish an enabling environment for change, and on the effectiveness of those partnerships.

2.3.2 Were there missed opportunities to form strategic partnerships around research programs related to PIM innovations? Which factors prevented these opportunities to be realized? How can they be overcome in future?

While OICRs are primarily good news stories that track positive changes, each year OICRs are submitted to the program management unit (PMU) and to PIM's director for consideration in the upcoming annual report. Examination of the OICR submissions and of the management responses provides some insights into the progress made and the reasons for lack of progress. The list of reasons for the decisions and frequency by flagship are provided in Table 12. By far most of the reasons for decisions regarding OICR topics and stages are categorized as "lack of evidence/progress" (58.7 percent). Even though in a few instances some additional details for this category are provided, in most cases information on why there were no updates or progress is lacking.

Table 12. Summary of reasons for decisions regarding OICR topics and stages for the PIM 2021 annual report, by flagship

2021 PIM annual report: Reasons for decisions (summary)	Flagship						Total	
	1	2	3	4	5	6	No.	Percent
Awaiting evidence/decision		7	3		1		**11**	**6.0**
Biotic and abiotic factors	1	1					**2**	**1.1**
Competing demands/time issues at the project level	2	1					**3**	**1.6**
COVID-19	3	1				1	**5**	**2.7**
Government-level issue	5	4	1		2		**12**	**6.5**
Intended outcome level reached		2					**2**	**1.1**
Lack of evidence/progress	24	39	13	12	11	9	**108**	**58.7**
Partner issues						1	**1**	**0.5**
PIM attribution/contribution issues	3	5			2		**10**	**5.4**

2021 PIM annual report: Reasons for decisions (summary)	Flagship						Total	
	1	2	3	4	5	6	No.	Percent
Progress	3	2	1		1		**7**	**3.8**
Project-level issues	4	1			4	1	**10**	**5.4**
Timing	2	5		1	4		**12**	**6.5**
User-level issues		1					**1**	**0.5**
Total	**47**	**69**	**18**	**13**	**25**	**12**	**184**	**100.0**

Source: PIM Phase 2 outcomes database, November 2021 (internal document).

From the perspective of an external evaluator, the failure to collect documentation on the reasons for a lack of evidence and/or progress represents a missed opportunity to gather and document lessons learned. Perhaps one explanation is that OICRs are good news stories that track positive changes; however, this is one time when the adage, "if you have nothing good to say, say nothing" does not hold true. Institutional learning could be enhanced by gathering explanations of factors that have inhibited progress or the collection of evidence of progress. As One CGIAR moves forward, it should promote the documentation and widespread use of lessons learned collected during the process of determining progress toward outcomes.

While recognizing that in some cases partnership issues may underlie the lack of evidence or progress, "partner issues" was explicitly mentioned only once in Table 12 as a reason for lack of progress. This is surprising, given that 2021 flagship insights provide numerous examples of missed opportunities, factors preventing the realization of opportunities, and suggestions on how to avoid missed opportunities in future:

- Flagship 1 found there to have been missed opportunities to influence the design of weather insurance policies in Bangladesh, input/technology subsidy policies in India, and information and communications technology (ICT)-enabled extension policies in Uganda. These opportunities were missed largely due to political factors and competing interests from other organizations. In addition, due to differing incentive systems, collaborations with developing-country think tanks, universities, and experts were less productive than expected; in such cases, CGIAR's incentive to publish contrasted with the incentive of collaborators to earn consulting fees. Flagship 1 suggested that possible future strategies that could help alleviate partnership-induced shortfalls in success include: continued investment in country programs to support engagement with policymakers, adjustments in the selection of partners, and increased long-term investment in relationships with research organizations with which CGIAR more closely aligns (PIM, 2021f).
- Flagship 2 noted that, despite initial high levels of interest and engagement, partnerships that depend on government champions to achieve policy reforms can stall when administrations change. In Zambia, for example, even though the Decentralization Secretariat requested political economy analysis and the Secretariat staff actively participated in PIM-supported research, a cabinet reshuffle led to difficulties in disseminating the research's findings. In Ghana in 2016, as another example, the SSP's longstanding relationship with the Ministry of Food and Agriculture was disrupted by the arrival of a new political administration. Moving forward, "[strategic] partnerships with governments should include policy champions across multiple ministries and levels of

government (both political and bureaucratic) in order to retain policy influence and momentum in case of ministerial turnover" (PIM, 2021b).

- Flagship 3 initially considered dissemination of effective value chain interventions through establishing value chain hubs in South America, Latin America, West Africa, and East Africa. The process of establishing the regional value chain hubs, however, proved to be too challenging. Instead, the flagship's outreach effort shifted to developing a CGIAR value chain community of practice (COP) and targeting other CGIAR Research Programs, international NGOs, and international development agencies with interest in value chain analysis (PIM, 2021d).
- Simply put, Flagship 4 found that the less successful partnerships were those which often lacked "a counterpart who could engage on integration of the research into planned programming" (PIM, 2021e, p.6).
- Key challenges faced by Flagship 5 were:
    - Short-term funding limits long-term engagement with partners.
    - The claims of contribution to successful reforms made by researchers to fulfill reporting demands may create a risk of undermining local ownership of these reforms.
    - In some cases, there is a discrepancy between the priorities expressed by government partners and the best interests of the intended beneficiaries.
    - Landscape-level governance requires involving multiple types of stakeholders, which is often a challenge.
    - As in the past, longer term partner engagements that involved significant financial resources remained subjected to the risks of piecing together bilateral grants. This affected more than one of Flagship 5 partnerships, and CGIAR Research Program funds could only provide a partial buffer or bridge (PIM, 2021c, p.8).
- Flagship 6 was able to increase PIM's focus on gender within the broader research portfolios and to produce a large number of high quality international public goods (IPG); it was nevertheless difficult for this flagship to convince research partners of the importance of incorporating gender analysis. As One CGIAR moves forward, there is a need for increased support for gender work within broader research portfolios, along with stronger links and opportunities among collaborators working on gender issues (PIM, 2021a).

Overall, PIM was successful in developing and strengthening strategic partnerships and partnership modalities, but there were still situations where opportunities to form strategic partnerships for research did not materialize. Partnership shortfalls and missed opportunities limited the dissemination of policy advice and innovations.

As One CGIAR moves forward, to reduce the incidence of missed opportunities and increase the value of partnerships, it will need to give more attention to: (1) the essential roles that a range of different partners play along the impact pathway; (2) the priorities of partner organizations and the needs of the intended beneficiaries; (3) the resources and commitments required to fully develop and strengthen long-term partnerships; and (4) the increasing need for more strategic and innovative partnership modalities.

2.4 Theme IV: Attracting key partners

One of the features of effective partnerships is complementarity. PIM researchers working by themselves will struggle to have their research exert influence on the intended end users'

decisions and actions. In the eyes of some of the actors that researchers seek to influence, traditional research products often lack relevance and legitimacy (Matson et al., 2016). Policy savvy, political relationships, networks, and practical knowledge are attributes that go beyond the normal confines of regular research activities; without a great amount of these, it can be very difficult for researchers to produce useful research outputs.

While partnerships provide a potential remedy for such limitations, not every partnership will enhance the effectiveness of PIM research activities. Pursuing partnerships as the end goal, without the proper strategic concern around which organizations to engage with, is likely to generate more costs than benefits. One recent PIM report, for example, concludes that research outputs were much less influential when research activities lacked partners in positions that allowed them to integrate research findings into planned programming (PIM, 2021e). In another recent report, PIM Flagship 5 researchers provided a further example of the challenges of forming effective partnerships; reflecting on the need for a diverse set of partners, they commented that, "Landscape-level governance requires involving multiple types of stakeholders, which is often a challenge" (PIM, 2021e).

The empirical findings from Section 2.2 support the importance of complementarity in partnerships. The quantitative analysis in that section shows that studies that involved a greater variety of partner types such as research, government, community, and private sector partner organizations, tended to produce research outputs that had a greater influence on end users than did studies with fewer partner types. In contrast, merely having a large number of external partners (of any type) does not appear to be significantly associated with producing more influential outputs. (For more details on the empirical findings, see Section 2.2 above.)

Based on these observations, it seems that one of the keys to effective partnerships is the ability of PIM researchers to construct collaborations with organizations that complement their own abilities, resources, and relationships. Given PIM's explicit goal of influencing government policy, the inclusion of downstream end users in partnerships seems particularly important. Such complementarity brings potentially big gains in effectiveness to PIM research.

The problem, however, is that such complementarity can be hard to achieve in practice. From the researchers' perspectives, it is difficult to assess the strategic value that a potential partner organization will bring to the collaborative research activity. Will their actual contribution correspond to the one initially intended by the parties? In what ways will the proposed partnership help accomplish goals that the researchers could not accomplish on their own? Are other potential partners more capable or more suitable to the research activity? How much additional work will it take to cultivate and maintain new partnerships?

Even if the PIM researchers are able to determine which specific organizations make strategic sense for the study's impact pathways, it is not a trivial task to initiate partnerships with those organizations. The identified organizations are likely to face constraints of their own and may not be motivated to pursue the proposed collaboration. To be an effective contributor in the development "ecosystem," PIM researchers need to be perceived by potential partner organizations as attractive research partners who will bring substantial benefits to the table (CGIAR–IEA, 2016). Ideally, PIM researchers should be well enough known by key development partners so that these partners seek out PIM researchers to propose collaboration to conduct joint research about their shared interests to advance in rural development research.

This section of the report analyzes questions related to PIM's ability to attract key partners in their research activities. The analysis assumes that this ability depends largely on how potential

partners perceive the costs and benefits associated with forming formal partnerships with the program. If potential PIM partners perceive the costs of entering a partnership with PIM to exceed the perceived benefits, they are not likely to be interested in collaborating. The evaluation team leverages original data from interviews and questionnaires with PIM researchers and with their partner organizations to address the following evaluation questions:

1. What are the main benefits associated with being a PIM partner?
2. Which factors inhibit the engagement of different types of partner organizations?
3. Which future partnership strategies are most important?

PIM partner survey

The evaluation teams developed an online questionnaire which the PIM management team distributed to approximately 60 partner organizations in two mailings, the first one in March 2021 (to partners in Flagship 5), and the second in December 2021. Representatives from a total of 44 different organizations responded to the survey (hereafter the "partner survey"). Before sending out the survey, the evaluation team requested PIM researchers to provide contact information for three categories of partner organizations; these were partner organizations that:

1. Currently work with PIM researchers as partners;
2. Have worked with PIM researchers in the past; or
3. Have not worked with PIM so far but could potentially do so in the future.

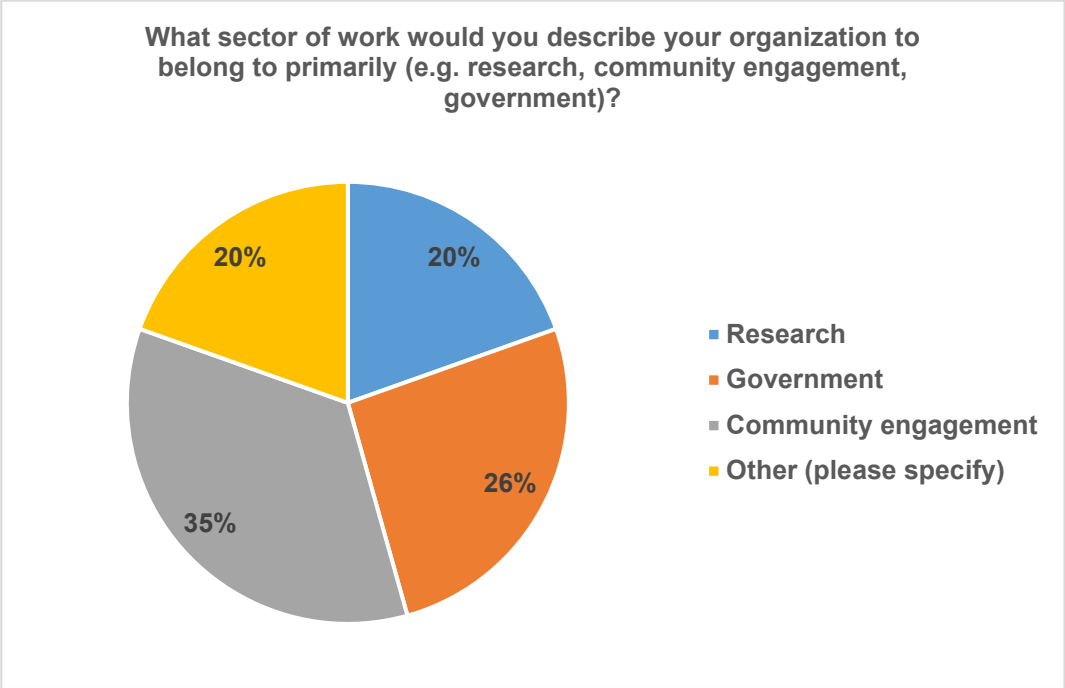
Figure 11 presents the shares of partner survey respondents among the three categories of partner organizations, depending on their partnership status with respect to PIM. The sample appears to be well balanced, allowing the evaluation team to conduct comparative analyses that contrast these three dimensions of partnership status.

Figure 11. Shares of past, current, and potential future partners that responded to the PIM partner survey

Source: PIM partner survey conducted in 2021.

Responses to the partner survey came from five different types of partners. Due to a shortage of responses, however, differentiated analysis was only possible for three of these partner types; they included research partners (7), government partners (11), and community engagement partners (15). Figure 12 presents a breakdown of the 43 different partner representatives with regard to the type of organization that they represented in the partner survey. The two main downstream partner organization types—community engagement and government—are well represented in this sample; less well represented groups include private sector firms and international organizations. Aggregate results need to be interpreted with these limitations in mind.

Figure 12. Shares of partner organization types responding to the PIM partner survey



Source: PIM partner survey conducted in 2021.

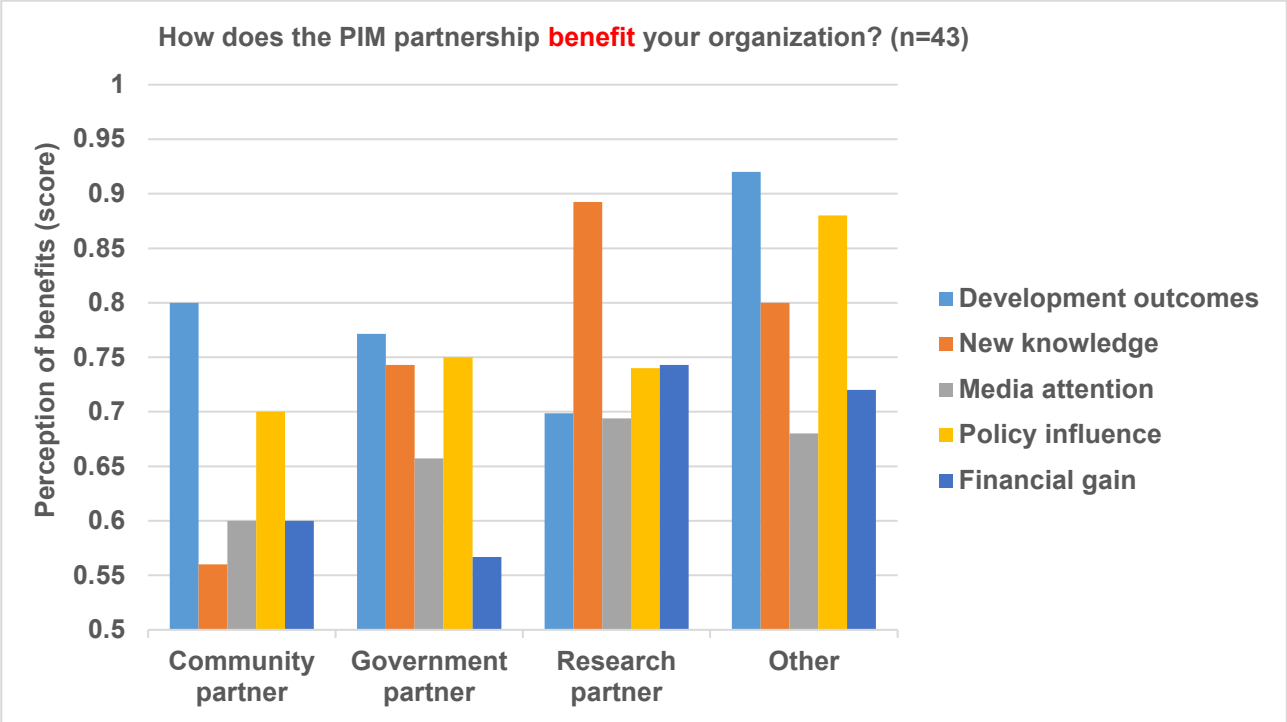
2.4.1 What are the main benefits associated with being a PIM partner?

If partners perceive more benefits than costs associated with their partnership with PIM, they will be more interested in collaborating. In this section of the report, the evaluation team uses the perceived benefits and costs associated with PIM partnerships (past, current, and future) as a proxy measure for how attractive PIM is as a partner. Analyzing the partner survey responses, the evaluation team ascertains the degree to which PIM was able to attract and retain different types of partner organizations.

Partner organizations that knew about PIM research and found it relevant to their work were interested in entering into a partnership when they perceived that the benefits outweigh the costs. These perceived net benefits may differ among different partner organizations—both existing and potential—as well as between types of partner organizations.

Overall, PIM partner organizations perceived several important benefits accruing through collaboration. In Figure 13, a score greater than 0.5 means that the respondents agree, or very much agree, that the stated benefit is significant (the closer to an average score of 1 among partners in a particular category, the more agreement there is about this being a major benefit). The figure also shows that the perceived benefits vary by organization type. Research partners appear to value the pursuit of new knowledge as the most important benefit, followed by financial gain, policy influence, and development outcomes. All other partners perceive the achievement of improved development outcomes as the most important benefit to be gained from the PIM partnership. Knowing how the perceived importance of benefits varies across organizational types is of great value to CGIAR researchers in making sure that existing partners stay motivated and that potential future partners see the possible benefits accruing from collaborating with One CGIAR. According to partner survey respondents, financial gain does not represent the most significant benefit for any type of partner organization.

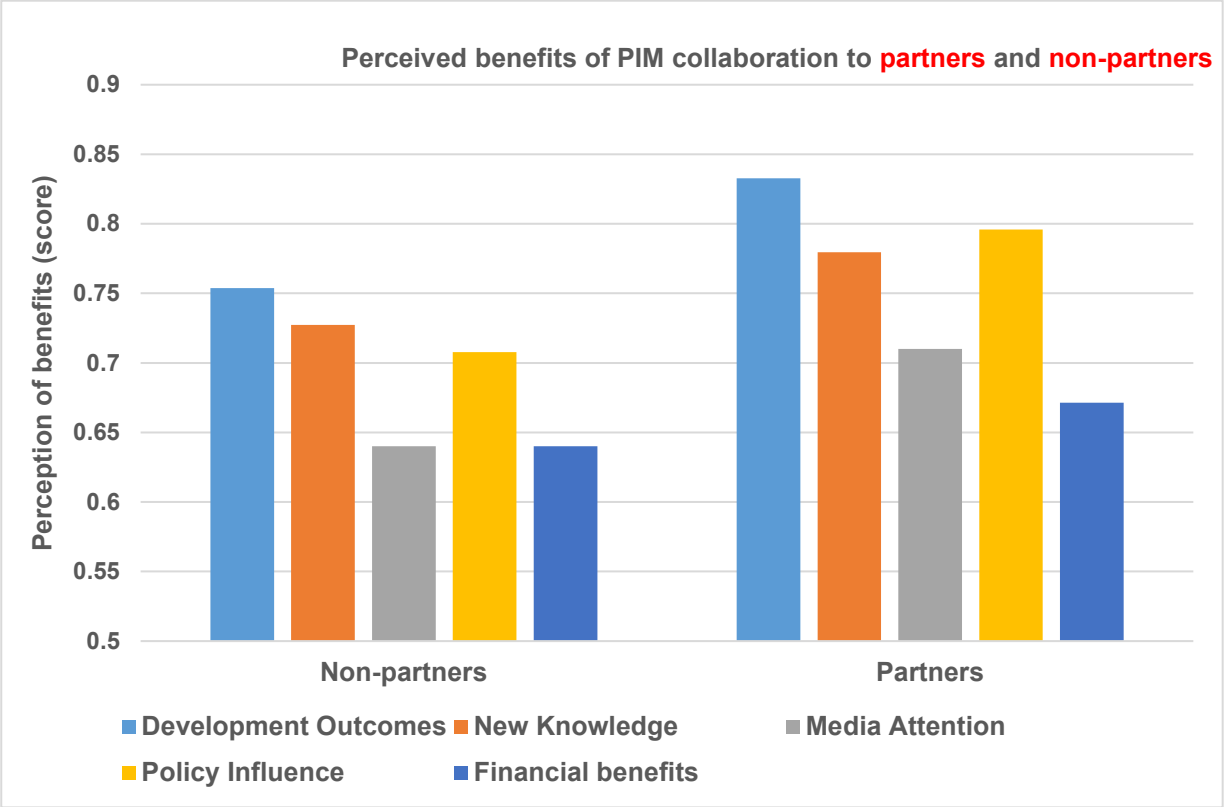
Figure 13. Perceived benefits of PIM partnership



Source: PIM partner survey conducted in 2021.
Note: The higher the score, the greater the perceived benefit of collaboration.

Another piece of useful knowledge that may be gleaned from the partner survey results is how perceived benefits differ between current partners and non-partners. (In the category of non-partners, we include organizations that have never been partners with PIM as well as those that were not partners at the time of the 2021 PIM partner survey but had been in the past). Figure 14 breaks down perceived benefits for partners and non-partners. As expected, existing partners exhibit stronger overall agreement with the perception of the five benefits as important, but the difference is not statistically significant and the two distributions look very similar. This suggests that the set of PIM partners appeared to value largely the same benefits as the organizations that were currently not partnering with PIM. Knowing this can help CGIAR researchers frame invitations to new partner organizations, emphasizing contributions to improved development outcomes, stronger scientific evidence, and the potential to influence public policymaking.

Figure 14. Perceived benefits to partners and non-partners



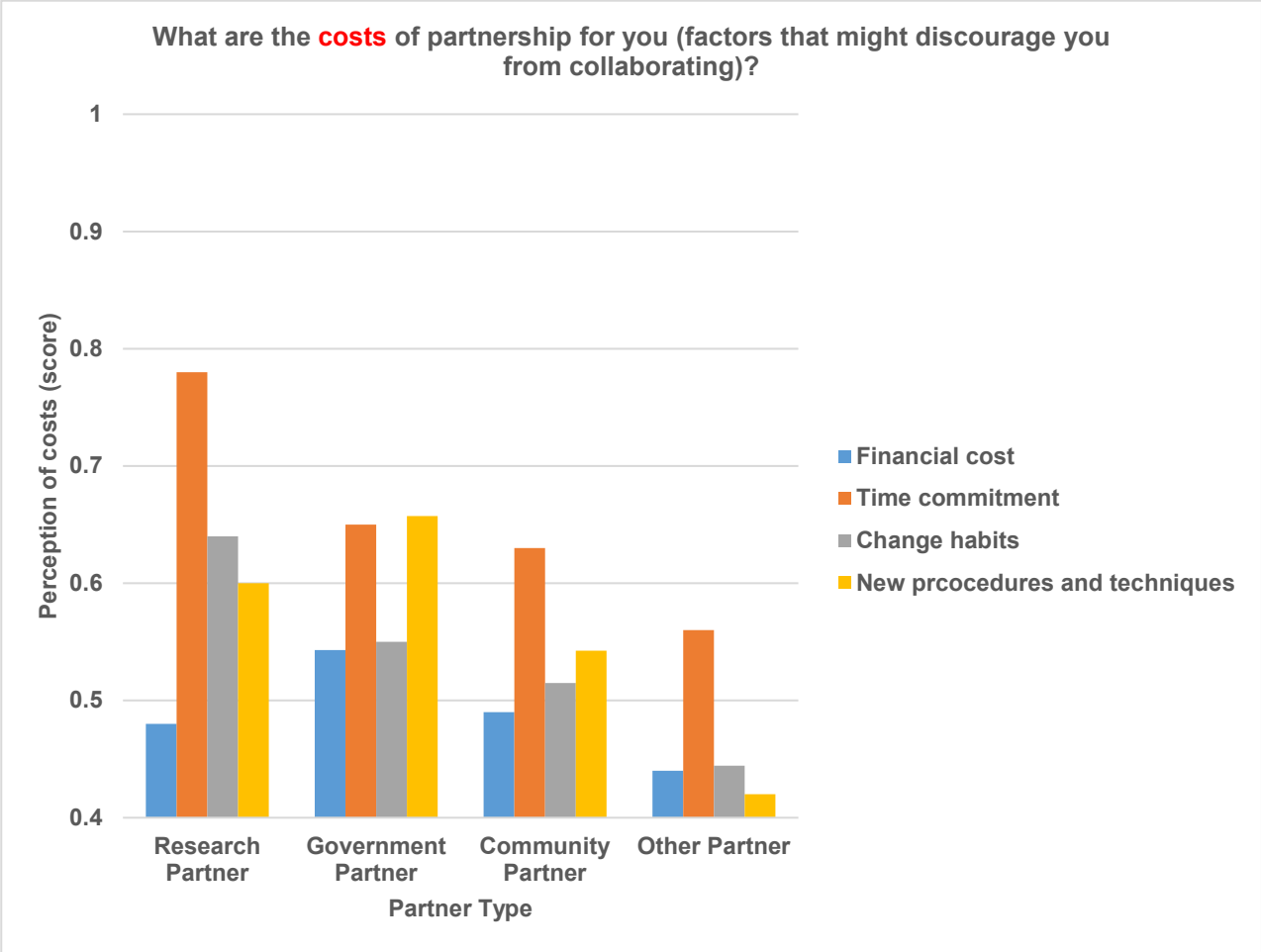
Source: PIM partner survey conducted in 2021.
Note: The higher the score, the greater the perceived benefit of collaboration.

2.4.2 Which factors inhibited the engagement of different types of partner organizations?

The 2021 PIM partner survey also asked the respondents how they perceived the various costs associated with PIM partnership (or, in the case of non-partners, the prospects of such a partnership). The survey question specifically referred to these costs as factors that might discourage the individual and their organization from collaborating with PIM.

Figure 15 presents the distribution of four perceived costs for each of the four types of partner organization. The scoring for each cost ranges from 0 to 1. Scores close to 1 mean that the respondent very much agrees with the assertion that a particular cost is a major aspect of the partnership. A value close to zero means that the respondent completely disagrees with the proposition that it is a major cost.

Figure 15. Perceived costs of PIM partnership



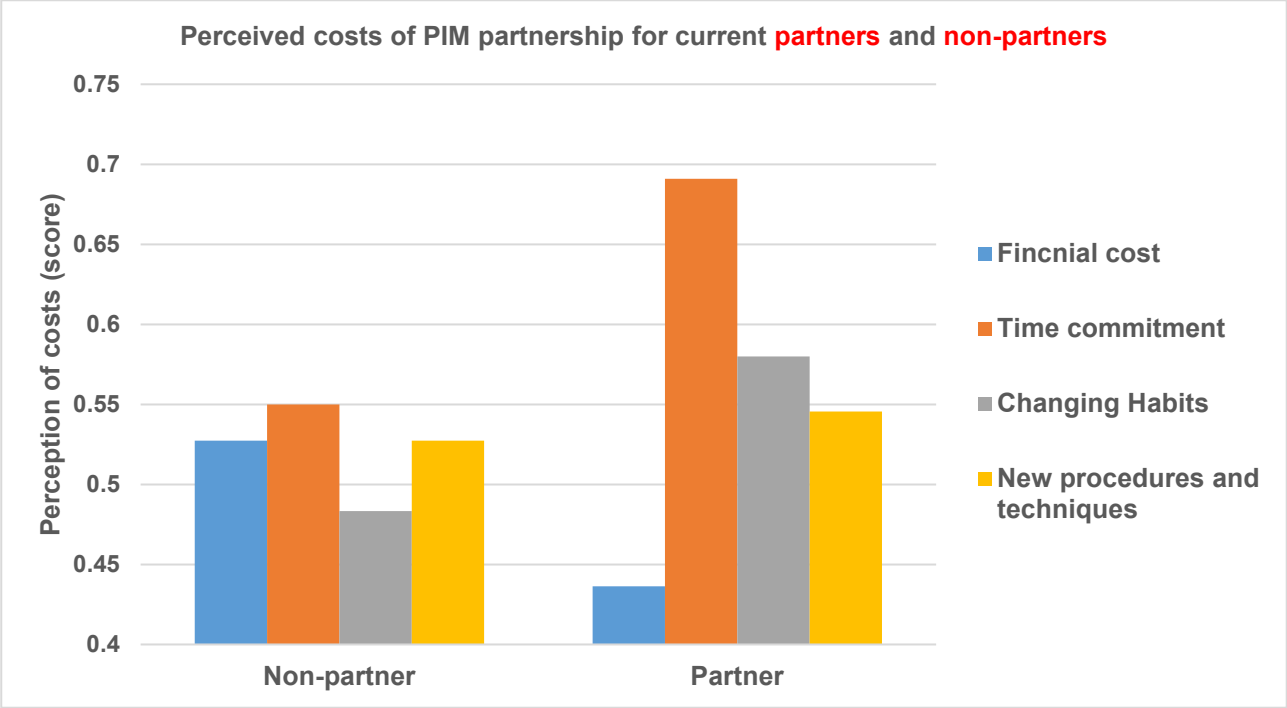
Source: PIM partner survey conducted in 2021.
Note: A score close to 1 means a particular cost is perceived as a major aspect of the partnership, and a score close to 0 means that it is not perceived as important.

Perhaps the most striking result of the comparison of perceived costs across different partner organizations (Figure 15) is how different the partner researchers' perspectives are, especially when compared to governmental organizations. Government actors perceive the costs related to "learning new techniques and procedures" to be the greatest; researchers, on the other hand, perceive "time commitment" to be a much more significant cost. Researchers also ranked "change habits" as a more significant cost than did other partner types. Focusing on the downstream external partners that play a prominent role in many of PIM's impact pathways, this comparison of cost perceptions is instructive; it appears that for both government and community engagement partners, financial constraint is less of a concern than costs associated with "time commitment," "new procedures and techniques," and "change habits."

Another noteworthy result is that costs associated with "time commitment" are a major consideration for partner organizations in that it was felt that spending time on the PIM collaboration was time that could have been spent on other activities. Such opportunity costs can inhibit the engagement of partner organizations. The prominence of time commitment as a major cost also comes through in the comparison of partners with non-partners (Figure 16), although partners agree more strongly than non-partners that this is a major cost. This is

especially the case relative to other perceived costs, such as financial costs. It is telling that existing partners are much less concerned with the financial costs of partnerships than are non-partners, presumably because current partners receive some financial compensation from the collaboration. This finding suggests that the types of inputs from CGIAR researchers that will best retain and support current partners are quite different from the kinds of inputs needed to attract and motivate new partners.

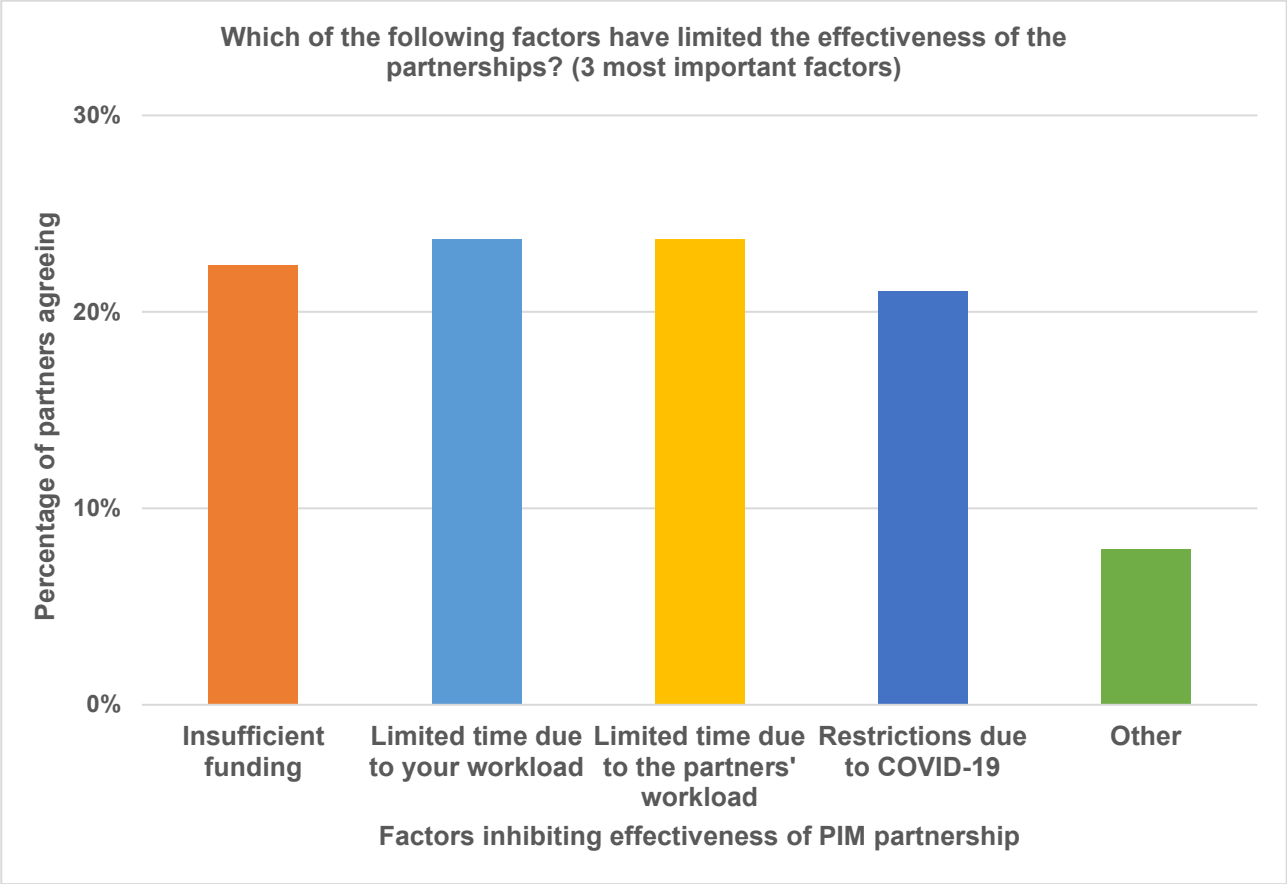
Figure 16. Perceived costs for current partners and non-partners



Source: PIM partner survey conducted in 2021.
Note: A higher score means that a particular cost is perceived as a major aspect of the partnership, and a score close to 0 means that it is not perceived as major.

From the researchers' perspectives, there are also several factors that may have inhibited effective partnerships. In the PIM researcher survey, the evaluation team asked respondents, "Which of the following factors have limited the effectiveness of the partnerships? (Please select the three most important factors)." The distribution of selected responses is presented in Figure 17.

Figure 17. Factors inhibiting effective partnerships



Source: PIM partner survey conducted in 2021.

The constraints that appear to be holding back partnership effectiveness, at least from a researcher perspective, are the partners' limited time due to heavy workloads and the researchers' own limited time. Insufficient funding also appears as a major constraint for many researchers in their efforts to work with partners. Almost as significant are the travel restrictions that have prevented researchers from interacting with partners in person during the COVID-19 pandemic.

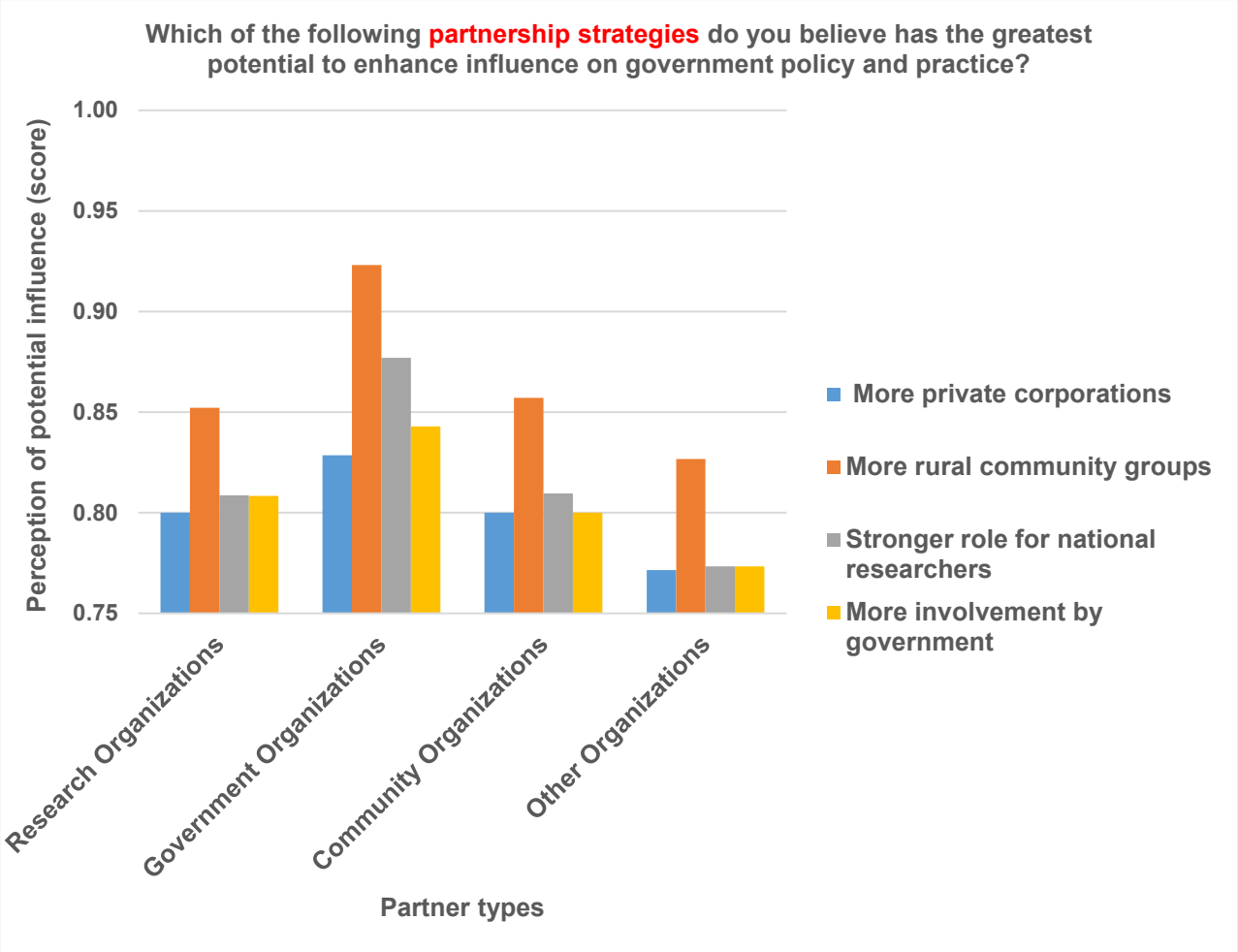
Net benefits to partners

While the survey questions on benefits and costs provide an overview of how partners perceive and value their collaboration (existing or prospective) with PIM researchers, they do not shed light on the net benefits. To what extent do these benefits outweigh the costs? In other words, do PIM partnerships provide partners with what are perceived to be net benefits? To get a sense of how partners view the balance between benefits and costs, we asked the current partners the following question as part of the partner survey: "In your opinion, has this partnership with PIM generated more benefits than costs for your organization (so far)?" The response was categorical; all current partners (100 percent) who chose to answer this question selected the option, "Yes, benefits are greater than costs." This is a resounding endorsement of PIM partnerships and of the net benefits they have delivered to partner organizations.

2.4.3 *Which future partnership strategies are most important for the continued impact of PIM research outputs?*

Existing PIM partners are often closer to decision-making processes than are the researchers themselves. Because of this, they possess a wealth of knowledge when it comes to the conditions that enable research activities to influence decision-making. These partners are therefore in a good position when it comes to offering advice on how the research program may adjust its partnership strategies to further improve its effectiveness. Along these lines, the evaluators asked PIM partners to identify the partnership strategies that they believed would improve effectiveness. Figure 18 below presents their responses.

Figure 18. Perceived potential of partnership strategies to achieve greater influence on government policy and practice



Source: PIM partner survey conducted in 2021.
Note: A higher score means that a particular item is perceived by respondents to have a higher potential of influencing government policies and practices, and a score close to 0 means that it is not perceived as having a high potential.

The responses by the representatives from all four types of partner organizations consistently recommend that future research partnerships find ways to involve more rural community groups directly in the research. The respondents also consistently recommended a stronger role for

national researchers. Somewhat surprisingly, the respondents did not argue strongly for more government involvement in future versions of the PIM research program.

Conclusions

Future versions of PIM research have a strong foundation of effective partnerships on which to build. PIM researchers take research partnerships very seriously and invest an immense amount of time and effort into making them as effective as possible. Most of their partners are also actively involved in the research itself, as well as in the dissemination of research findings. The results presented here suggest that partner organizations feel that the benefits associated with PIM partnership activities outweigh its costs.

Many PIM researchers sought to build partnerships with a variety of actors whose skill, competencies, and contacts complement those of the researchers. To continue to increase the impact of research products on end users' decision-making, there are two partnership-related actions that would benefit researchers. First, there are opportunities to diversify partnerships to encompass a greater variety of partner types. The average number different PIM partner types per study was just over two, and over 40 percent of the sampled PIM studies reported having just one partner or none at all. The results suggest that future versions of PIM research would benefit from investing in enhancing the diversification of partners. The results here provide some clues as to what potential partners look for in research partnerships.

At the same time as researchers seek to attract new strategic partners, it is important to be cognizant of the main constraint in carrying out partnership activities as this is expressed by both researchers and partners, that is to say, the considerable time commitment that comes with collaborative research. For these reasons, as researchers seek to enhance the diversity of partner types it is important that the overall numbers of partners do not grow excessively, as this would likely contribute to an even greater workload on researchers.

The results presented here also suggest that as researchers consider which type of partner it would make the greatest strategic sense to add, partner organizations themselves may be able to contribute to such an analysis as they are often closer to the end users and know how their decision-making works. Their social knowledge of political networks and influencers may help researchers identify new partner organizations that would be able to help shape and disseminate research outputs for greater impact. According to the research partners' perspective that is analyzed here, future One CGIAR partnership activities would become even more effective and influential if the research partnerships could find ways to more directly involve rural communities, national researchers, private companies, and government agencies in the research partnership activities.

Finally, one of the most important assets that all CGIAR centers possess when it comes to attracting strategic research partners is their brand. A CGIAR center such as IFPRI is a prestigious partner to have by your side. As One CGIAR moves forward with its numerous initiatives, it seems important to find ways to capitalize on this well-established brand recognition and to refrain from inventing too many new acronyms for each specific initiative.

2.5 Theme V: Reporting on and evaluating partnerships

2.5.1 What indicators can be used to measure the performance of partnerships in the policy research area? How could increased capacity to influence policy among CGIAR partners be measured?

To address the complex and interdependent challenges to sustainable growth, the 2030 Agenda for Sustainable Development was officially launched by the United Nations in September 2015 (United Nations, 2015). It stresses the vital role of MSPs in bringing about the level of systemic transformation needed to achieve the 17 Sustainable Development Goals (SDGs). Taking on board the new set of SDGs, particularly those relating to poverty reduction, improved food and nutrition security for health, and improved natural resource systems and ecosystem services, CGIAR released the 2016–2030 Strategy and Results Framework (SRF) in May 2015. Due to the disparity between the size of the global grand challenges in food and agriculture and the limited resources and reach of any single development entity, CGIAR recognizes that strategic and innovative MSPs operating at local to global scales are essential to achieving the CGIAR SLOs and targets that are aligned to the SDGs.

While necessary for the achievement of development goals, partnerships are not a panacea and partnership structures are more important than the absolute number of partners. Systemic and sustainable change depends on the development of inclusive and transparent partnership structures that bring together a range of coherent, complementary, and interdisciplinary skills from key stakeholders along the AR4D impact pathway and, where appropriate, take advantage of local to global linkages. Partners must be committed to engaging in the partnership; that is, they must be willing and able to participate and provide necessary resources and time. Most partnerships entail significant transaction and opportunity costs. According to Bezanson, Narain, and Prante (2004), CGIAR has historically emphasized the benefits of partnerships without fully recognizing the associated costs. Funding shortfalls, however, have resulted in increased consideration of the costs associated with partnerships, because if the benefits gained by partners do not outweigh their costs, then the quality and sustainability of the partnership is threatened.

In an environment of limited resources, tackling global threats to food, nutrition, and water security in a time of escalating climate and biodiversity crises requires a unified and integrated approach to sustainable development that is not only effective but also efficient. New innovative partnerships involve an element of risk in partner selection and operational processes and procedures. Over the past two decades there has been an increased effort to assess and document success factors in building partnerships; if implemented, these will mitigate the risks and enhance effectiveness.

Nelson (2017), for example, examined the role of collective action by business, government, and civil society in the achievement of sustainable development. Lessons on factors that promote successful partnerships were drawn from an in-depth review of over 100 partnerships across five different levels of engagement.[13] The eight factors in successfully building

[13] The five levels of engagement included: (1) cooperation with business partners along value chains; (2) project-level, financing, and implementation partnerships; (3) industry-level, precompetitive business

partnerships are transferrable; that is, they can be applied to all research-for-sustainable-development projects and can be used as a checklist when selecting partners and managing partnerships. The eight success factors are nested within three overarching categories: (1) a shared purpose and understanding of the ecosystem and its stakeholders; (2) rigorous process; and (3) operational alignment, good governance, and mutual accountability for progress (see Table 13 for more details).

Table 13. Success factors in building partnerships

Success category	No.	Success factors
Shared purpose and understanding of the ecosystem and its stakeholders	1	A compelling agenda for change led by strong champions who are leaders in their own organizations and are able to take decisions, allocate resources, motivate and mobilize others, and support a long-term commitment.
	2	Jointly agreed public commitments and a strategic plan for achieving them, based on rigorous consultation and relevant baseline evidence, with clearly defined roles and responsibilities for every participant.
	3	Understanding of the full value chain or ecosystem required for transformation and ability to either holistically coordinate activities or stakeholders across this system or target specific interventions that mutually reinforce those of others.
Rigorous process and operational alignment	4	Effective implementation capability, enabled by dedicated and well-resourced 'backbone support', committed practitioners from participant organizations who have the necessary authority and skills to engage, and effective communication and conflict resolution processes that enable regular and rigorous dialogue and feedback.
	5	Strong alignment with and leverage of partners' core competencies and interests.
Good governance and mutual accountability for progress	6	Mutually agreed metrics and governance mechanisms to track performance and ensure rigorous oversight and accountability, both within the partnership itself and externally with relevant stakeholders, including beneficiaries and vulnerable groups where relevant.
	7	Participatory monitoring and independent evaluation approaches that facilitate shared learning and better decision-making in addition to ensuring transparency and accountability.
	8	Flexibility to "course correct" and be adaptive based on evolving circumstances, disruptive events, failures, stakeholder feedback and lessons learned.

Source: Nelson, J. 2017. *Partnerships for Sustainable Development: Collective Action by Business, Governments and Civil Society to Achieve Scale and Transform Markets*. Cambridge, USA: Business and Sustainable Development Commission, and Corporate Responsibility Initiative, Harvard Kennedy School. http://s3.amazonaws.com/aws-bsdc/PartnershipsforSD.pdf .

Horan (2019) outlines two overarching requirements that must be satisfied to achieve sustainable transformation. The first focuses on the internal workings of the partnership and includes factors such as effective leadership, the willingness of participants to invest time and resources, process management, the degree of institutionalization, adequate funding, and adaptability to local conditions. The second requirement centers on establishing an enabling

alliances; (4) multistakeholder institutions, platforms, and networks; and (5) coordination between different levels and types of partnership to drive systemic change.

environment by ensuring that there is not a mismatch between the types of partnerships required for impact and the types of partners engaged. Horan (2019) also suggests that the implementation of a transparent, accountable, and participatory monitoring system would provide stakeholders with the information needed to encourage, achieve, measure, and learn from effective partnerships.

There is a significant body of work regarding the conditions that support functional partnerships, much of which informs discussions on partnership evaluation; however, there is limited analysis on the correlation between partnership and development outcomes. This is because even without trying to establish a causal link between intermediate research and innovation outcomes that have been developed though partnership and high-order development goals,

> [partnership] evaluation is by nature a complicated, challenging undertaking. Engaging with both process and outcomes is vital, and there will always be blurred boundaries between evaluating the outcomes of a project that was undertaken in partnership and evaluating the partnership itself. Within this, effective partnership evaluation is dependent on a clear understanding of [the]overall purpose (Hollow, 2011, p.25).

A detailed review of this literature was beyond the scope of this study. It appears, however, that even a decade ago there was a range of partnership evaluation frameworks from which to choose, but there was little evidence that they had been thoroughly tested, refined, and used. Recently, a disaggregated framework for understanding partnership effectiveness was developed and implemented in a research project entitled *Effectiveness of Partnerships for Advancing the SDGs*.[14] This novel analytical framework is based on the premise that the contribution of a specific research and innovation partnership is realized through a set of intermediate pathways. These pathways include: (1) the attainment of partnership goals; (2) the creation of value for the partners; (3) increased collaboration among these partners; (4) the delivery of positive environmental, social, and economic impacts for affected populations; and (5) the influence on collaboration and institutions outside of the partnership (CIES, 2020). The two key intermediate pathways through which the increased capacity to influence policy among CGIAR partners can be traced and subsequently measured are the external collaboration pathway and the social, economic, and environmental impact pathway.

While the same principles of flexibility and context-specific approaches that apply to partnerships also apply to partnership evaluation, the disaggregated framework could prove to be a useful tool to guide the evaluation of a range of partnership structures (particularly in the case of collaborative policy research where influence and impact are diffuse) if:

- The framework and the associated list of key evaluation questions and indicators are adapted to ensure that results address the needs of the evaluation audience;
- The frameworks and list of indicators are not viewed as sufficient in and of themselves, but rather are seen as a foundation upon which nuanced methods can be applied to contextualize the evaluation; the complex questions of partnership evaluation require

[14] This was a three-year research project that was coordinated by Prof. Liliana Andonova at the Centre for International Environmental Studies, Graduate Institute Geneva, and supported by a grant from the Swiss Network for International Studies (SNIS) under its 2017 call for projects. The project started its activities in the fall of 2017 and ended in December 2020.

the skilled use of appropriate theories and frameworks as well as the application of both qualitative and quantitative methods;
- The aim and purpose of partnership evaluations determine the data collection and analysis methods, not the reverse;
- All the transaction costs of the partnership are included in the analysis (these may be significantly higher than the agreed project budget);
- All intended, unintended, positive, and negative outcomes are captured;
- The counterfactual is used to determine the with- and without-partnership scenarios, as well as partnerships that enjoy theoretically favorable versus unfavorable conditions;
- Where necessary, the issue of contribution versus attribution is addressed; and
- Special attention is given to drawing lessons from the partnership and from the evaluation process and methodology (information on what did not work, and why, is just as valuable as information on what did work).

The disaggregated approach to partnership evaluation is founded on the notion of impact pathways. Recognizing this, and given the inherent complexities of evaluating partnerships, the development of a detailed ToC and nested impact pathways provides a pragmatic strategy for documenting hard-to-track consequences; it also provides a guide to major focal points, data needs, and sources.

While a prescriptive list of indicators is not being provided here because of the context-specific nature of partnerships, the analytical results in Section 2.2 show that there are several partnership conditions that are associated with greater policy influence; this suggests that some of these measures may be used to assess the performance of research partnerships. The enabling partnership index, for example, captures 10 conditions that PIM researchers consider to be central to the success of efforts to collaborate with external partners. Future work can further refine and adjust this index to more fully capture the factors and conditions that are conducive to effective partnership work.

The empirical analysis in Section 2.2 also showed the importance of working with a variety of partners and thus fulfilling complementary roles in the coproduction process. Future efforts to assess partnership effectiveness would therefore benefit from monitoring the types of partner organizations and their expected roles in the collaborative relationship with CGIAR researchers.

2.5.2 *Forming and nurturing partnerships has costs in terms of financial and time commitments. How should the cost-effectiveness of partnerships be evaluated and improved?*

According to the PIM research partners who responded to the online survey, the perceived benefits associated with PIM partnerships far outweigh the costs. At the same time, many of these external partners expressed concern about costs, especially in terms of the considerable time commitments demanded by partnership activities. PIM researchers expressed very similar concerns about the perceived costs of working with external research partners. As researchers seek to attract new strategic partners to increase the impact of the collaborative research, it is important that researchers are cognizant of these costs so that the overall numbers of partners are kept to a manageable level; otherwise, partnership work could add even more to researchers' already heavy workload. To improve the cost-effectiveness of CGIAR research partnerships, it seems important to determine how these costs may vary over time and across the different organizations that are involved in partnership activities.

The results from the PIM partner survey also provide some strategic guidance on how the cost-effectiveness of partnership may be improved. Partners suggest that cost-effectiveness would be improved by involving existing partner organizations more closely in the strategic analysis of external partners and of their potential contribution to CGIAR research.

External delivery partner organizations tend to operate closer to end users; they therefore know better than do PIM researchers how end users' decision-making works. External partner organizations' social knowledge of political networks and influencers may help researchers identify new partner organizations that would be able to help shape and disseminate research outputs for greater impact. According to the research partners' perspective that is analyzed here, future CGIAR partnership activities would become even more cost-effective if the research partnerships could find ways to more directly involve rural communities, national researchers, private companies, and government agencies in research partnership activities.

3 Strengths and Weaknesses

3.1 Strengthened/facilitated achievements

PIM was a highly collaborative global research program that operated from 2011 to 2021. In this short time period, PIM collaborated with at least 677 partners drawn from 8 regions across the globe. PIM's collaborative research and capacity development efforts were focused on contributing to poverty reduction, better nutrition and health, and good stewardship of natural resources. The emphasis was on Africa south of the Sahara, South Asia, and selected countries in East Asia, Southeast Asia, and Latin America. Key strengths that facilitated PIM's achievements include:

- PIM's ability to develop and engage in innovative partnership modalities. PIM recognized the importance of partnership for policy innovation and impact and so actively collaborated with multiple research and delivery stakeholders along the impact pathway. PIM developed and/or engaged not only in multistakeholder partnership modalities that prioritized impact at a local level, but also in partnership structures that linked to regional and global scales; this increased the likelihood that PIM research and capacity strengthening activities have contributed, or will contribute, to the achievement of the SDGs through the CGIAR SLOs.
- PIM's adaptive and innovative culture. PIM proved to be very adaptive and innovative in addressing the financial challenges to partnership. This resulted in an increased number of partnerships despite declining W1/2 funding over time. Financial constraints and uncertainty can motivate CGIAR researchers to seek new sources of funds and new partnerships; however, this is not sustainable in the long run. It limits the freedom to engage in innovative/exploratory partnerships and can result in the development agenda being driven by funding sources rather than by science; it may also adversely impact the quality of collaborative research.
- PIM's pragmatic approach to building partnerships. In addition to the scope of the research and capacity strengthening activities and geographical focus, PIM researchers considered a range of specific factors when selecting partners; these included: (1) the added value a partner can bring to the AR4D activity; (2) the partner's capacity and willingness to develop, engage in, and maintain, strong long-term relationships; (3) the strength of the partner's incentive to undertake the research and/or delivery activities;

and (4) the partner's capacity and willingness to share information and credit for success. These broadly align with the literature on partnerships for sustainable development.

3.2 Weakened achievements

Key weaknesses that may have limited PIM's achievements include:

- Incomplete monitoring and evaluation systems for partnerships. At the beginning of Phase 2, PIM adopted the CGIAR MARLO online platform. While it contains a large amount of information on PIM's partnership landscape, information on the effectiveness of partnerships and lessons learned was lacking. As such, the usefulness of this reporting system for evaluation purposes was limited and there were no alternative partnership monitoring and evaluation systems in place from which to draw evaluative evidence. While practical experience is an important input into the decision-making process, evaluative evidence on successful and less successful partnership modalities could have strengthened PIM's ability to develop more strategic and innovative partnership structures and could have reduced the number of missed opportunities.
- Limited information on unsuccessful partnerships. The evaluation team found that while there were a number of success stories, with the exception of a limited amount of information in the flagship insights and despite PIM researchers' wealth of experience and knowledge, reporting on unsuccessful research and/or delivery partnerships was lacking. A comprehensive evaluation will draw on information of what worked, what did not, and why. Drawing out lessons learned about the influence of underlying conditions and factors that drove or inhibited success adds considerable value to the evaluation. In turn, the aggregated evidence and lessons learned provide researchers and other key stakeholders with information that can be invaluable when developing or implementing collaborative AR4D, particularly when establishing new innovative partnerships. Identifying the factors influencing success will require the development and operationalization of a robust theory of partnership effectiveness.
- Failure to capture lessons learned during the OICR selection process. Examination of the annual OICR submissions and management responses provides some insights into progress made and the reasons for lack of progress. By far the most common reason for decisions regarding OICR topics and stages was "lack of evidence/progress." Institutional learning could have been enhanced by gathering and documenting more elaborate explanations where possible.

4 Recommendations

Recommendation 1: One CGIAR should prioritize stakeholder engagement in the design, development, and early implementation phase of new research and capacity strengthening activities and initiatives. One CGIAR articulated the vital role that partnerships play in AR4D in the background and strategy documents and a large number of stakeholders and potential partners were contacted by initiative design teams. An issue that was nevertheless raised during the researcher interviews was the perception that there had been missed opportunities to more fully engage development partners in the design of the new initiatives (this may have been at least partly due to travel restrictions and a tight timetable). There is now a further opportunity to engage closely with partners in the implementation phase of the new initiatives and in the planning, design, and implementation of new research activities.

Recommendation 2: One CGIAR should strengthen the capacity for measuring partnership effectiveness through a coherent, participatory approach to monitoring and evaluating partnerships. Addressing the challenges of complex and systemic change requires the development of partnership structures that have the capacity to evaluate partnership performance and the flexibility to revise and modify partnership roles and structures based on lessons learned. A user-friendly participatory monitoring and evaluation system will provide stakeholders with the information needed to encourage, achieve, measure, and learn from effective and ineffective partnerships if stakeholders have a degree of ownership in the system. The data collected could also be used in in-depth evaluation studies that will help fill the current evidence gaps that are due to the difficulty in identifying and measuring program outcomes that are directly linked to partnerships.

Recommendation 3: To reduce the incidence of missed opportunities and increase the value of partnerships, One CGIAR should give more attention to developing a consultative partnership strategy that addresses the increasing need for more strategic and innovative partnership modalities, including the long-term engagement of a diverse set of partners that complements the skills and resources of One CGIAR researchers. Increased financial and technical support will be required to research partnerships because developing and maintaining innovative strategic partnerships takes time and stable funding. Partnerships that suffer from funding uncertainties are more likely to miss opportunities for policy advice and innovations.

Recommendation 4: One CGIAR should promote the development and use of detailed, granulated, context-specific ToCs and IPs that are: (1) developed in partnership with key stakeholders in an inclusive, participatory process; (2) revisited and revised regularly; and (3) used for measuring progress, capturing lessons learned, and communicating results. Overarching ToCs and IPs provide useful frameworks for identifying core constraints and opportunities, underlying assumptions and risks, and key types of actors along the impact pathway; however, they are not themselves particularly useful tools for measuring or enhancing progress. Much more granulated, context-specific ToCs and IPs that identify enabling conditions and factors are needed for individual research innovation activities in order to guide design and implementation and to measure and communicate all positive and negative, intended and unintended outcomes. To build ownership and encourage use, the ToCs and IPs should be developed by key stakeholders in a consultative process. The roles of partners and the underlying assumptions and risks should be clearly articulated and should be revisited and updated as needed. Finally, ToCs and IPs should be reexamined regularly and/or at crucial stages of the research innovation activities and should be revised as needed.

Recommendation 5: One CGIAR should promote the documentation and widespread use of lessons learned from annual analyses of progress toward outcomes. Even if progress was not made or information on progress is lacking, useful data on why this is the case and the steps taken to mitigate limiting factors could enhance institutional learning. It will benefit CGIAR partnerships and the broader development community if the lessons learned are captured, shared, and effectively used.

ANNEX

Contents

Annex A. Flagship Overview, Project ID, and Project Titles

Table A.1. Flagship 1 overview and research cluster

Overview	Research cluster
F1. Technological Innovation and Sustainable Intensification Lessons from the modern history show that visionary policies and rapid technological change can achieve agricultural productivity growth and poverty reduction. However, lessons from the past are not sufficient to motivate action in today's world. The grand modern challenges, such as climate change, soil degradation, and growing competition for land and other resources add more layers of complexity to decision making and require rigorous analysis of the decisions' potential outcomes. PIM's Flagship 1 assesses future food systems and their agricultural production, food consumption, and nutrition and environmental outcomes under alternative scenarios of climate change and other drivers. It further analyzes technological solutions that could address those challenges and examines the associated public policies and investments in science and innovation required to implement the solutions. Among these investments there is particular emphasis on policy and regulatory aspects of seed systems and on agricultural extension methods and approaches for enhancing the wider use of CGIAR and partner technologies. This flagship takes a global perspective that transcends a single crop, commodity, technology, or agro-ecological system. Applications of the scenario analysis and work on innovation systems are regional and national, with current engagement in Africa south of the Sahara (Ethiopia, Ghana, Kenya, Malawi, Mali, Nigeria, Tanzania, Uganda, Zambia, and Zimbabwe), Asia (Bangladesh, China, India, Myanmar, Nepal, Pakistan, Philippines, Vietnam), Latin America and the Caribbean (Colombia, Honduras, Nicaragua, Peru), and the Middle East and North Africa.	Cluster 1.1: Food Systems Futures Cluster 1.2: Science Policy and Innovation Systems for Sustainable Intensification

Source: CGIAR. n.d. Flagship 1: *Technological Innovation and Sustainable Intensification***.** Washington, DC: CGIAR Research Program on Policies, Institutions, and Markets. https://pim.cgiar.org/research/f1/.

Table A.2. Flagship 2 overview and research cluster

Overview	Research cluster
F2. Economywide Factors Affecting Agricultural Growth and Rural Transformation Progress toward creating decent jobs and reducing rural poverty requires transformations of economies, rural spaces, and food systems. Economywide transformation brings changes in relative factor costs (i.e., land, labor, and capital), new patterns of consumption, and changes in opportunities for trade and specialization. Food system transformation is shaped by changing food demand, which creates investments and jobs in food value chains and increases commercial farming opportunities. Both transformations will have substantial effects on rural economies, but maximizing the positive effects requires attention to policies and investments. PIM's Flagship 2 teams study these processes and analyze policy options to promote inclusive rural growth and transformation. Specific topics include assessment and implications of transformation processes, agri-food systems as source of jobs, key public and private investments to stimulate rural development, and the political economy of agricultural and food policy reforms. Late-transforming countries face internal challenges in a context of external and global grand challenges. Among the latter are climate change, degradation of water, soil, forests, fish stocks, and biodiversity, urbanization without significant industrialization, high levels of youth unemployment, and increasing competition for land. Many of these challenges are particularly acute in Africa south of the Sahara, where most late-transforming countries are located. Therefore, the work of Flagship 2 is primarily concentrated in this region, with emphasis on Ethiopia, Ghana, Malawi, Nigeria, Rwanda, Tanzania, Uganda and Zambia. The work is well aligned with the Malabo Declaration, the articulation in 2014 by African heads of state and government of their new commitments to the CAADP agenda. The *Client-Responsive Country and Regional Engagement and Partnership* research cluster reflects the importance of country partners for achieving outcomes. It includes the IFPRI Country Strategy Support Programs in Bangladesh, Egypt, Ethiopia, Ghana, Malawi, Myanmar, Nigeria, and Rwanda, and the programs of research and policy support in India, Papua New Guinea, Central Asia, and China, as well as the ReSAKSS-Asia network, which focus on partnerships with and building capacities of national stakeholders for improved policy making.	Cluster 2.1: Agricultural Transformation and Rural Incomes Cluster 2.2: Public Investments and Institutions Cluster 2.3: Political Economy and Policy Processes Cluster 2.4: Client-Responsive Country and Regional Engagement and Partnership

Source: CGIAR. n.d. Flagship 2: *Economywide Factors Affecting Agricultural Growth and Rural Transformation***.** Washington, DC: CGIAR Research Program on Policies, Institutions, and Markets. https://pim.cgiar.org/research/f2/.

Table A.3. Flagship 3 overview and research cluster

Overview	Project title
F3. Inclusive and Efficient Value Chains PIM's Flagship 3 addresses the evolving international, regional, and local contexts for agricultural markets, and investigates how value chains can be strengthened to generate more profits for smallholders and small entrepreneurs, both men and women. This area of the PIM portfolio focuses on the "middle" of complex agri-food systems – the link between farmers and consumers. The research at the micro level is focused on reducing common inefficiencies across different value chains and understanding models to improve their quality to increase smallholder incomes. For example, researchers are studying the size of post-harvest physical and economic losses, and testing interventions to overcome them. A broad body of research projects is investigating interventions (e.g. quality certification) to enhance product quality throughout the value chain. To overcome constraints related to risk, a body of work is dedicated to developing insurance products that work for small farmers, including picture-based insurance and bundling insurance with other financial or advisory services. From the macro perspective, researchers are analyzing the effects of alternative trade, fiscal, and agricultural policies to support policy decisions at national and regional level. Businesses, NGOs, and governments are key partners in designing and piloting interventions to make value chains more efficient and inclusive. PIM's Flagship 3 contributes to enhanced collaboration across CGIAR through the Tools4ValueChains website – a comprehensive repository of tools, research methods, and best practices in value chain research – and the emerging CGIAR Value Chains community of practice. In addition, the team takes part in major global initiatives: the Ag-Incentives Consortium and its Ag-Incentives website, an interactive platform facilitated by IFPRI which aggregates agricultural policy data for guiding more informed policy; and the Technical Platform on Food Loss and Waste hosted by FAO. The geographical focus of the portfolio is on Eastern and Southern Africa (Ethiopia, Kenya, Tanzania, Uganda), Western Africa (Ghana, Mali, Nigeria, Senegal), and Latin America (the Andean countries, Honduras, Nicaragua), with projects in Vietnam and Indonesia.	Cluster 3.1: The Policy Environment for Value Chains Cluster 3.2: Interventions to Strengthen Value Chains Cluster 3.3: Value Chains Research: Outreach and Scaling

Source: CGIAR. n.d. Flagship 3: *Inclusive and Efficient Value Chains*. Washington, DC: CGIAR Research Program on Policies, Institutions, and Markets. https://pim.cgiar.org/research/f3/.

Table A.4. Flagship 4 overview and research cluster

Overview	Project title
F4. Social Protection for Agriculture and Resilience Flagship 4 seeks to determine how best to design safety nets, and how these programs complement programs supporting agricultural growth and rural transformation. An understanding of which instruments for delivery (cash, vouchers, food…) work best for specific groups, how to target beneficiaries, how large transfers need to be, and to which extent complementary nutrition counseling can increase the efficiency of safety nets, can help inform design and implementation of these programs. Other areas of focus of the flagship are: how social protection can stimulate investment in agriculture; how social protection programs, together with agricultural and other interventions, can lead to graduation from social protection (i.e., beneficiaries reaching a wellbeing threshold that allows them to no longer rely on these programs); what combination of approaches are needed to make lasting impacts on the well-being of populations in fragile contexts (e.g. post-conflict areas). The gendered nature of vulnerability is a major area of focus. Social protection research in PIM focuses on Africa south of the Sahara and South Asia, with particular emphasis on Bangladesh, Ethiopia, and Mali. The research team works closely with governments and NGOs who are implementing social protection programs.	Cluster 4.1: Social Protection Delivery and Outcomes Cluster 4.2: Improving Resilience for the Poor in Fragile and Low-income Settings

Source: CGIAR. n.d. Flagship 4: *Social Protection for Agriculture and Resilience*. Washington, DC: CGIAR Research Program on Policies, Institutions, and Markets. https://pim.cgiar.org/research/f4/.

Table A.5. Flagship 5 overview and research cluster

Flagship	Research cluster
F5. Governance of Natural Resources Equitable and secure tenure arrangements and well-performing rural institutions can contribute to well-distributed incomes and foster investment and technological innovation in agriculture. On the other hand, tenurial regimes, if controlled by elites or implemented to reinforce traditional hierarchies of power, can be powerful instruments of exclusion. Lack of attention to resource governance carries high risk for development programs, particularly with regard to equality, social inclusion, and long-term sustainability of natural resources. PIM's Flagship 5 seeks to identify actions to strengthen tenure rights of poor and marginalized people (particularly women) and communities; improve governance of natural resources; and enhance constructive interaction of resource users within shared landscapes. More specifically, PIM's research aims to document the sources of tenure insecurity for men, women, and communities with regards to their resources (land, forest, water, fish stocks), as well as the negative consequences of tenure insecurity. Researchers also investigate mechanisms (e.g. policy or institutional reforms) to strengthen tenure and institutions. The team analyzes the management of resources held in common or individually, under formal, informal, and legally pluralistic arrangements. The rights and roles of women and members of marginalized groups (for example ethnic minorities and indigenous peoples) receive particular attention. Researchers examine approaches to strengthen collective action and improve governance of shared resources, including through multi-stakeholder platforms. Flagship 5 research spans a large number of countries in Africa (Ethiopia, Ghana, Kenya, Madagascar, Malawi, Mali, Mozambique, Nigeria, Tanzania, Tunisia, Uganda, Zambia), Asia (Bangladesh, Cambodia, India, Myanmar, Nepal, Vietnam), and Latin America (Guatemala).	Cluster 5.1: Enhancing Tenure Security Cluster 5.2: Governing Shared Landscapes

Source: CGIAR. n.d. Flagship 5: *Governance of Natural Resources.* Washington, DC: CGIAR Research Program on Policies, Institutions, and Markets. https://pim.cgiar.org/research/f5/.

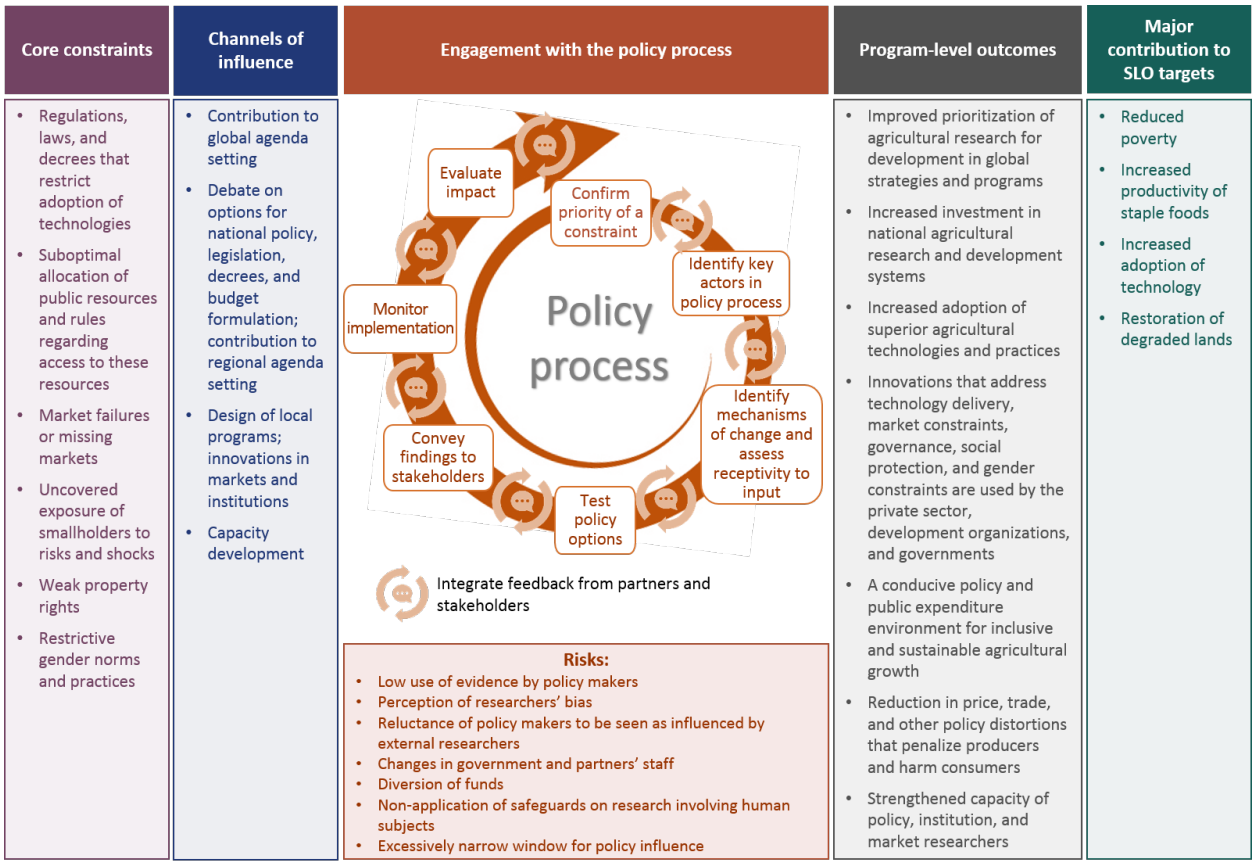
Table A.6. Flagship 6 overview and research cluster

Overview	Research cluster
F6—Cross-cutting Gender Research and Coordination Progress toward gender equality enhances inclusion and promotes effective development. PIM's cross-cutting gender research focuses on three main areas: developing tools and methods to further our understanding of women's empowerment and women's access to and control over resources; understanding the complex process of joint-decision making in agricultural production decisions and how that affects production outcomes; and understanding how different drivers of the agricultural transformation process affect gendered roles in agriculture and the corresponding challenges and opportunities for development strategies. In 2017-2019, Flagship 6 hosted the CGIAR Collaborative Platform for Gender Research which aimed to increase the visibility and impact of gender research undertaken across the CGIAR. The Platform supported priority setting for gender research, strategic partnerships, capacity development, and collaboration between and among CGIAR programs, Centers, and partners. It coordinated research on various topics, including gender dynamics in seed systems, gender and value chains, and the "feminization" of agriculture, and initiated a forward-looking review of the CGIAR contributions on gender and aqua/agriculture and natural resource management (to be completed in 2021). In January 2020, the Platform, now named GENDER (Generating Evidence and New Directions for Equitable Results), transitioned to its new stage under the leadership of the International Livestock Research Institute (ILRI). While the work of Flagship 6 has global applications, PIM's cross-cutting gender research is more specifically focused on Bangladesh, Benin, Burkina Faso, Colombia, Ethiopia, Ghana, India, Kyrgyzstan, Malawi, Myanmar, Nicaragua, Nigeria, Senegal, and Uganda.	Cluster 6.1: Gender, Agricultural Productivity, and Rural Transformation Cluster 6.2: Collaborative Gender Research

Source: CGIAR. n.d. Flagship 6: *Cross-cutting Gender Research and Coordination.* Washington, DC: CGIAR Research Program on Policies, Institutions, and Markets. https://pim.cgiar.org/research/f6/.

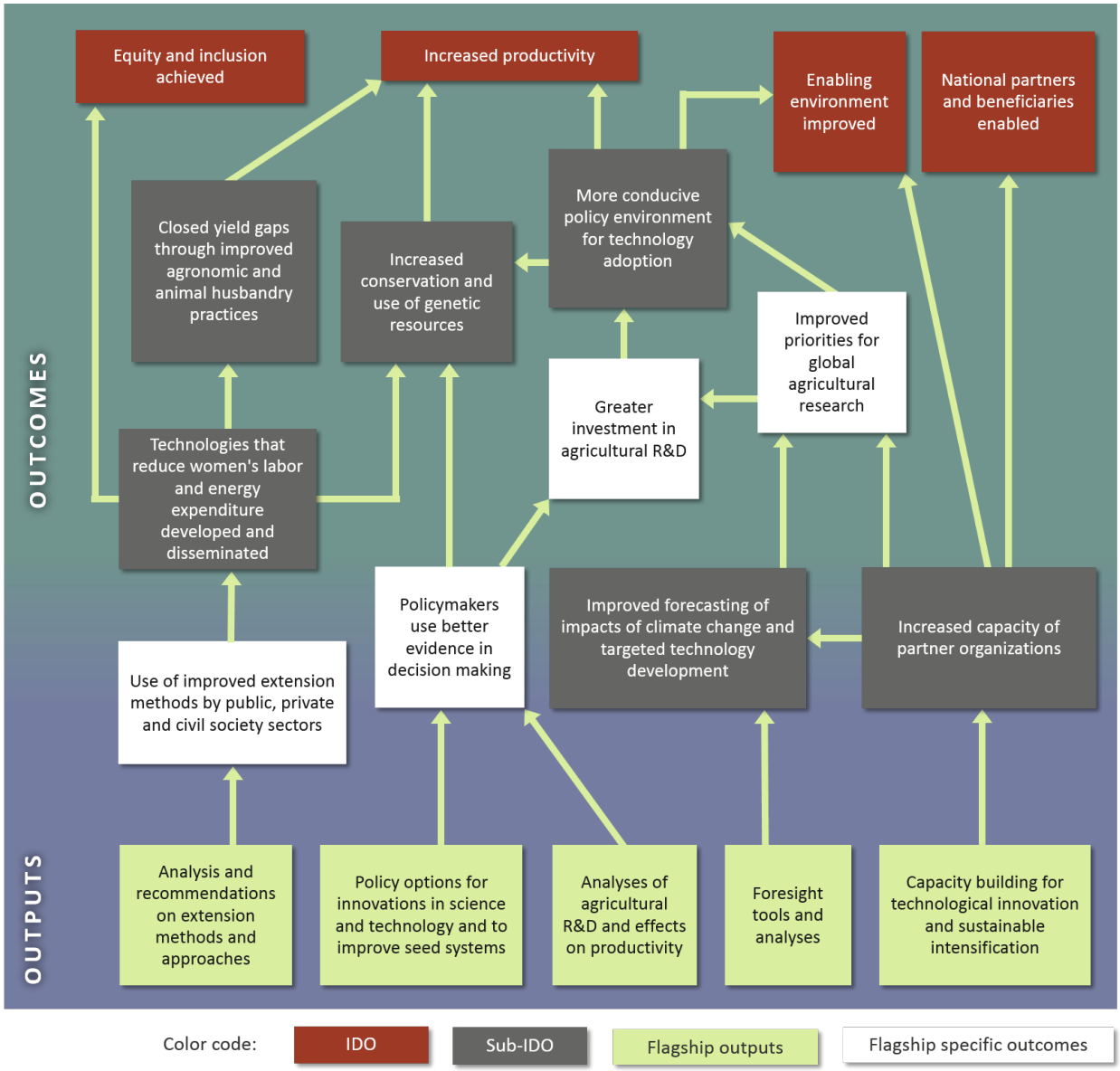
Annex B. PIM Theory of Change and Impact Pathways

Figure B.1. PIM theory of change



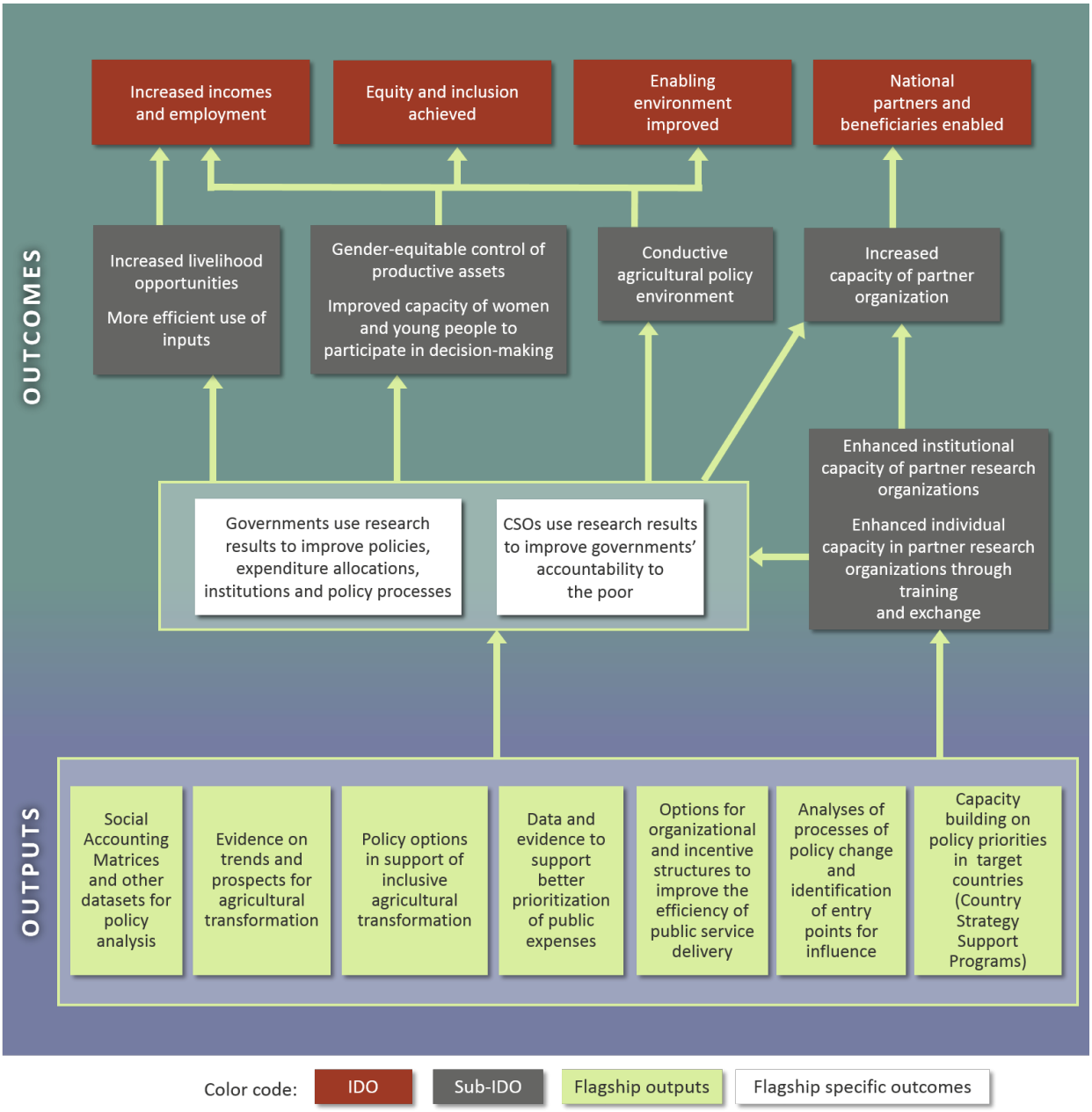
Source: CGIAR. n.d. *Theory of Change and Impact Pathways*. Washington, DC: CGIAR Research Program on Policies, Institutions, and Markets. https://pim.cgiar.org/impact/theory-of-change-impact-pathways/.

Figure B.2. Flagship 1 impact pathway



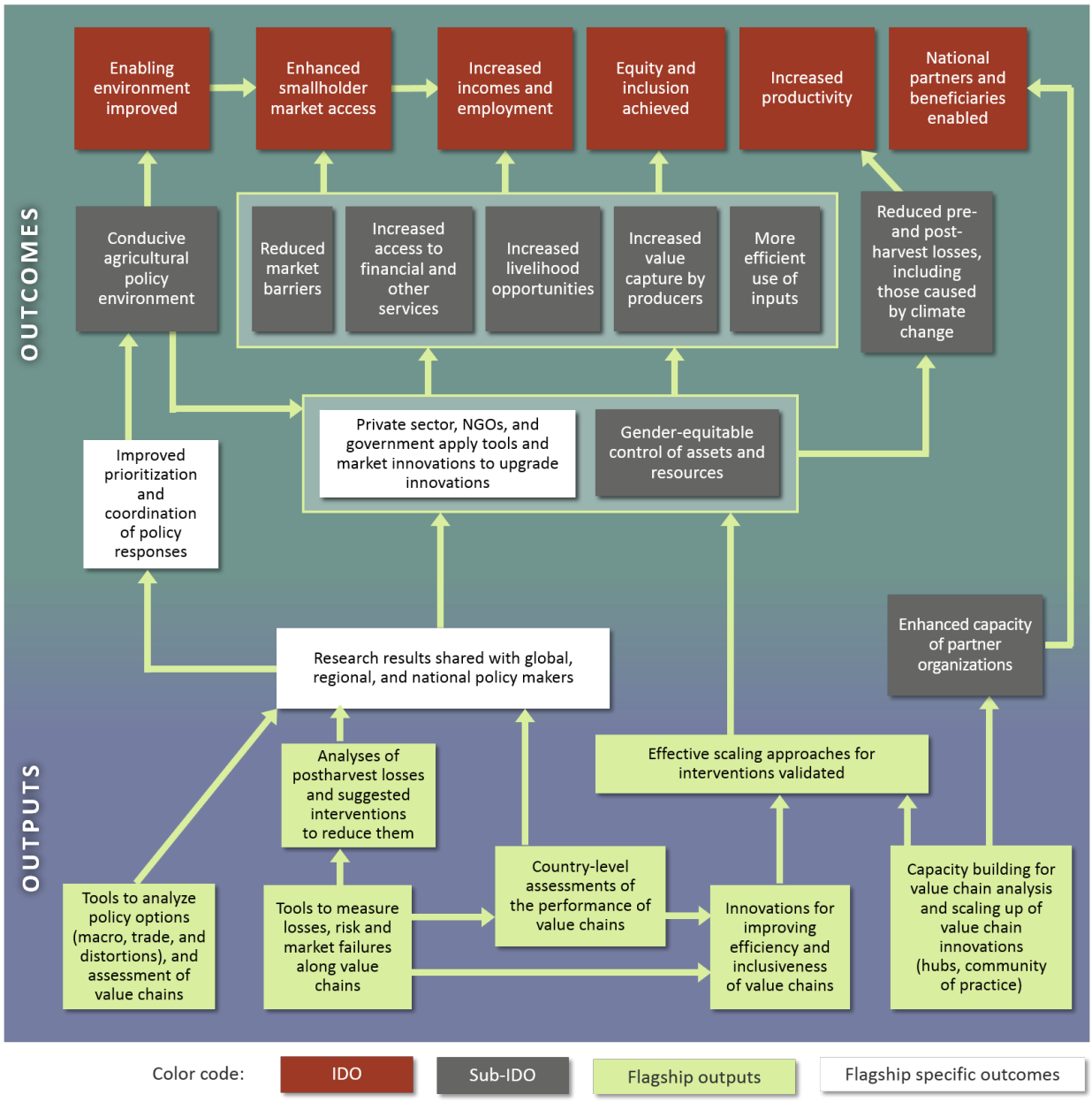
Source: CGIAR. n.d. *Impact Pathways for Flagship 1: Technological Innovation and Sustainable Intensification*. Washington, DC: CGIAR Research Program on Policies, Institutions, and Markets. https://pim.cgiar.org/impact/theory-of-change-impact-pathways/impact-pathways-for-flagship-1/,
Note: Flagship 1 = Technological Innovation and Sustainable Intensification; IDO = intermediate development outcome; sub-IDO = sub-intermediate development outcome.

Figure B.3. Flagship 2 impact pathway



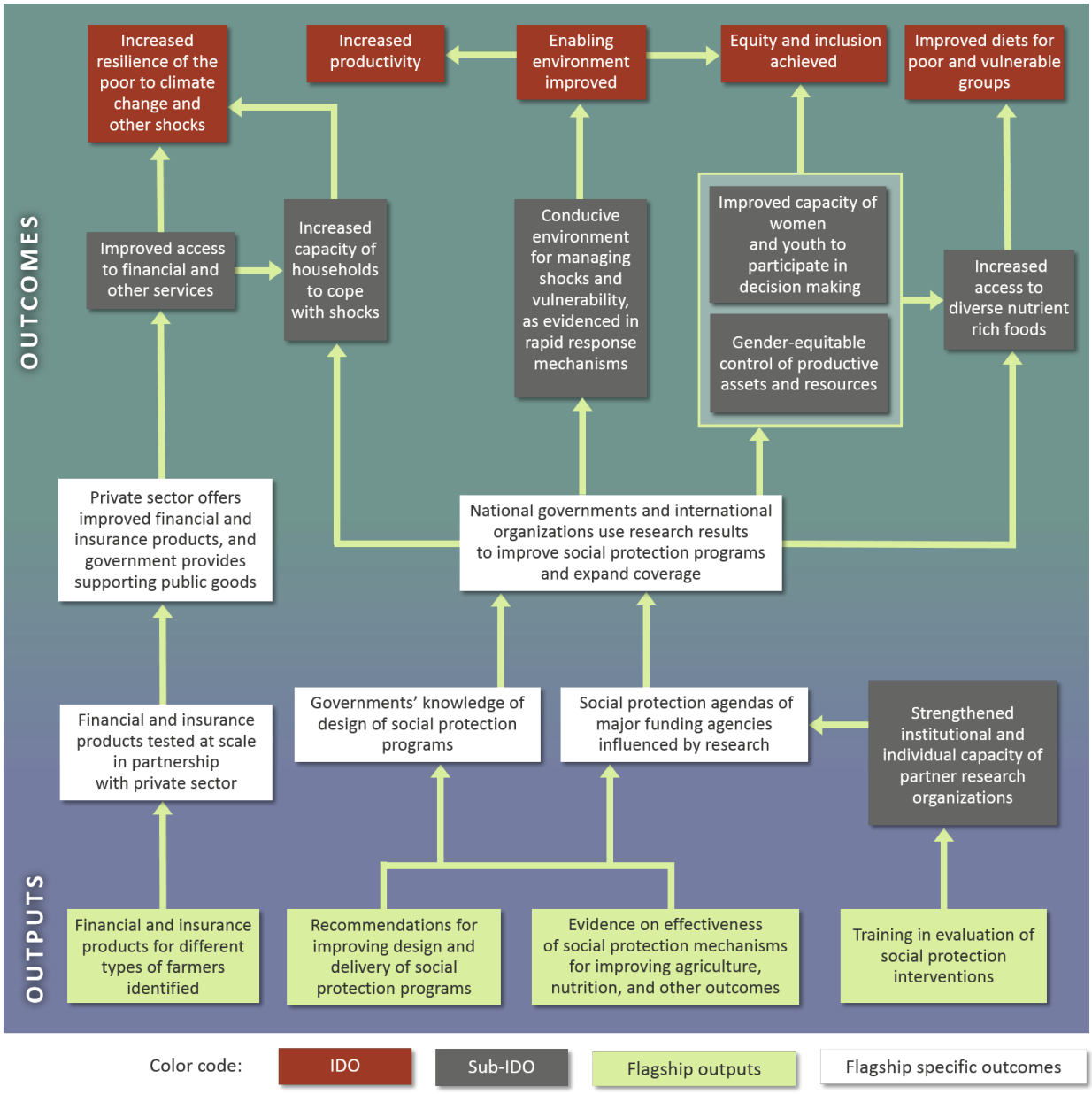
Source: CGIAR. n.d. *Impact Pathways for Flagship 2: Economywide Factors Affecting Agricultural Growth and Rural Transformation*. Washington, DC: CGIAR Research Program on Policies, Institutions, and Markets. https://pim.cgiar.org/impact/theory-of-change-impact-pathways/impact-pathways-for-flagship-2/.
Note: Flagship 2 = Economywide Factors Affecting Agricultural Growth and Rural Transformation; CSO = civil society organization; IDO = intermediate development outcome; sub-IDO = sub-intermediate development outcome.

Figure B.4. Flagship 3 impact pathway



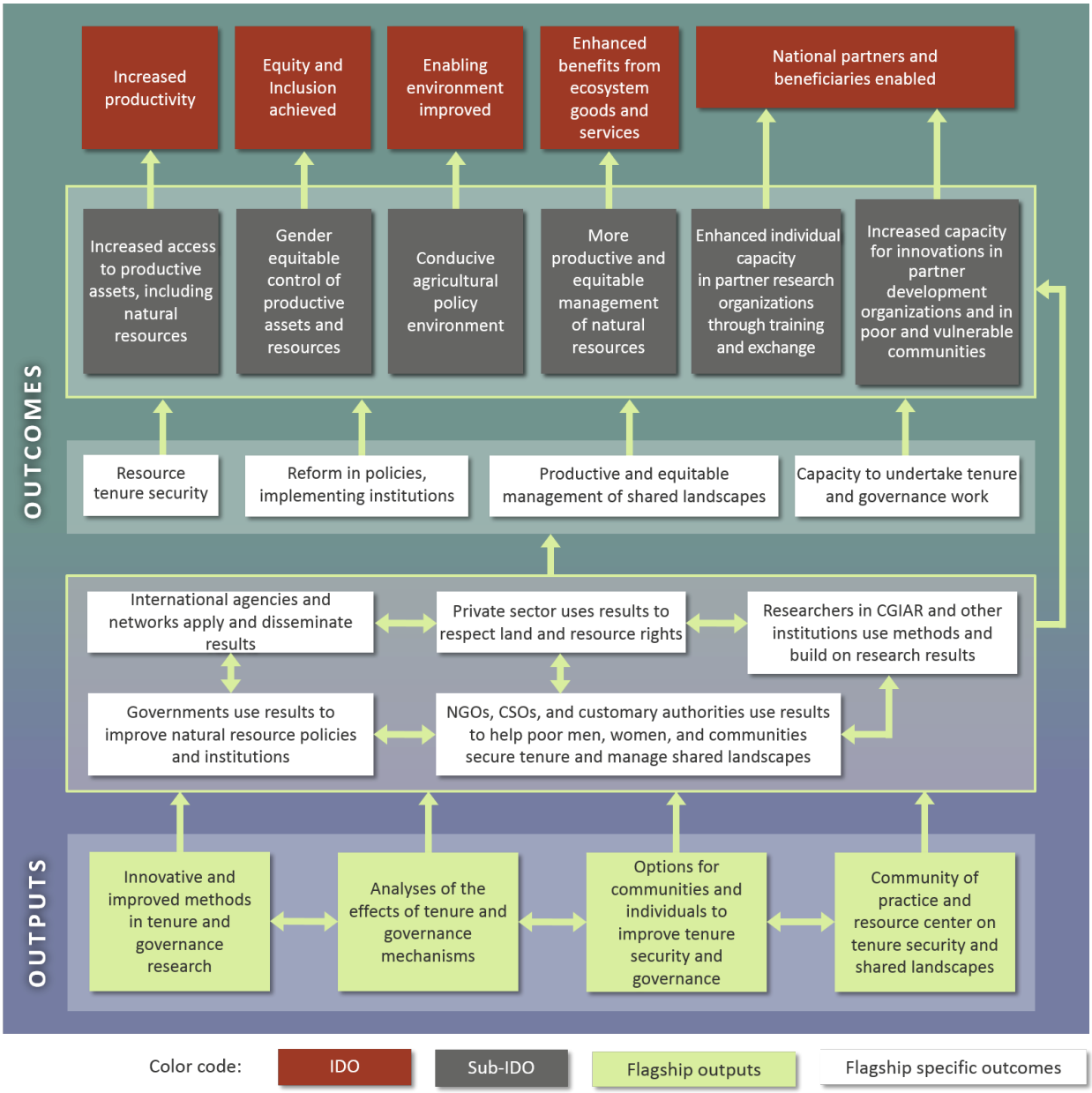
Source: CGIAR. n.d. *Impact Pathways for Flagship 3: Inclusive and Efficient Value Chains*. Washington, DC: CGIAR Research Program on Policies, Institutions, and Markets. https://pim.cgiar.org/impact/theory-of-change-impact-pathways/impact-pathways-for-flagship-3/
Note: Flagship 3 = Inclusive and Efficient Value Chains; IDO = intermediate development outcome; sub-IDO = sub-intermediate development outcome.

Figure B.5. Flagship 4 impact pathway



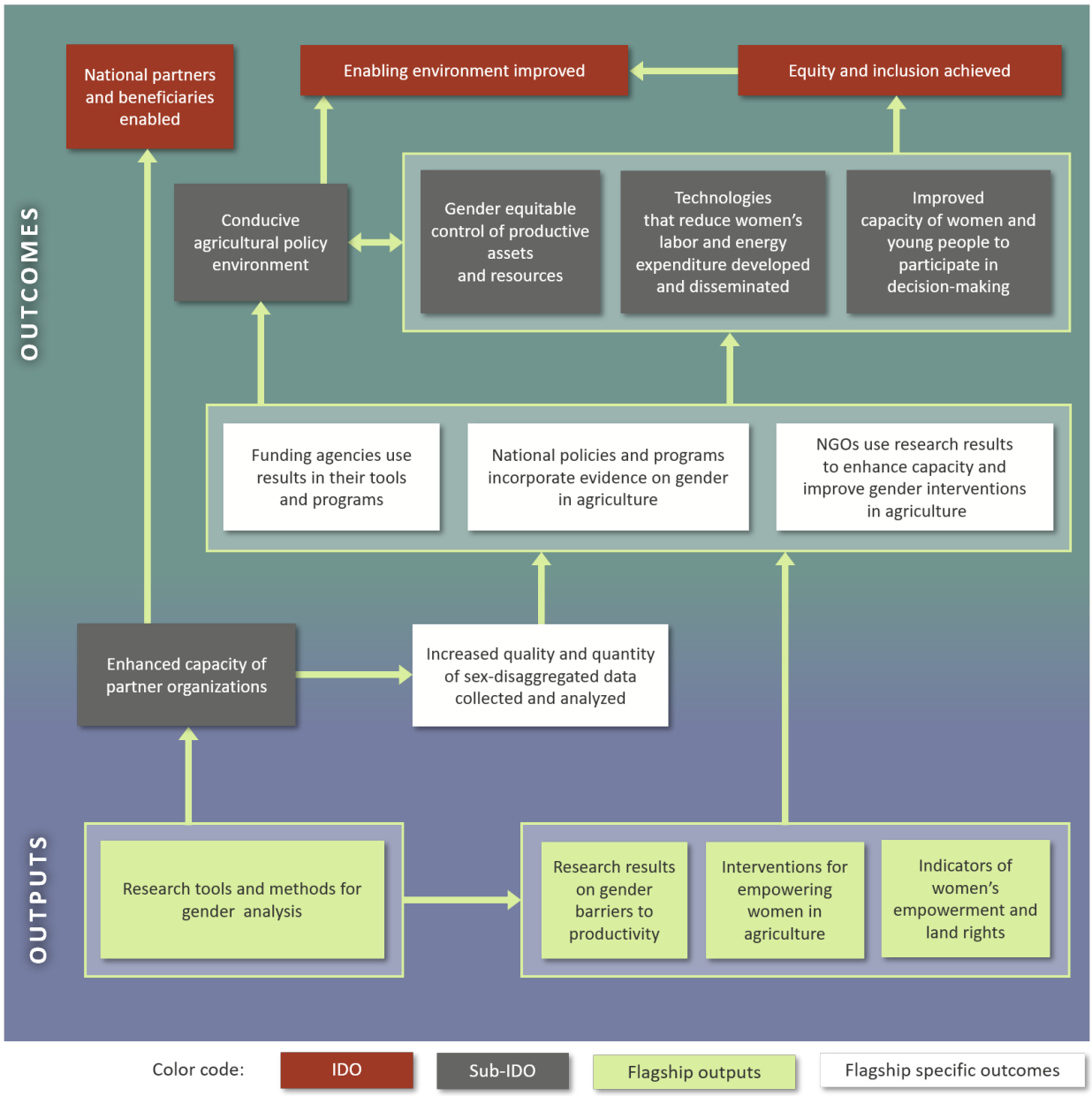
Source: CGIAR. n.d. *Impact Pathways for Flagship 4: Social Protection for Agriculture and Resilience*. Washington, DC: CGIAR Research Program on Policies, Institutions, and Markets. https://pim.cgiar.org/impact/theory-of-change-impact-pathways/impact-pathways-for-flagship-4/.
Note: Flagship 4 = Social Protection for Agriculture and Resilience; IDO = intermediate development outcome; sub-IDO = sub-intermediate development outcome.

Figure B.6: Flagship 5 impact pathway



Source: CGIAR. n.d. *Impact Pathways for Flagship 5: Governance of Natural Resources*. Washington, DC: CGIAR Research Program on Policies, Institutions, and Markets. https://pim.cgiar.org/impact/theory-of-change-impact-pathways/impact-pathways-for-flagship-5/.
Note: Flagship 5 = Governance of Natural Resources; IDO = intermediate development outcome; sub-IDO = sub-intermediate development outcome.

Figure B.7: Flagship 6 impact pathway



Source: CGIAR. n.d. *Impact Pathways for Flagship 6: Cross-cutting Gender Research and Coordination*. Washington, DC: CGIAR Research Program on Policies, Institutions, and Markets. https://pim.cgiar.org/impact/theory-of-change-impact-pathways/impact-pathways-for-flagship-6/.
Note: Flagship 6 = Cross-cutting Gender Research and Coordination; IDO = intermediate development outcome; sub-IDO = sub-intermediate development outcome.

Annex C. Key Supporters of PIM

Table C.1. Key supporters of PIM 2017—2020

Organization	Organization
AECOM	Indian Council of Agricultural Research
African Agricultural Technology Foundation	Innovations for Poverty Action
African Center for Economic Transformation	Institute of International Education
African Development Bank	Integrated Data Services
African Institute for Economic Development and Planning	InterAction Inter-American Development Bank
Agricultural Research Council of Nigeria	International Center for Advanced Research and Training
Alfred Landecker Foundation	International Development Research Centre
Alliance for a Green Revolution in Africa	International Fund for Agricultural Development
American Seed Trade Association	International Initiative for Impact Evaluation (3ie)
Amsterdam Institute for Global Health and Development	International Institute for Sustainable Development
Asian Development Bank	International Labour Office
Associated Consulting Engineers	International Life Sciences
Bill & Melinda Gates Foundation	CFA Institute Research Foundation
Bureau for Food and Agricultural Policy, South Africa	Keurig Green Mountain
CARE International	Korea Rural Economic Institute
Center for Clean Air Policy	KPMG East Africa Limited
Chinese Academy of Agricultural Sciences	Max und Ingeburg Herz Stiftung
CropLife International	Mayer Brown
Deutsche Welthungerhilfe	McKnight Foundation
Development Alternatives Incorporated	Millennium Challenge Corporation
	National Economic and Development Authority, The Philippines
Dutch Research Council	New Field Foundation
Ethiopian Agricultural Transformation Agency	OCP Foundation
European Commission	OPEC Fund for International Development
Florida Institute for Human and Machine Cognition	Overseas Development Institute
Food and Agriculture Organization of the United Nations	Practical Action Zimbabwe
Ford Foundation	Q.E.D. Foundation
Foundation for Ecological Security, India	RTI International
Foundation for Educational Service	Social Impact
German Corporation for International Cooperation	South African Medical Research Council
Global Digital Green Foundation	
Global Environment Facility	Swiss Agency for Development and Cooperation
Government of Australia	Swiss Contact for Technical Cooperation
Government of Belgium	Syngenta Foundation for Sustainable Agriculture

Organization	Organization
Government of Colombia	System IQ Ltd.
Government of Finland	TechnoServe
Government of Flanders	UKAID
	UNICEF
Government of Germany	United Kingdom Research and Innovation
Government of Mali	
Government of Nigeria	United Nations Development Programme
Government of the Republic of Bangladesh	United Nations Economic Commission for Africa
Government of the Republic of South Africa	United Nations World Food Programme
Government of the Russian Federation	United States Department of Agriculture USAID
IDEP Foundation	UTZ
	World Bank
	World Vision International

Source: CGIAR Research Program on Policies, Institutions, and Markets (PIM). 2020. *PIM Achievements in 2019: Highlights*. Brochure. Washington, DC: International Food Policy Research Institute. https://cdm15738.contentdm.oclc.org/digital/collection/p15738coll2/id/133800.

Note: This is not an exhaustive list of PIM funders as only funders who contributed in 2017–2019 are included. Intermediary funders such as universities or projects are not listed. We apologize if we have inadvertently omitted any funders.

Annex D. PIM Expenditure Data

Table D.1. PIM total expenditure, 2017 to 2021

Year	Total			Percent W1/2
	W1/2	W3/bilateral	Total	
2017	16,606	46,857	63,464	26.2
2018	14,598	49,098	63,695	22.9
2019	17,114	41,076	58,190	29.4
2020	15,908	35,511	51,420	30.9
2021	19,300	42,628	61,928	31.2
Average	**16,705**	**43,034**	**59,739**	**28.0**

Source: PIM Annual Reports 2017 to 2020; 2021 Plan of Work and Budget (https://pim.cgiar.org/about/key-documents/).
Note: The figures for 2017 to 2020 (inclusive) are actual expenditures; the figures for 2021 are planned.

Table D.2. PIM expenditure by flagship, 2017 to 2021

Year	Flagship 1			Flagship 2			Flagship 3		
	W1/2	W3/bilateral	Total	FP2	W3/bilateral	Total	W1/2	W3/bilateral	Total
2017	4,721	13,794	18,515	2,440	21,479	23,919	2,860	5,324	8,185
2018	3,490	15,596	19,086	2,274	22,715	24,989	2,711	4,253	6,964
2019	3,627	9,716	13,343	2,706	21,814	24,520	3,196	3,359	6,555
2020	3,766	9,614	13,380	2,974	16,853	19,827	2,785	6,102	8,887
2021	4,471	8,442	12,913	3,226	16,942	20,168	3,853	7,505	11,358
Average	**4,015**	**11,432**	**15,447**	**2,724**	**19,961**	**22,685**	**3,081**	**5,309**	**8,390**
Year	**Flagship 4**			**Flagship 5**			**Flagship 6**		
	W1/2	W3/bilateral	Total	W1/2	W3/bilateral	Total	W1/2	W3/bilateral	Total
2017	1,431	3,256	4,687	1,972	2,085	4,057	985	920	1,905

2018	1,112	3,559	4,671	1,632	2,425	4,057	1,344	550	1,895
2019	1,362	3,387	4,749	2,008	1,659	3,667	2,137	1,141	3,278
2020	1,340	896	2,236	1,827	703	2,530	1,363	1,138	2,501
2021	1,332	6,149	7,482	2,089	1,546	3,635	1,450	1,430	2,881
Average	**1,315**	**3,449**	**4,765**	**1,906**	**1,684**	**3,589**	**1,456**	**1,036**	**2,492**

Source: PIM Annual Reports 2017 to 2020; 2021 Plan of Work and Budget (https://pim.cgiar.org/about/key-documents/).
Note: The figures for 2017 to 2020 (inclusive) are actual expenditures; the figures for 2021 are planned.

Annex E. Original and Updated Key Evaluation Questions

Table E.1. Original key evaluation questions

Themes	Key evaluation questions
I. Partnership design at activity, flagship, and program level	a. What were the main types of partnerships and partnership modalities used by PIM scientists in contributing to outcomes and impacts (how common were the different types used)? b. What were the main factors considered for selecting different types of partners (public, private, NGOs)? c. Did the program and flagships' impact pathways and theories of change influence the choice of partners and partnership modalities? How? Conversely, Did the choice of partners and partnership modalities influence the program and flagships' impact pathways and theories of change? How? d. Did the PIM requirement to articulate how research results would be used to achieve outcomes in the annual activity plans influence the choice of partners and partnership modalities? If so, what are some examples? e. Were there any adjustments in partnerships (at the activity, flagship and/or program level) over the years, and which lessons learned or external factors triggered them?
II. Partnerships for policy influence	a. Looking at selected cases of success in translating research into policies, strategies, or investments, what were the key success factors (choice of partners, alignment of objectives, complementarity of skill sets and roles, modalities of engagement, availability of resources, etc.)? b. Looking at cases where research did not materialize into outcomes, to what extent was this related to the choice of partners and/or partnership modalities? What other factors could be considered? c. Given the experiences on the ground, how could policy influence across different thematic areas be better coordinated at country/regional level?
III. Partnerships to scale up innovations	a. Which partnership arrangements were particularly effective to scale up innovations? b. Were there missed opportunities to form strategic partnerships around research programs related to PIM innovations? Which factors prevented these opportunities to be realized, and how to overcome those in the future?
IV. Attracting key partners	a. To what extent and why have partnerships with PIM been attractive to external partners? Were there any deterrent factors that inhibited such engagements? Are there any key/noteworthy distinctions with that respect between national, regional, and international partners? How could this be improved? b. Are specific coordination mechanisms needed for partnerships with selected key partners, such as multilateral agencies or universities that have multiple collaborations with CGIAR?

Themes	Key evaluation questions
V. Reporting on and evaluating partnerships	a. Which indicators can be used to measure the performance of partnerships in the policy research area? How could increased capacity to influence policy among CGIAR partners be measured? b. Forming and nurturing partnerships has costs, in terms of financial and time commitment. How to evaluate and improve the cost-effectiveness of partnerships?

Table E.2. Updated key evaluation questions

Themes	Key evaluation questions
I. Partnership design at activity, flagship, and program level	a. What were the main types of partnerships and partnership modalities used by PIM scientists in contributing to outcomes and impacts, and how common were the different types used? b. What were the main factors considered for selecting different types of partners (public, private, NGO)? c. Did the program theory of change and the flagships' impact pathways influence the choice of partners and partnership modalities? If so, how? Conversely, did the choice of partners and partnership modalities influence the program's theories of change and the flagships' impact pathways? If so, how? d. Were there any adjustments in partnerships (at the activity, flagship and/or program level) over the years, and which lessons learned or external factors triggered them?
II. Partnerships for policy influence	a. Looking at selected cases of success in translating research into policies, strategies, or investments, what were the key success factors (choice of partners, alignment of objectives, complementarity of skill sets and roles, modalities of engagement, availability of resources, etc.)?
III. Partnerships for scaling innovations	a. Which partnership arrangements were particularly effective for scaling innovations? b. Were there missed opportunities to form strategic partnerships around research programs related to PIM innovations? Which factors prevented these opportunities to be realized? How can they be overcome in the future?
IV. Attracting key partners	a. What are the main benefits associated with being a PIM partner? b. What factors inhibited the engagement of different types of partner organizations? c. Which future partnership strategies are most important for continuing the impact of PIM research outputs?
V. Reporting on and evaluating partnerships	a. What indicators can be used to measure the performance of partnerships in the policy research area? How could increased capacity to influence policy among CGIAR partners be measured? b. Forming and nurturing partnerships has costs in terms of financial and time commitment. How should the cost-effectiveness of partnerships be evaluated and improved?

Annex F. PIM Partnerships: MARLO Data

Table F.1. Number of PIM partners by partner type, 2017 to 2021

Partner type	2017	2018	2019	2020	2021	Difference between 2019 and 2021	Total number of unique partners from 2017 to 2021
	Number	Number	Number	Number	Number	Number	Number
Agricultural advisory and/or extension services	1	1	3	3	4	1	4
Association (other than regional organizations, extension, and farmer/community-level)	11	9	8	12	14	6	18
Bilateral development agency/bank	3	7	9	12	13	4	13
CGIAR center	15	16	16	16	16	0	18
Farmer/community-level organization	4	4	4	8	7	3	9
Foundation	2	4	5	5	5	0	6
Government	46	50	65	94	112	47	129
International NGO	19	20	22	36	43	21	48
International organization (other than financial or research)	5	7	7	11	11	4	13
International/regional financial institution	3	4	4	5	7	3	7
International/regional research institution	20	18	19	23	23	4	35
National/local financial institution	2	3	3	5	5	2	6
National/local NGO	14	16	21	33	36	15	39
National/local research Institution	41	35	45	68	76	31	91
Other	13	10	14	16	16	2	19
Private company (other than financial)	9	11	20	31	42	22	44
Regional organization	10	5	6	14	15	9	18
University	37	41	73	130	143	70	160
Total	**255**	**261**	**344**	**522**	**588**	**244**	**677**

Source: CGIAR MARLO online platform.
Note: There are 18 different entities listed as CGIAR centers in MARLO because the CGIAR System Office was listed from 2018 and the Alliance of Biodiversity and CIAT, Headquarters (Biodiversity International) and the Alliance of Biodiversity and CIAT, Regional Hub (Centro Internacional de Agricultura Tropical) were listed from 2020; however, in any given year there were 15 CGIAR centers plus the System Office.

Table F.2. Percentage of PIM partners by partner type, 2017 to 2021

Partner type	2017	2018	2019	2020	2021	Difference between 2019 and 2021	Total number of partners from 2017 to 2021
	Percentage of each partner type	Percentage of each partner type	Percentage of each partner type	Percentage of each partner type	Percentage of each partner type	Percentage increase in number of partners	Percentage of each partner type
Agricultural advisory and/or extension services	0.4	0.4	0.9	0.6	0.7	33.3	0.6
Associations (other than regional organizations, extension, and farmer/community-level)	4.3	3.4	2.3	2.3	2.4	75.0	2.7
Bilateral development agency/bank	1.2	2.7	2.6	2.3	2.2	44.4	1.9
CGIAR center	5.9	6.1	4.7	3.1	2.7	0.0	2.7
Farmer/community-level organization	1.6	1.5	1.2	1.5	1.2	75.0	1.3
Foundation	0.8	1.5	1.5	1.0	0.9	0.0	0.9
Government	18.0	19.2	18.9	18.0	19.0	72.3	19.1
International NGO	7.5	7.7	6.4	6.9	7.3	95.5	7.1
International organization (other than financial or research)	2.0	2.7	2.0	2.1	1.9	57.1	1.9
International/regional financial institution	1.2	1.5	1.2	1.0	1.2	75.0	1.0
International/regional research institution	7.8	6.9	5.5	4.4	3.9	21.1	5.2
National/local financial institution	0.8	1.1	0.9	1.0	0.9	66.7	0.9
National/local NGO	5.5	6.1	6.1	6.3	6.1	71.4	5.8
National/local research Institution	16.1	13.4	13.1	13.0	12.9	68.9	13.4
Other	5.1	3.8	4.1	3.1	2.7	14.3	2.8
Private company (other than financial)	3.5	4.2	5.8	5.9	7.1	110.0	6.5
Regional organization	3.9	1.9	1.7	2.7	2.6	150.0	2.7
University	14.5	15.7	21.2	24.9	24.3	95.9	23.6
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**70.9**	**100.0**

Source: CGIAR MARLO online platform.

Table F.3. Number of PIM unique partners, by partner type and by region, from 2017 to 2021

Partner type	North America	Latin America	Europe	MENA	SSA	CAC	East Asia	South Asia	Southeast Asia	Australia and Papua New Guinea	Total
Agricultural advisory and/or extension services	1	1	1	0	1	0	0	0	0	0	**4**
Association (other than regional organizations, extension, and farmer/community level)	0	1	3	0	10	0	0	2	2	0	**18**
Bilateral development agency/bank	3	0	4	1	2	0	2	0	0	1	**13**
CGIAR center	1	4	3	1	4	0	0	2	3	0	**18**
Farmer/community-level organization	0	3	0	0	5	0	0	1	0	0	**9**
Foundation	3	1	1	1	0	0	0	0	0	0	**6**
Government	4	12	5	7	57	1	3	19	19	2	**129**
International NGO	16	2	17	0	8	0	1	0	4	0	**48**
International organization (other than financial or research)	2	0	9	0	2	0	0	0	0	0	**13**
International/regional financial institution	4	0	1	0	1	0	0	0	1	0	**7**
International/regional research institution	7	0	17	0	5	1	0	2	1	2	**35**
National/local financial institution	0	0	0	0	5	0	1	0	0	0	**6**
National/local NGO	3	3	0	0	17	0	0	12	3	1	**39**
National/local research Institution	3	2	4	7	49	0	3	11	11	1	**91**
Other	3	2	4	0	8	0	0	1	1	0	**19**
Private company (other than financial)	11	7	1	0	18	0	0	5	2	0	**44**
Regional organization	0	1	0	1	11	0	2	1	2	0	**18**
University	54	6	36	1	25	3	8	9	12	6	**161**
Total	**115**	**45**	**106**	**19**	**228**	**5**	**20**	**65**	**61**	**13**	**677**
Percentage	**17.0**	**6.6**	**15.7**	**2.8**	**33.7**	**0.7**	**3.0**	**9.6**	**9.0**	**1.9**	**100.0**

Source: CGIAR MARLO online platform.
Note: MENA = Middle East and North Africa; SSA = Africa south of the Sahara; CAC = Central Asia and the Caucasus.

Table F.4. Percentatge of PIM unique partners, by partner type and by region, from 2017 to 2021

Partner type	North America	Latin America	Europe	MENA	SSA	CAC	East Asia	South Asia	Southeast Asia	Australia and Papua New Guinea	Total
Agricultural advisory and/or extension services	0.9	2.2	0.9	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.6
Association (other than regional organizations, extension, and farmer/community level)	0.0	2.2	2.8	0.0	4.4	0.0	0.0	3.1	3.3	0.0	2.7
Bilateral development agency/bank	2.6	0.0	3.8	5.3	0.9	0.0	10.0	0.0	0.0	7.7	1.9
CGIAR center	0.9	8.9	2.8	5.3	1.8	0.0	0.0	3.1	4.9	0.0	2.7
Farmer/community-level organization	0.0	6.7	0.0	0.0	2.2	0.0	0.0	1.5	0.0	0.0	1.3
Foundation	2.6	2.2	0.9	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.9
Government	3.5	26.7	4.7	36.8	25.0	20.0	15.0	29.2	31.1	15.4	19.1
International NGO	13.9	4.4	16.0	0.0	3.5	0.0	5.0	0.0	6.6	0.0	7.1
International organization (other than financial or research)	1.7	0.0	8.5	0.0	0.9	0.0	0.0	0.0	0.0	0.0	1.9
International/regional financial institution	3.5	0.0	0.9	0.0	0.4	0.0	0.0	0.0	1.6	0.0	1.0
International/regional research institution	6.1	0.0	16.0	0.0	2.2	20.0	0.0	3.1	1.6	15.4	5.2
National/local financial institution	0.0	0.0	0.0	0.0	2.2	0.0	5.0	0.0	0.0	0.0	0.9
National/local NGO	2.6	6.7	0.0	0.0	7.5	0.0	0.0	18.5	4.9	7.7	5.8
National/local research institution	2.6	4.4	3.8	36.8	21.5	0.0	15.0	16.9	18.0	7.7	13.4
Other	2.6	4.4	3.8	0.0	3.5	0.0	0.0	1.5	1.6	0.0	2.8
Private company (other than financial)	9.6	15.6	0.9	0.0	7.9	0.0	0.0	7.7	3.3	0.0	6.5
Regional organization	0.0	2.2	0.0	5.3	4.8	0.0	10.0	1.5	3.3	0.0	2.7
University	47.0	13.3	34.0	5.3	11.0	60.0	40.0	13.8	19.7	46.2	23.6
Total	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**	**100**

Source: CGIAR MARLO online platform.
Note: MENA = Middle East and North Africa; SSA = Africa south of the Sahara; CAC = Central Asia and the Caucasus.

Table F.5. Project ID, research cluster, and Project title[c]

Project ID[a,1]	Research cluster number and title[b]	Project title[c,1]
P596	Cluster 1.1: Food Systems Futures	1.1.1 Emerging Challenges and Agricultural Investment Options for Improved Income, Food Security, and Environment
P656	Cluster 1.1: Food Systems Futures	1.1.2 Improved Quantitative Strategic Foresight Modeling Tools and Applications
P658	Cluster 1.2: Science Policy and Innovation Systems for Sustainable Intensification	1.2.1 Seeds Systems and Markets
P659	Cluster 1.2: Science Policy and Innovation Systems for Sustainable Intensification	1.2.2 Agricultural Extension and Advisory Services
P660	Cluster 1.2: Science Policy and Innovation Systems for Sustainable Intensification	1.2.3 Decision Support Systems for R&D
P661	Cluster 1.2: Science Policy and Innovation Systems for Sustainable Intensification	1.2.4 Comparative Science, Technology, and Innovation Systems in Developing-Country Agriculture
P664	Cluster 2.1: Agricultural Transformation and Rural Incomes	2.1.1 Farm Size, Land Market, and Labor Dynamics
P665	Cluster 2.1: Agricultural Transformation and Rural Incomes	2.1.2 Mechanization and Policies for Labor-Saving Technology
P666	Cluster 2.1: Agricultural Transformation and Rural Incomes	2.1.3 Rural Entrepreneurship and Nonfarm Business Promotion
P667	Cluster 2.1: Agricultural Transformation and Rural Incomes	2.1.4 Rural–Urban Linkages and Agrifood System Employment
P668	Cluster 2.1: Agricultural Transformation and Rural Incomes	2.1.5 Capacity Building and Economywide Data and Tools
P669	Cluster 2.2: Public Investments and Institutions	2.2.1 Prioritization of Policies and Investments
P670	Cluster 2.2: Public Investments and Institutions	2.2.2 Efficient Rural Service Delivery
P671	Cluster 2.3: Political Economy and Policy Processes	2.3.1 Drivers of Agricultural Policy Reforms

Project[a,1] ID	Research cluster number and title[b]	Project title[c,1]
P672	Cluster 2.3: Political Economy and Policy Processes	2.3.2 Institutional Reforms to Improve Agricultural Service Delivery
P673	Cluster 2.3: Political Economy and Policy Processes	2.3.3 Political Economy Barriers to Agrifood System Transformation
P570	Cluster 2.4: Client-Responsive Country and Regional Engagement and Partnership	2.4.1 Support to Ethiopia Policies
P2075	Cluster 2.4: Client-Responsive Country and Regional Engagement and Partnership	2.4.10 Support to Rwanda Policies
P578	Cluster 2.4: Client-Responsive Country and Regional Engagement and Partnership	2.4.2 Support to Nigeria Policies
P579	Cluster 2.4: Client-Responsive Country and Regional Engagement and Partnership	2.4.3 Support to Ghana Policies
P580	Cluster 2.4: Client-Responsive Country and Regional Engagement and Partnership	2.4.4 Support to Malawi Policies
P690	Cluster 2.4: Client-Responsive Country and Regional Engagement and Partnership	2.4.5 Support to Bangladesh Policies
P581	Cluster 2.4: Client-Responsive Country and Regional Engagement and Partnership	2.4.6 Asian Regional Policy Engagement
P582	Cluster 2.4: Client-Responsive Country and Regional Engagement and Partnership	2.4.7 MENA Regional Policy Engagement
P583	Cluster 2.4: Client-Responsive Country and Regional Engagement and Partnership	2.4.8 China Country Strategy Support Program and South–South Learning Platform
P657	Cluster 2.4: Client-Responsive Country and Regional Engagement and Partnership	2.4.8 Other Policy Engagement
P1967	Cluster 2.4: Client-Responsive Country and Regional Engagement and Partnership	2.4.9 Support to Myanmar Policies
P695	Cluster 3.1: The Policy Environment for Value Chains	3.1.1 Impact of Agricultural Policies and Incentives along the Value Chains
P696	Cluster 3.1: The Policy Environment for Value Chains	3.1.2 Improved Trade and Macroeconomic Policies to Strengthen Value Chains

Project[a,1] ID	Research cluster number and title[b]	Project title[c,1]
P697	Cluster 3.2: Interventions to Strengthen Value Chains	3.2.1 Postharvest Losses
P698	Cluster 3.2: Interventions to Strengthen Value Chains	3.2.2 Identification of Distortions Across and Within Value Chains for Intervention Design
P699	Cluster 3.2: Interventions to Strengthen Value Chains	3.2.3 Linking Smallholders to Dynamic Markets
P817	Cluster 3.2: Interventions to Strengthen Value Chains	3.2.4 Innovative Risk Management Tools for the Poor
P701	Cluster 3.3: Value Chains Research: Outreach and Scaling	3.3.1 Value Chains Research: Outreach and Scaling
P702	Cluster 3.3: Value Chains Research: Outreach and Scaling	3.3.2 Scaling Up of Successful Interventions in Value Chains
P687	Cluster 4.1: Social Protection Delivery and Outcomes	4.1.1 Social Protection and Agriculture
P688	Cluster 4.1: Social Protection Delivery and Outcomes	4.1.2 Improving Design and Delivery of Social Protection for Nutrition and Other Outcomes
P689	Cluster 4.2: Improving Resilience for the Poor in Fragile and Low-income Settings	4.2.1 Improving Resilience for the Poor in Fragile and Low-income Settings
P1562	Cluster 4.2: Improving Resilience for the Poor in Fragile and Low-income Settings	4.2.1 Improving Resilience for the Poor in Fragile and Low-income Settings
P663	Cluster 5.1: Enhancing Tenure Security	5.1.1 Enhancing Tenure Security
P662	Cluster 5.2: Governing Shared Landscapes	5.2.1 Governing Shared Landscapes
P675	Cluster 6.1: Gender, Agricultural Productivity, and Rural Transformation	6.1.1 Methods and Tools to Study Women's Empowerment and Control over Resources
P676	Cluster 6.1: Gender, Agricultural Productivity, and Rural Transformation	6.1.2 Women's Involvement in Decision-Making and Outcomes for Rural Households
P677	Cluster 6.1: Gender, Agricultural Productivity, and Rural Transformation	6.1.3 Gender and Rural Transformation

Project[a,1] ID	Research cluster number and title[b]	Project title[c,1]
P678	Cluster 6.2: Collaborative Gender Research	6.2.1 Analysis of and Support to Integrative Gender Research in other PIM Flagships
P691	Cluster 6.2: Collaborative Gender Research	6.2.2 Cross-CRP Research Started Under the Gender Platform in 2017–2019
P723	Cluster 6.2: Collaborative Gender Research	6.2.3 CGIAR Collaborative Platform for Gender Research, Advisory Committee
P674	Flagship Management	1.0.1 Flagship 1 Management (Flagship Leaders and Cluster Leaders)
P752	Flagship Management	2.0.1 Flagship 2 Management (Flagship Leaders and Cluster Leaders)
P753	Flagship Management	3.0.1 Flagship 3 Management (Flagship Leaders and Cluster Leaders)
P754	Flagship Management	4.0.1 Flagship 4 Management (Flagship Leaders and Cluster Leaders)
P724	Flagship Management	5.0.1 Flagship 5 Management (Flagship Leaders and Cluster Leaders)
P755	Flagship Management	6.0.1 Flagship 6 Management (Flagship Leaders and Cluster Leaders)
P756	Flagship Management Support	Flagship 1 Management Support
P757	Flagship Management Support	Flagship 2 Management Support
P758	Flagship Management Support	Flagship 3 Management Support
P759	Flagship Management Support	Flagship 4 Management Support
P760	Flagship Management Support	Flagship 5 Management Support
P761	Flagship Management Support	Flagship 6 Management Support

Project ID[a,1]	Research cluster number and title[b]	Project title[c,1]
P763	Program Management Unit	CGIAR Country Collaboration
P765	Program Management Unit	PIM Capacity Strengthening
P766	Program Management Unit	PIM Management
P762	Program Management Unit	PIM Monitoring and Evaluation
P764	Program Management Unit	PIM Partnerships

Source: a) CGIAR MARLO online platform; b) https://pim.cgiar.org/research/.
Note: 1) As can be seen from this table, "Project" can be thought of as a level below the research cluster level.

Table F.6. Number of PIM partners and partner type, by Project, 2021

Project ID	Number of partners	Number of partner types	Project ID	Number of partners	Number of partner types
P570	7	4	**P672**	5	4
P578	12	9	**P673**	26	10
P579	9	6	**P675**	47	13
P580	6	5	**P676**	9	4
P581	40	12	**P677**	37	11
P582	11	5	**P678**	2	2
P596	17	3	**P687**	19	7
P656	16	5	**P688**	47	9
P657	6	5	**P690**	4	4
P658	66	11	**P691**	61	11
P659	62	14	**P695**	12	6
P660	43	9	**P696**	15	8
P661	25	10	**P697**	20	10
P662	69	14	**P698**	2	1
P663	83	14	**P699**	60	14
P664	8	6	**P701**	16	6
P665	5	3	**P702**	2	2
P666	14	7	**P723**	6	3
P667	7	6	**P817**	30	9
P668	16	6	**P1562**	15	10
P669	19	8	**P1967**	8	4
P670	43	10	**P2075**	4	3
P671	2	2			
Total				**1033**	**325**
Average				**23.0**	**7.2**

Source: CGIAR MARLO online platform.
Note: Excludes management and management support.

Table F.7. Projects with more than 20 partners and/or 10 partner types, 2021

Flagship	Project ID	Number of partners	Number of partner types	Project title
1	**P658**	66	11	1.2.1 Seeds Systems and Markets
	P659	62	14	1.2.2 Agricultural Extension and Advisory Services
	P660	43	9	1.2.3 Decision Support Systems for R&D
	P661	25	10	1.2.4 Comparative Science, Technology, and Innovation Systems in Developing-Country Agriculture
2	**P670**	43	10	2.2.2 Efficient Rural Service Delivery
	P673	26	10	2.3.3 Political Economy Barriers to Agrifood System Transformation
	P581	40	12	2.4.6 Asian Regional Policy Engagement
3	**P697**	20	10	3.2.1 Postharvest Losses
	P699	60	14	3.2.3 Linking Smallholders to Dynamic Markets
	P817	30	9	3.2.4 Innovative Risk Management Tools for the Poor
4	**P688**	47	9	4.1.2 Improving Design and Delivery of Social Protection for Nutrition and Other Outcomes
	P1562	15	10	4.2.1 Improving Resilience for the Poor in Fragile and Low-income Settings
5	**P663**	83	14	5.1.1 Enhancing Tenure Security
	P662	69	14	5.2.1 Governing Shared Landscapes
6	**P675**	47	13	6.1.1 Methods and Tools to Study Women's Empowerment and Control over Resources
	P677	37	11	6.1.3 Gender and Rural Transformation
	P691	61	11	6.2.2 Cross-CRP Research Started under the Gender Platform in 2017–2019

Source: CGIAR MARLO online platform.

Table F.8. Number of Flagship 1 partners and partner types per Project, 2021

Project ID	Number of partners	Number of partner types
P596	17	3
P656	16	5
P658	66	11
P659	62	14
P660	43	9
P661	25	10
Total	**229**	**52**
Average	**38.2**	**8.7**

Source: CGIAR MARLO online platform.
Note: Excludes management and management support.

Table F.9. Number of Flagship 2 partners and partner types per Project, 2021

Project ID	Number of partners	Number of partner types
P570	7	4
P578	12	9
P579	9	6
P580	6	5
P581	40	12
P582	11	5
P657	6	5
P664	8	6
P665	5	3
P666	14	7
P667	7	6
P668	16	6
P669	19	8
P670	43	10
P671	2	2
P672	5	4
P673	26	10
P690	4	4
P1967	8	4
P2075	4	3
Total	**252**	**119**
Average	**12.6**	**6.0**

Source: CGIAR MARLO online platform.
Note: Excludes management and management support.

Table F.10. Number of Flagship 3 partners and partner types per Project, 2021

Project ID	Number of partners	Number of partner types
P695	12	6
P696	15	8
P697	20	10
P698	2	1
P699	60	14
P701	16	6
P702	2	2
P817	30	9
Total	**157**	**56**
Average	**19.6**	**7.0**

Source: CGIAR MARLO online platform.
Note: Excludes management and management support.

Table F.11. Number of Flagship 4 partners and partner types per Project, 2021

Project ID	Number of partners	Number of partner types
P687	19	7
P688	47	9
P1562	15	10
Total	**81**	**26**
Average	**27.0**	**8.7**

Source: CGIAR MARLO online platform.
Note: Excludes management and management support.

Table F.12. Number of Flagship 5 partners and partner types per Project, 2021

Project ID	Number of partners	Number of partner types
P662	69	14
P663	83	14
Total	**152**	**28**
Average	**76.0**	**14.0**

Source: CGIAR MARLO online platform.
Note: Excludes management/management support.

Table F.13. Number of Flagship 6 partners and partner types per Project, 2021

Project ID	Number of partners	Number of partner types
P675	47	13
P676	9	4
P677	37	11
P678	2	2
P691	61	11
P723	6	3
Total	**162**	**44**
Average	**27.0**	**7.3**

Source: CGIAR MARLO online platform.
Note: Excludes management/management support.

Annex G. Outcome Impact Case Reports

Table G.1. Outcome impact case report (OICR) title, stage, number and link, by flagship, 2017 to 2020

OICR title	Flagship	Area 1 Area 2 Area 3	OICR stage	OICR No.	OICR link (where available)
Foresight analysis informs strategic decision making of countries, CGIAR and the donor community	1	Foresight	1	3205	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=3205&cycle=Reporting&year=2019
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	1	Advisory services	1	3951	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=3951&cycle=Reporting&year=2020
ASTI [formerly Agricultural Science and Technology Indicators] data inform policies to improve agricultural research capacity, efficiency, and output delivery	1	Agricultural research	1	2095	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2095&cycle=Reporting&year=2017
ASTI data contributed to justify the need for the merger of several institutions to form the Kenya Agriculture and Livestock Research Organization (KALRO), for improved capacity and performance	1	Agricultural research	1	2096	Not publicly available: https://marlo.cgiar.org/projects/PIM/study.do?expectedID=2096&projectID=660&edit=true&phaseID=12
Cards that farmers CAN read: on the way to improving the effectiveness of the Government of India's Soil Health Card Scheme	1	Advisory services	1	2644	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2644&cycle=Reporting&year=2018
PIM research informs agricultural policies aimed at ensuring the long-term success of the 2018 Rice Tariffication Act in the Philippines	1	Climate change Foresight	2	2652	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2652&cycle=Reporting&year=2019
Seed regulations and certification system strengthened in Afghanistan	1	Seed systems	2	3311	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=3311&cycle=Reporting&year=2019

OICR title	Flagship	Area 1 Area 2 Area 3	OICR stage	OICR No.	OICR link (where available)
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	1	Seed systems	2	4068	New link to be added
Registration of eleven local varieties of rice and beans distributed by more than 3,000 farmers in Nepal	1	Seed systems	2	4071	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=4071&cycle=Reporting&year=2020
Volunteer Farmer Trainer program reaching 352,000 dairy farmers in Uganda increases knowledge and productivity	1	Advisory services	2	2653	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2653&cycle=Reporting&year=2020
A digital agricultural extension platform to boost adoption of improved technologies and practices in Ethiopia	1	Advisory services; information and communications technologies (ICTs)	2	3261	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=3261&cycle=Reporting&year=2019
Informing the Government of Flanders' investment in agricultural advice services to Malawian farmers	1	Advisory services	2	2677	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2677&cycle=Reporting&year=2018
Commercial release of genetically engineered insect resistant cowpea in Nigeria informed by ex ante modelling and capacity building conducted by IFPRI's Program for Biosafety Systems	1	Biosafety	2	3276	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=3276&cycle=Reporting&year=2019
Enhanced capacity of the government of Malawi to evaluate the safety of genetically-engineered crops	1	Biosafety	2	2684	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2684&cycle=Reporting&year=2018
Insect-resistant cotton approved for release to farmers in Malawi and planted by 20,000 farmers during the first growing season	1	Biosafety	2	2684	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2684&cycle=Reporting&year=2020

OICR title	Flagship	Area 1 Area 2 Area 3	OICR stage	OICR No.	OICR link (where available)
Contribution to Malawi's National Agricultural Extension and Advisory Services Strategy, launched in 2020 to guide investments	1	Advisory services	2	4079	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=4079&cycle=Reporting&year=2020
Direct Seed Marketing boosts seed availability and improves crop yields and commercialization in Ethiopia (26% increase in maize yield)	1	Seed systems Markets and trade	3	2735	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2735&cycle=Reporting&year=2020
Informing the Government of South Africa's projections on the economic effects of the COVID-19 pandemic	2	COVID-19	1	4070	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=4070&cycle=Reporting&year=2020
Contributions to national-level policy discourse on response to economic impacts of COVID-19 in Ghana, Malawi, Tunisia and Indonesia	2	COVID-19	1	4029	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=4029&cycle=Reporting&year=2020
SPEED data was used to inform World Bank loans and government investments	2	Public investments	1	2192	Not publicly available: https://marlo.cgiar.org/projects/PIM/study.do?expectedID=2192&projectID=669&edit=true&phaseID=12
PIM's research informs Nepal's federal transition on the devolution of the agricultural sector	2	Policy processes	1	2191	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2191&cycle=Reporting&year=2017
Assessing the impact of the COVID-19 pandemic and formulating policy responses to protect vulnerable sectors and populations in Rwanda	2	COVID-19	1	4082	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=4082&cycle=Reporting&year=2020
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	2	Agricultural policy; COVID-19	1	4038	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=4038&cycle=Reporting&year=2020
Use of MAP Yemen by the government, development partners and academics: towards more effective allocation of development funding	2	Agricultural policy	1	3303	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=3303&cycle=Reporting&year=2019

OICR title	Flagship	Area 1 Area 2 Area 3	OICR stage	OICR No.	OICR link (where available)
		Public investments			
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	2	COVID-19	1	4087	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=4087&cycle=Reporting&year=2020
PIM research used to develop school gardens in 29 schools for better nutrition of 28,000 students in Papua New Guinea	2		1	4069	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=4069&cycle=Reporting&year=2020
The Government of Uganda adopts PIM recommendations to improve a nationwide program aimed at involving citizens towards effective public service delivery	2	Policy processes	1	4073	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=4073&cycle=Reporting&year=2020
Findings from the Myanmar Agriculture Policy Support Activity inform the Government of Myanmar's response to the COVID-19 pandemic	2	COVID-19	1	4077	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=4077&cycle=Reporting&year=2020
Policy makers, development agencies, and academics use PIM's research on structural transformation to develop their strategies	2	Structural transformation	1	2193	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2193&cycle=Reporting&year=2017
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	2	Policy processes	1	4067	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=4067&cycle=Reporting&year=2020
Informing the Government of Flanders' investment in agricultural advice services to Malawian farmers	2	Advisory services	2	2677	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2677&cycle=Reporting&year=2018
Reform of Ghana's main agricultural mechanization program to better meet the needs of smallholder farmers	2	Mechanization	2	2189	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2189&cycle=Reporting&year=2019

OICR title	Flagship	Area 1 Area 2 Area 3	OICR stage	OICR No.	OICR link (where available)
High-level indicators developed by PIM assist USAID in targeting food security investments and tracking progress of the Global Food Security Strategy in focal countries	2	Employment	2	2675	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2675&cycle=Reporting&year=2019
PIM's modeling expertise used to design the agricultural strategies of Malawi and Rwanda	2	Agricultural policy Structural transformation	2	2676	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2676&cycle=Reporting&year=2018
Improved evidence-base for Rwanda's National Strategy for Transformation and Vision 2050	2	Structural transformation Public investments	2	3260	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=3260&cycle=Reporting&year=2019
Improved evidence-base for Kenya's Agricultural Sector Transformation and Growth Strategy and National Agricultural Investment Plan	2	Agricultural policy Structural transformation Public investments	2	3212	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=3212&cycle=Reporting&year=2019
Improving returns to public investments in China's agricultural sector	2	Agricultural policy Public investments	2	2678	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2678&cycle=Reporting&year=2018
Contribution to Malawi's National Agricultural Extension and Advisory Services Strategy, launched in 2020 to guide investments	2	Advisory services	2	4079	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=4079&cycle=Reporting&year=2020
USAID Bureau for Resilience and Food Security staff trained to use to the Kaleidoscope Model for food security policy change	2	Policy processes	2	3208	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=3208&cycle=Reporting&year=2019

OICR title	Flagship	Area 1 Area 2 Area 3	OICR stage	OICR No.	OICR link (where available)
PIM findings used to develop the United States Government's strategy in Ethiopia	2	Agricultural policy Structural transformation Value chains	2	2673	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2673&cycle=Reporting&year=2018
PIM studies inform Nigeria's National Gender Policy on Agriculture	2	Gender Agricultural policy	2	3191	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=3191&cycle=Reporting&year=2019
The Bangladesh Policy Research and Strategy Support Program (PRSSP) informed the United States Government Global Food Security Strategy (GFSS) Bangladesh Country Plan.	2	Agricultural policy	2	2674	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2674&cycle=Reporting&year=2018
PIM findings influence the Punjab Agricultural Policy and the Pakistan National Food Security Policy	2	Agricultural policy	2	2679	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2679&cycle=Reporting&year=2018
PIM studies inform the Punjab Agriculture Marketing Regulatory Authority Act and Ordinance	2	Value chains Markets and trade	2	3282	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=3282&cycle=Reporting&year=2019
Uptake of research-based recommendations on Egypt's national cash transfer program	2	Safety nets Resilience	2	2171	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2171&cycle=Reporting&year=2020
Evidence-based support to change the modalities of Egypt's food subsidy system for better effectiveness and improved nutrition and food security impacts	2	Safety nets Nutrition	2	4086	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=4086&cycle=Reporting&year=2020
Improving the criteria for selecting the beneficiaries of the largest safety net program for ultra-poor women in rural Bangladesh	2	Safety nets Nutrition	2	2661	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2661&cycle=Reporting&year=2018

OICR title	Flagship	Area 1 Area 2 Area 3	OICR stage	OICR No.	OICR link (where available)
Strengthening the targeting performance of a child nutrition-oriented safety net in Bangladesh: the Improved Maternity and Lactating Mother Allowance	2	Safety nets Nutrition	2	2662	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2662&cycle=Reporting&year=2018
Direct Seed Marketing boosts seed availability and improves crop yields and commercialization in Ethiopia (26%increase in maize yield)	2	Seed systems Markets and trade	3	2735	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2735&cycle=Reporting&year=2020
PIM's research informs trade negotiations between the European Union and two African Regional Economic Communities	3	Markets and trade	1	2199	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2199&cycle=Reporting&year=2017
PIM tools used in a project to foster gender-inclusive business models in small rural enterprises in Honduras	3	Gender Value chains Rural employment	1	2649	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2649&cycle=Reporting&year=2018
PIM studies inform the Punjab Agriculture Marketing Regulatory Authority Act and Ordinance	3	Value chains Markets and trade	2	3282	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=3282&cycle=Reporting&year=2019
Reform of European Union biofuel policies	3	Markets and trade Climate change	2	3320	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=3320&cycle=Reporting&year=2019
Swisscontact uses WEAI and WEAI4VC to develop gender and social inclusion strategies for project intervention in agricultural value chains in southern Honduras	3	Gender Value chains Social inclusion	2	3192	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=3192&cycle=Reporting&year=2019
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	3	Insurance Resilience ICTs	2	3905	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=3905&cycle=Reporting&year=2020

OICR title	Flagship	Area 1 Area 2 Area 3	OICR stage	OICR No.	OICR link (where available)
Direct Seed Marketing boosts seed availability and improves crop yields and commercialization in Ethiopia (26% increase in maize yield)	3	Seed systems Markets and trade	3	4067	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=4067&cycle=Reporting&year=2020
Research on Ethiopia's health insurance and safety net programs results in more inclusive and integrated programs for the poor	4	Safety nets Insurance Resilience	1	2198	Not publicly available: https://marlo.cgiar.org/projects/PIM/study.do?expectedID=2198&projectID=688&edit=true&phaseID=12
Cash Transfer and Intimate Partner Violence Research Collaborative contributes to strategies of global development organizations	4	Safety nets Gender	1	2687	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2687&cycle=Reporting&year=2019
Uptake of research-based recommendations on Egypt's national cash transfer program	4	Safety nets Resilience	2	2171	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2171&cycle=Reporting&year=2020
Evidence-based support to change the modalities of Egypt's food subsidy system for better effectiveness and improved nutrition and food security impacts	4	Safety nets Nutrition	2	4086	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=4086&cycle=Reporting&year=2020
Improving the design of the Government of Mali's social protection program for achieving better child nutrition	4	Safety nets	2	2659	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2659&cycle=Reporting&year=2018
The $74 million Nobo Jatra (New Beginning) USAID-funded project includes PIM findings to improve child nutrition in poor coastal areas of Bangladesh	4	Safety nets Nutrition	2	2660	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2660&cycle=Reporting&year=2018
Improving the criteria for selecting the beneficiaries of the largest safety net program for ultra-poor women in rural Bangladesh	4	Safety nets Nutrition	2	2661	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2661&cycle=Reporting&year=2018
Strengthening the targeting performance of a child nutrition-oriented safety net in Bangladesh: the Improved Maternity and Lactating Mother Allowance	4	Safety nets Nutrition	2	2662	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2662&cycle=Reporting&year=2018

OICR title	Flagship	Area 1 Area 2 Area 3	OICR stage	OICR No.	OICR link (where available)
Adoption of woreda participatory land use planning in pastoral areas by the Government of Ethiopia	5	Natural resource governance	1	3301	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=3301&cycle=Reporting&year=2019
The Rulal game is used to facilitate natural resource governance in Southeast Asia and to train students in natural resource management	5	Natural resource governance	1	3312	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=3312&cycle=Reporting&year=2019
GIZ used research results to include tenure into future land restoration programs	5	Property rights Natural resource governance	1	2036	No publicly available: https://marlo.cgiar.org/projects/PIM/study.do?expectedID=2036&projectID=663&edit=true&phaseID=12
The Monitoring and Evaluation for Land in Africa (MELA) framework is applied in 12 African Countries	5	Natural resource governance Property rights	1	2015	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2015&cycle=Reporting&year=2017
The Collaborating for Resilience approach is used by International Land Coalition's National Engagement Strategies in 5 countries to build effective coalitions of civil society and government agencies for pro-poor land governance	5	Resilience Natural resource governance	1	2203	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2203&cycle=Reporting&year=2017
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	5	Natural resource governance	1	3965	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=3965&cycle=Reporting&year=2020
Deployment of PIM guidance on development of multi-actor platforms for landscape governance and restoration across six states in India	5	Natural resource governance	1	4078	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=4078&cycle=Reporting&year=2020

OICR title	Flagship	Area 1 Area 2 Area 3	OICR stage	OICR No.	OICR link (where available)
Adoption of joint village land use planning by the Government of Tanzania to increase tenure security for livestock keepers[1]	5	Property rights Natural resource governance	2	2631	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2631&cycle=Reporting&year=2019
PIM research informs the renewal of community forest concessions in the Maya Biosphere Reserve (Guatemala)	5	Property rights Natural resource governance	2	3302	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=3302&cycle=Reporting&year=2019
Payments for agrobiodiversity conservation scaled up in Peru	5	Natural resource governance Seed systems	2	3325	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=3325&cycle=Reporting&year=2019
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	5	Natural resource governance	2	3945	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=3945&cycle=Reporting&year=2020
Experimental games scaled out to 250,000 households to improve ground and surface water governance in India	5	Natural resource governance	2	3335	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=3335&cycle=Reporting&year=2019
Participation of National Agrarian University La Molina (Peru) in research on indigenous tenure security leads to changes in forestry curriculum	5	Property rights Natural resource governance	2	2709	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2709&cycle=Reporting&year=2018
Cash Transfer and Intimate Partner Violence Research Collaborative contributes to strategies of global development organizations	6	Safety nets Gender	1	2687	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2687&cycle=Reporting&year=2019
The Women's Empowerment in Agriculture Index is used by the Africa Union's Comprehensive Africa	6	Gender	1	2008	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2008&cycle=Reporting&year=2017

[1] In the 2017 PIM Annual Report (Table A-2), this was listed as "The Joint Village Land Use Planning methodology secures tenure for pastoralists in Tanzania" and the OICR number was 2033.

OICR title	Flagship	Area 1 Area 2 Area 3	OICR stage	OICR No.	OICR link (where available)
Agriculture Development Programme monitoring framework					
PIM studies inform Nigeria's National Gender Policy on Agriculture	6	Gender Agricultural policy	2	3191	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=3191&cycle=Reporting&year=2019
Swisscontact uses WEAI and WEAI4VC to develop gender and social inclusion strategies for project intervention in agricultural value chains in southern Honduras	6	Gender Value chains Social inclusion	2	3192	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=3192&cycle=Reporting&year=2019
The Women's Empowerment in Agriculture Index is used by development organizations to improve women's empowerment	6	Gender	2	3192	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=3192&cycle=Reporting&year=2019
Including women's empowerment as a key component of the United States' global initiative to combat hunger – Role of the Women's Empowerment in Agriculture Index	6	Gender	2	2680	https://marlo.cgiar.org/projects/PIM/studySummary.do?studyID=2680&cycle=Reporting&year=2018

Source: PIM Annual Report 2017, 2018, 2019, 2020; PIM Phase 2 Outcomes Database November 2021 (internal document).
Note: 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 have led to impacts at scale or beyond the direct CGIAR sphere of influence.

Annex H. Interviews

Table H.1. List of PIM scientists interviewed

Name	Title	Center	PIM flagship
Kwaw Andam	Country Program Leader/Research Fellow	IFPRI	F2
Suresh Babu	Senior Research Fellow/Head of Capacity Strengthening	IFPRI	Cross-cutting
Rui Benfica	Senior Research Fellow	IFPRI	F1
Peter Cronkleton	Senior Scientist	CIFOR	F5
Xinshen Diao	Deputy Division Director, Development Strategy and Governance Division	IFPRI	F2
Dolapo Enahoro	Senior Agricultural Economist	ILRI	F1, F2
Thomas Falk	Senior Scientist	ICRISAT	F5
Fiona Flintan	Senior Scientist	ILRI	F5
Guy Hareau	Division Leader	CIP	F1, F3, F4
Michael Hauser	Research Program Director – Enabling Systems Transformation	ICRISAT	F5
Melissa Hidrobo	Senior Research Fellow	IFPRI	F4, F6
Girma Kassie	Senior Agricultural Market Economist	ICARDA	F3
Soonho Kim	Senior Data Manager	IFPRI	F3
Gideon Kruseman	Foresight and Ex-Ante Research Leader	CIMMYT	F1
David Laborde Debucquet	Senior Research Fellow	IFPRI	F3
Anne Larson	Team Leader, Equal Opportunities, Gender Justice and Tenure	CIFOR	F5
Will Martin	Senior Research Fellow	IFPRI	F3
Ruth Meinzen-Dick	Senior Research Fellow	IFPRI	F5
Blake Ratner	Executive Director, Collaborating for Resilience	WorldFish (2014–2017)	F5

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