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► Public-private partnerships to strengthen smallholder resilience

Learning from the Leaders Working Paper Series



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► Abbreviations

AGROSEGURO	Agrupación Española de Entidades Aseguradoras de los Seguros Agrarios Combinados
CNAAS	Compagnie Nationale d'Assurance Agricole du Sénégal
FISP	Farmer Input Support Programme
GDP	Gross domestic product
ISA	Incentivo al Seguro Agropecuario
KAIP	Kenya Agriculture Insurance Programme
KIAMIS	Kenya Integrated Agriculture Management Information System
LMICs	Low and middle-income countries
MADR	Ministry of Agriculture and Rural Development
MINAGRI	Ministry of Agriculture and Animal Resources
MoA	Ministry of Agriculture
MoF	Ministry of Finance
MoFPED	Ministry of Finance, Planning and Economic Development
MoU	Memorandum of understanding
NAIS	National Agricultural Insurance Scheme
PMFBY	Pradhan Mantri Fasal Bima Yojana
PPPs	Public-private partnerships
SLA	Service level
TARSIM	Tarım Sigortaları Havuzu
UAIS	Uganda Agricultural Insurance Scheme
USD	United States Dollar
ZIAMIS	Zambia Integrated Agricultural Management Information System

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► About the Learning from the Leaders Series

The Learning from the Leaders series brings together insights from the most recent research of the ILO's Impact Insurance Facility and Microinsurance Network on inclusive insurance. Information for the working papers has been systematically collected through dozens of interviews with both insurers that do not currently offer inclusive insurance and leading inclusive insurers. Findings are also supported by earlier research on the topics.

Arranged into core working papers and related webinars, the goal is to generate and share practical knowledge to overcome key barriers identified in inclusive insurance, promoting the adoption of innovative and sustainable solutions in the sector. The series is designed to highlight success stories and actionable insights from industry leaders, helping

insurers enhance the value and viability of their products for underserved markets.

This working paper is supplemented by the webinar entitled “Learning from the Leaders – Leveraging regulations and PPPs for inclusive insurance”, which can be found by following [this link](#) and scrolling to the bottom of the page. The webinar features Carlos Boelsterli, CEO of Micro Risk Solutions (MiCRO), Andrea Camargo, Inclusive Risk Financing Programmes Lead at the World Food Programme, Elias Omondi, Principal, Innovation for Resilience at FSD Africa, and Pranav Prashad, Senior Technical Officer at the ILO's Impact Insurance Facility. It is moderated by Nicolas Morales, LATAC Regional Manager at the Microinsurance Network, and Lisa Morgan, Technical Specialist at the ILO's Impact Insurance Facility.



► Executive summary

Smallholder farmers are among the most vulnerable populations on earth, yet fewer than one in five is covered by agricultural insurance. They are also a valuable and significant group: in low- and middle-income countries (LMICs), agriculture contributes to more than 25 per cent of gross domestic product (GDP) and employs over half of the workforce. In sub-Saharan Africa, an estimated 97 per cent of smallholders are uninsured. As climate shocks become more frequent and severe, the consequences extend beyond economic loss: food insecurity, asset depletion and debt spirals can persist across seasons and even generations.

Purely market-based approaches have failed to reach smallholders at scale, while fully public schemes have often been fiscally costly and operationally weak. Public-private partnerships (PPPs) — arrangements in which governments and private insurers jointly design, finance and deliver agricultural insurance — have emerged as the dominant model in many of the world's largest agricultural insurance markets, and evidence from both established and emerging markets points to PPPs as a reliable mechanism for protecting smallholder farmers.

This report examines what makes agricultural insurance PPPs effective, scalable and inclusive. It draws on structured interviews with 14 organizations and detailed analysis of seven PPP schemes in Colombia, India, Kenya, Rwanda, Senegal, Uganda and Zambia. Three main PPP models are identified: premium subsidy schemes with private delivery; public insurers or co-insurance pools; and schemes that bundle insurance with existing public programmes, such as input subsidies or social protection. In practice, most programmes combine elements of more than one model, and the distribution of roles between government, insurers, aggregators, reinsurers and development partners varies significantly by market. Across all three models, the government's role extends well beyond premium subsidies to include enabling the regulatory environment, investing in data and technical infrastructure, and providing risk financing for catastrophic layers of loss.

PPPs have succeeded in insuring millions of smallholder farmers, improving the speed and predictability of payouts, reducing governments' reliance on unplanned disaster relief, and enabling access to credit — as seen in Rwanda, where over US\$5 million in agricultural credit has been unlocked through insurance used as loan collateral, and in Uganda, where commercial banks

have changed their lending policies following the establishment of the country's PPP scheme. However, outcomes are uneven. Many PPPs remain dependent on annual budget cycles and significant protection gaps persist: Uganda's one million insured farmers represent a fraction of the country's estimated five to six million smallholder households, and across sub-Saharan Africa, the aggregate coverage gap has not significantly narrowed despite a decade of pilot and scale-up activity.

The analysis in this report shows that PPPs do not succeed simply because the public and private sectors work together. Their success depends on how stakeholders design, finance and support these partnerships. Effective PPPs make explicit trade-offs between smallholder inclusion, fiscal sustainability and market development. These choices are backed by robust governance and sustained investment in data and delivery systems.

The report identifies four recommendations for more effective PPPs.

- First, governments and their partners should stabilise the basic foundations, prioritizing multi-year commitments, a single coordinating authority, agreed data-sharing rules and investment in core digital infrastructure.
- Second, once foundations are in place, governments and insurers should jointly review product terms, subsidy structures and reinsurer engagement to ensure that risk layers, pricing and coverage align with both smallholder inclusion and fiscal sustainability.
- Third, sustainable PPPs depend on the systematic collection and use of evidence. Programmes should track a minimum set of indicators, including coverage, loss ratios, fiscal cost per farmer, credit unlocked and proxies for resilience outcomes, and use this data to adjust design and delivery over time.
- Fourth, digital infrastructure should be treated as core element of PPP design: farmer registries, e-voucher platforms and digital payment systems are public goods that make PPPs viable at scale.

No single actor can make agricultural insurance successful alone. Governments must provide the policy direction, public investment and long-term commitment needed to reach vulnerable farmers. Private insurers must bring the technical expertise, operational efficiency and risk management capacity required for

sustainable delivery. Development partners play a catalytic but time-limited role, which is most successful where plans are in place to transition to domestic financing from the outset. When these roles are

combined effectively, with clarity on how risks, responsibilities and incentives are shared, PPPs can expand protection to millions of smallholder farmers while making public spending more predictable and financially efficient.



► 1. Introduction

Smallholder farmers are the backbone of global food systems.¹ In low- and middle-income countries (LMICs), agriculture contributes to more than 25 per cent of gross domestic product (GDP) and employs over half of the workforce.² Despite this, the sector absorbs nearly a quarter of all disaster-related economic losses, and farmers are among the most vulnerable populations on earth. Over 600 million small-scale farmers depend on agriculture for their livelihoods.³ However, fewer than one in five is covered by agricultural insurance. In sub-Saharan Africa, an estimated 97 per cent of smallholders are uninsured. In Asia, around 80 per cent of farmers lack protection.⁴

The consequences go beyond economic impacts: intensifying climate shocks routinely trigger food insecurity and force asset sales. Resulting debt spirals can last several seasons and even generations. In Africa, 37 per cent of the population is exposed to severe weather – double the global average of 18 per cent.⁵ Insurance has been used among some farmer groups to mitigate the effects of climatic shocks and has led to greater participation in higher-return activities. This reflects its dual role as protective cover and as an enabler of productive investment.⁶ However, as extreme weather events become more frequent, the systemic nature of risk increasingly exceeds the capacity of any single actor to manage alone.

1.1 Why the public and private sectors need to come together

Several agricultural insurance pilots have been launched worldwide, but many have failed to reach

scale.⁷ Purely market-based agricultural insurance has not improved insurance penetration and typically focuses on larger, commercial farmers. Fully public schemes and state insurers have often been fiscally costly, operationally weak and slow to innovate (Table 1).

Failures can be attributed to several reasons, such as high administrative costs, chronic underinvestment in risk data infrastructure, affordability constraints and limited public support⁸.

These barriers have driven a shift from public monopolies and purely commercial approaches to public-private partnerships (PPPs) as a way to combine the strengths of both public and private systems while offsetting their weaknesses.

1.2 Agricultural insurance PPPs protect smallholder farmers in LMICs

PPPs refer to long-term arrangements where government and private insurers jointly design, finance, deliver and even underwrite the risk of crop or livestock insurance schemes for farmers. These schemes can combine a government's capacity to subsidize, regulate and provide data with private insurers' technical, operational and capital capacity to cover many farmers.

By 2025, PPPs had become the dominant model in many of the world's largest and most established agricultural insurance markets.⁹ Evidence from these countries and emerging markets points to PPPs as a reliable mechanism to cover smallholders.

¹ FAO, [Small family farmers produce a third of the world's food](#) (2021).

² UNDP, [Building integrated agricultural insurance agendas: A framework for government action](#) (2025).

³ UNDP, [Building integrated agricultural insurance agendas](#).

⁴ UNDP, [Building integrated agricultural insurance agendas](#).

⁵ R. Hill and B. Kramer, [Scaling up crop insurance in Africa for climate resilience and agricultural transformation](#) (2026).

⁶ Hill and Kramer, [Scaling up crop insurance in Africa](#).

⁷ D. Clarke, [What have we learned from all the agricultural microinsurance pilots?](#) (2012).

⁸ O. Mahul and C.J. Stutley, [Government support to agricultural insurance: Challenges and options for developing countries](#) (2010).

⁹ Financial Protection Forum, [Public-private partnerships for agricultural insurance](#) (2025).

Several successful PPP schemes have emerged, such as AGROSEGURO¹⁰ in Spain and TARSIM¹¹ in Türkiye. However, several PPPs still suffer from systemic constraints. These include subsidy dependence, basis risk, political economy pressures, coordination failures, and the persistent exclusion of marginal farmers¹². Importantly, the

role of governments is often misunderstood or not well-defined. While new PPP schemes continue to emerge, such as in Colombia, India and Rwanda, success factors for improving smallholder resilience through PPPs can vary by market.

► **Table 1: Comparison of agricultural insurance scheme types**

Indicators	Fully intervened public sector systems	Public-private partnerships	Purely market-based systems
Agricultural insurance penetration level	High	High	Low to moderate
Risk portfolio diversification level	High	High	Low
Fiscal cost to governments	High	Moderate – based on market competition	Low
Government involvement level	High	Moderate	Low
Number of insurers and product diversification	Low	Moderate	High
Global adoption (as of 2025)	Low	High	High
Decision-making is based on	Social objectives	Technical feasibility	Commercial incentives
Notable countries where this scheme is in use	Canada, Indonesia, Panama, Philippines	USA, China, India, Spain, Turkey, Italy	Germany, Austria, Netherlands, Sweden

Source: World Bank, [Public-private partnerships for agricultural insurance](#) (2025)

¹⁰ AGROSEGURO is Spain's co-insurance pool, which coordinates subsidized multi-peril agricultural insurance for farmers on behalf of private insurers.

¹¹ TARSIM is Türkiye's state-subsidized agricultural insurance pool, through which the government funds premiums and private insurers jointly underwrite, administer and reinsure coverage.

¹² Marginal farmers are those who own small plots of land, typically less than one hectare. Source: <https://feed.net.in/who-are-marginal-farmers/>

1.3 The approach and evidence base of this report

1.3.1 Aim and intended audience

As governments and insurers consider ways to protect smallholder farmers from growing climate and economic risks, PPPs are reshaping how agricultural

insurance is designed, financed and delivered. Commissioned by the Microinsurance Network's Best Practice Group (BPG) on Building the Resilience of Smallholder Farmers and supported by the ILO, this report examines what makes agricultural insurance PPPs effective, scalable and inclusive. It highlights current models and government roles across different contexts. The analysis is structured around three core research questions, as shown in Figure 1.

► **Figure 1: Research questions**



The report is aimed at four primary audiences: policy-makers and regulators in LMICs exploring agricultural insurance; insurers seeking to engage in smallholder-focused PPPs; development partners and finance institutions; and insurtechs and agritechs looking to use their platforms and distribution networks to deliver insurance to the unserved and underserved.

1.3.2 Methodology

This report was produced through desk research and perspectives gathered via key informant interviews. The organizations interviewed were selected by the Microinsurance Network (MiN) Secretariat and the BPG Technical Committee that oversaw this project. The specific PPP schemes covered in detail in this report were finalized after most interviews had been completed to ensure all that all typical PPP models are adequately covered in the report.

1.3.3 Key informant perspectives

Structured interviews, based on a simple questionnaire (Annex 1), were held with 14 organizations. These included BPG members, other MiN members and

industry organisations (Table 2). These interviews yielded qualitative input on emerging practice, gaps in evidence and practical challenges faced by practitioners. The perspectives gathered were used to finalize the model typologies, collect more information on country examples and develop recommendations.

1.3.4 Geographic and thematic scope

Examples of PPPs from seven countries are presented in this report (Table 3). These cases were selected to reflect geographic diversity across sub-Saharan Africa, South Asia and Latin America, variation in model type, and the availability of evidence on both scheme design and outcomes. The specific cases profiled were agreed and validated with the BPG Technical Committee.

The analysis draws on evidence from several LMICs, where the protection gap for smallholder farmers is severe. The report explores PPPs in crop insurance (index and hybrid products) and livestock insurance. Several PPPs include micro-level insurance coverage bundled with credit, inputs or social protection. Standalone sovereign or macro-level risk pooling instruments are mentioned only where they directly connect to smallholder-level outcomes.

► **Table 2: List of organizations interviewed for this project**

BPG members and other MiN members		Other industry organizations
African Risk Capacity	ILO	Agro Consortium
APA Insurance	Radiant Yacu	FINAGRO
Blue Marble Microinsurance	Seguros Bolivar	Pula Advisors
FASECOLDA	UNDP IRFF	Insurance Development Forum
IFAD	WFP	

► **Table 3: PPP schemes covered in this report**

Country	Region	Public-private scheme
Colombia	Latin America	Incentivo al Seguro Agropecuario (ISA)
India	Asia-Pacific	Pradhan Mantri Fasal Bima Yojana (PMFBY)
Kenya	Sub-Saharan Africa	Kenya Agricultural Insurance Programme (KAIP)
Rwanda	Sub-Saharan Africa	National Agricultural Insurance Scheme (NAIS)
Senegal	Sub-Saharan Africa	Compagnie Nationale d'Assurance Agricole du Sénégal (CNAAS)
Uganda	Sub-Saharan Africa	Uganda Agricultural Insurance Scheme (UAIS)
Zambia	Sub-Saharan Africa	Farmer Input Support Programme (FISP)

1.3.5 Limitations

As with any body of work on an emerging approach, there are several limitations to this study. Firstly, evidence from Sub-Saharan Africa is often based on pilots of limited duration and scale. It is not always possible to

draw long-term conclusions from this data. In addition, agricultural insurance interacts with credit markets, input supply and social protection systems. As a result, isolating the contribution of PPPs to observed outcomes can be challenging. Finally, this report reflects evidence as of late 2025 and may not capture developments in 2026.

► 2. Defining PPP models and their characteristics

2.1 What are agricultural insurance PPPs?

PPPs in agricultural insurance are arrangements in which the government and the private sector share responsibilities, risks and resources to deliver insurance that neither party can easily provide alone. They are distinct from fully public schemes and market-based models. In public programmes, governments bear all technical and financial responsibilities. In purely commercial

models, insurers operate without structured or dedicated public support.

PPPs occupy the space between these two approaches. They combine the public drive towards social objectives, market stability and enabling infrastructure with the private sector's capacity in underwriting, product innovation and distribution.¹³ Since the launch of the first PPPs in agricultural insurance, several rationales for their use and contribution to improved resilience among smallholder farmers have emerged (Table 4).

► **Table 4: Rationales for the use of PPPs in agricultural insurance**

Rationale	Description
Resilience	Insurance that reaches smallholders can reduce pressure on governments for expensive, slow and often uneven post-disaster relief. ¹⁴ Therefore, government involvement in agricultural insurance PPPs is seen as an important component of national disaster risk financing strategies.
Building markets	In LMICs, the agricultural insurance market is often small and still evolving, with limited private capacity, product availability and diversity, weak data infrastructure, and high costs. Governments can create the conditions for private actors to enter the market and scale insurance products for smallholder farmers.
Correcting market failure	Private insurers' technical and operational capacity can be combined with public subsidies, data and infrastructure to reach smallholder farmers at scale.
Managing covariate risks	Sharing catastrophe layers between the state and insurers can make private sector participation viable and reduce reliance on ad-hoc disaster relief.
Improving products	Public investment in data, regulation and farmer awareness, alongside private innovation in product design, underwriting and claims, can improve affordability, product quality and user trust.
Pursuing development goals	PPPs allow governments to align risk transfer with development and social protection goals. Insurance can support access to credit, higher quality input use, climate adaptation and the protection of smallholder livelihoods after shocks have occurred.

¹³ Mahul and Stutley, Government support to agricultural insurance.

¹⁴ UNDP, Building integrated agricultural insurance agendas.

Inclusion

Most markets – including LMICs – will typically serve larger, commercial farmers first. Government involvement provides the necessary incentives to include smallholders who need insurance but are hard to serve through a purely commercial approach.

Markets adopting PPPs may prioritize one or several of these rationales. However, each rationale works in different ways: resilience requires breadth and speed; a market-building agenda needs patience, long-term commitment and commercial viability; and an inclusion agenda demands careful targeting and subsidy discipline. A core function of a well-designed PPP is to manage these rationales and their interaction well and with clarity. Nonetheless, across each rationale, the distinct roles of government and the private sector are equally important – even if there is variation.

2.2 Defining government and private sector roles

2.2.1 The role of governments in PPPs

Despite the involvement of the private sector in PPPs, governments have a significant role to play. Several governments in agricultural insurance PPPs have taken a leading role in financing premiums.¹⁵ Beyond this, governments can play a more varied role depending on the PPP model and market maturity. These roles include the following:^{16 17}

Enabling environment

Establishing the legal and regulatory framework, including licensing, product approval processes, consumer protection rules, and mandates or incentives for private participation.

Data and technical infrastructure

Investing in public goods that underpin actuarially sound products. These include weather stations, crop yield databases, satellite data access, farmer registration systems and geographic information systems.

Outreach and connection

Building farmer awareness, linking insurance to social

safety nets and credit programmes, and co-financing premiums to overcome affordability constraints for the most vulnerable.

Risk financing

Acting as a reinsurer of last resort for catastrophic risks, capitalizing co-insurance pools, issuing guarantees to attract private reinsurance, and putting in place sovereign risk transfer instruments.

In nascent markets, government responsibility can go further and may include anchoring institutional structures that enable other partners' involvement.¹⁸ Governments may also bear the high start-up costs involved in PPPs, especially where there is a lack of insurance systems and rural infrastructure. As markets develop, governments may focus on improving subsidy design, phasing out direct support and creating competitive conditions.

2.2.2 The role of the private sector

While the government enables the market, the private sector makes PPPs work in practice through risk-taking, delivery and technical execution. Private insurers, often with the support of reinsurers, price and develop products, build portfolios and absorb part of the insurance risk. This is a core function of their actuarial know-how. They are responsible for developing policy administration systems, claims processes and data tools.

Many of the private sector's attributes are due to its operational discipline around efficiency and innovation. The private sector may reinforce or lead marketing and sales efforts and settle claims directly or through agents. Experience of working with reinsurers and other insurers makes them well placed to join risk pools, share data and catastrophe risk.

The key roles played by the private sector are:

¹⁵ Interviews with stakeholders for this project.

¹⁶ Mahul and Stutley, Government support to agricultural insurance.

¹⁷ Financial Protection Forum, Public-private partnerships for agricultural insurance.

¹⁸ Interviews with stakeholders for this project.

Market development and crowding-in capital

The private sector can drive the functioning of a publicly enabled insurance scheme by investing in lasting distribution networks, sales teams and client relationships. For instance, insurance policies can be distributed to customers of commercial or agricultural banks, other financial institutions, agritechs working with farmer groups, and digital platforms, such as mobile money providers. In addition, private insurers' balance sheets and access to reinsurance and capital markets allow PPPs to mobilize additional risk capital and credit. Further, policy administration, loss assessment and disbursement processes and customer engagement can be enhanced through private sector participation.

Innovation and product knowledge

Private sector players are well placed to experiment with new product structures (for example, parametric layers and hybrid cover), technologies (remote sensing and digital distribution), and partnerships. This is due to their ability to compete and bear the risk involved. By spearheading innovation, private insurers can determine what to scale across programmes and countries. In addition, their lessons from other markets and lines of business can help PPPs evolve from basic and highly subsidized products into more precise and diversified offerings that can gradually function with diminishing public support. Private sector's understanding of risk and actuarial practices can further enhance the product offerings.

Performance discipline and accountability

In several PPPs, private insurers are likely to operate under performance-based contracts or competitive tendering. This can be used to ensure minimum levels of service quality, cost control and innovation. Private sector players would typically aim to manage portfolios profitably, which offers a counterweight to purely political or short-term pressures. This can help keep pricing, underwriting and operational standards closer to actuarial reality.

Risk co-financing

In some countries, the private sector has been involved in limited co-financing. For instance, in Colombia, cooperatives and microfinance institutions lending credit to farmers have made partial contributions towards premiums. This was done to protect their credit portfolios

and improve the quality of the risk for the insurers. In Mexico, premium co-financing by banks or cooperatives is sometimes done in an idiosyncratic way, absorbing the cost of a bundled product or cross-subsidizing via interest margins. While this is not a core design of the PPP, it shows that co-financing can be used to ensure the sustainability of certain types of services.

2.3 A typology of public-private partnership models

Three main partnership structures have consistently been adopted across PPP models currently in use for agricultural insurance. They reflect different distributions of risk, responsibility and finance between public and private actors. In practice, most programmes combine elements of more than one model. These structures often evolve as markets mature and trust between partners develops (Table 5).

2.3.1 Who does what across the three PPP models?

A similar group of stakeholders are involved across each model type. However, their respective leading roles vary significantly by model and even by market (Table 6). Across each model, the government is responsible for scheme oversight and providing premium support. Insurers are in charge of underwriting and typically lead product ownership, while reinsurers are responsible for providing reinsurance. Development partners also play a consistent role across the models, contributing technical assistance, capacity building and funding for early pilots.

Variation in role responsibility across the models is primarily seen in distribution, enrolment, premium collection and pay-outs. Distribution is carried out by several organizations: MFIs, cooperatives, banks, rural agents, aggregators and insurers, among others. While aggregators are primarily responsible for farmer enrolment, other locally based actors are also used to sign farmers up. The institutions responsible for premium collection and payouts will vary based on the financial institutions that reach farmers in each market. Between markets, there may also be variations on which organization plays a leading role and which one either facilitates or supports a particular activity.

► **Table 5: PPP models**

Model	Description	Government or public sector role	Private sector role	Example
1. Premium subsidy schemes with private delivery	This is the most widespread type of PPP worldwide. Governments pay part of the insurance premium for target groups. Private insurers are responsible for selling and servicing the policies.	Governments co-finance a portion of farmers' premiums. They are also responsible for setting eligibility criteria, subsidy rates and providing a stable financial floor.	Private insurers design, underwrite and distribute products within the scheme. Input suppliers, seed companies and off-takers act as aggregators and distribution partners.	The Kenya Agricultural Insurance Programme (KAIP) subsidizes up to 50 per cent of premiums for smallholders farming under 20 acres. KAIP has covered 1.6 million farmers across 38 counties in Kenya. ¹⁹
2. Public insurers²⁰ and co-insurance risk pools	These are PPP structures where a government-backed insurer and multiple private insurers jointly share agricultural risks in a common pool, rather than each insurer running its own separate scheme.	Governments establish or anchor a specialized agricultural insurer or co-insurance pool that sets common terms, manages shared risk and attracts private participation.	Private insurers co-insure or act as the reinsurer alongside the public insurer, helping to underwrite, price, and distribute policies. Banks and MFIs integrate pool products into their lending and input-finance operations, while brokers act as strategic intermediaries and managers in these arrangements, designing the pool architecture and placing risks.	In Africa, Senegal's CNAAS is 37 per cent government-owned and 52 per cent privately held. It serves over 500,000 farmers, with reinsurance support from the World Bank. ²¹ In Asia, India's PMFBY includes 20 general insurers ²² (a mixture of public and private insurers). ²³

¹⁹ Microinsurance Network, *The landscape of microinsurance 2024* (2024).

²⁰ Public insurers are state-owned or state-backed insurance entities that participate in providing insurance alongside private insurers.

²¹ UNDP, Building integrated agricultural insurance agendas.

²² Go Digit, Kshema or Raheja QBE had been added to the initial providers by 2025.

²³ Financial Protection Forum, Public-private partnerships for agricultural insurance.

3. Bundling with public programmes (inputs, credit or social protection)	Insurance is integrated with existing public delivery channels, such as input distribution, state-backed credit schemes, social protection programmes or extension services.	Governments set policy objectives and targeting rules. They may finance all or part of the premiums and provide data and delivery channels. Their roles may include overseeing regulation and consumer protection.	Private insurers design and price products tailored to the programme, underwrite and share the agreed layers of risk, and manage operations. Private sector players (for example, MFIs) distribute the cover, while insurtechs provide digital platforms, remote-sensing data and automated triggers for indices.	In Zambia, insurance has been bundled with input vouchers distributed via the existing Farmer Input Support Programme.
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Source: Key informant interviews

► **Table 6: Stakeholder roles by PPP model type**

Responsibility	Model 1: Premium subsidy schemes	Model 2: Public insurer or pool	Model 3: Bundling with public programmes
Scheme oversight or ownership	Government	Government	Government
Subsidy provision or premium support	Government	Government	Government
Underwriting	Private insurers	Public insurer plus private co-insurers (pool)	Private insurers and global reinsurers
Product ownership	Private insurers	Public insurer or pool	Joint between government and private insurers
Distribution	Private insurers via MFIs, co-operatives, banks, agents	Aggregators and private insurers	Banks, MFIs, input schemes, social transfer systems
Enrolment	Aggregators and agents	Aggregators and local agents	Programme implementers and aggregators
Technical assistance	Development partners, DFIs, reinsurers	Development partners, DFIs, reinsurers	Development partners, DFIs, agritechs and reinsurers

Reinsurance and capital support	Reinsurers and sometimes DFIs	Reinsurers and DFIs	Reinsurers and DFIs
Premium collection and claim payouts	Aggregators and insurers via mobile or bank channels	Pool members and their agents or aggregators	Banks, MFIs, mobile money, social transfer systems and insurers
Capacity building and design support	Development partners and DFIs	Development partners and DFIs	Development partners and DFIs
Funding for pilots or early premium subsidies	Development partners	Development partners	Development partners
Premium co-payments	Smallholder farmers	Smallholder farmers	Smallholder farmers

2.4 How existing PPP schemes compare

This report focuses on a selected group of PPPs in Africa, Asia and Latin America (see Table 3). These national, large-scale agricultural insurance PPPs illustrate various ways that governments, insurers and development partners share risk, responsibilities and financing.

The schemes span Colombia, India, Kenya, Rwanda, Senegal, Uganda and Zambia (Table 7). Among these are a range of PPP model types: premium subsidy-based programmes, public insurers or coinsurance pools and bundling insurance with an existing national agricultural programme. The schemes are described in more detail in Box 1.

► **Table 7: Selected PPPs covered in this report**

Country	PPP name	PPP model type	Farmers covered	PPP structure and focus	Scheme highlight
Colombia	ISA	Model 1: Premium subsidy scheme	>75,000 (2025)	Subsidies administered by FINAGRO. Private insurers design products and cede 90 per cent of premiums to reinsurers	A long-running rules-based PPP with targeting based on farm size, and strong links to international reinsurers
India	PMFBY	Model 1: Premium subsidy scheme	42 million (2024)	Government sets the policy, provides subsidies and coordinates operations. Private insurers underwrite and deliver products	An example of a large-scale PPP with strong government involvement and high subsidy use
Kenya	KAIP	Model 2: Public insurer or pool	~2 million (2024)	Government provides subsidies, while private insurers underwrite crop and livestock products	A multi-programme PPP using varied subsidy levels, index types and aggregator channels

Rwanda	NAIS	Model 2: Public insurer or pool	>600,000 (2024)	Government provides a partial premium subsidy, while four insurers carry the risk – half via cession and half via a risk pool	A relatively mature, well governed PPP with clear roles, gender-inclusive agent networks and detailed data
Senegal	CNAAS	Model 2: Public insurer or pool	>600,000 (2022)	Government is the majority shareholder, providing subsidies and tax exemptions. CNAAS underwrites crop and livestock insurance	A semi-public national insurer with a stable premium subsidy regime and widespread distribution via aggregators
Uganda	UAIS	Model 1: Premium subsidy scheme	>1 million (2024)	Government provides premium subsidies and data. Insurer consortium designs and delivers insurance cover	A PPP led by insurers reaching over 1 million farmers, but with fiscal and operational challenges
Zambia	FISP	Model 3: Bundling with public programmes	Over 1.5 million	Insurance embedded in input e-voucher, 50 per cent subsidy on insurance	Insurance embedded in an existing input subsidy programme and digital platform, reaching over 1 million smallholder farmers

Source: Key informant interviews

► Box 1: Descriptions of selected PPP schemes

Colombia – ISA (premium subsidy model)

Colombia's agricultural insurance PPP is built around the Incentive for Agricultural Insurance (ISA) and the National Agricultural Risk Fund. The government subsidises a large share of premiums (up to 90–95 per cent for some smallholders) and FINAGRO, a second-tier agricultural bank, disburses subsidies to private insurers once farmers' contributions are collected. Private insurers design and underwrite both traditional and parametric products. Aggregators, such as co-operatives, foundations, financial institutions and supply-chain firms group farmers and manage enrolment. International reinsurance markets are used to absorb up to 90 per cent of premiums in some portfolios.

India – PMFBY (public insurer or pool model)

Launched in 2016, PMFBY is India's flagship crop insurance programme. It is considered a textbook example of a PPP supported by the state and delivered by the market. PMFBY replaced previous schemes with a single national framework. The central and state governments set policy, subsidise the gap between farmers' premium rates and actuarial premiums, and share costs (typically 50:50). Public and private insurers underwrite and implement the scheme based on detailed guidelines and oversight from a national technical committee.

Kenya – KAIP (premium subsidy model)

Launched in 2016, KAIP offers subsidised area-yield and weather index insurance to smallholders. The government funds a 50 per cent premium subsidy, sets policy and coordinates with counties, while insurers underwrite and deliver products backed by reinsurance. Distribution is carried out via banks, co-operatives, agro-dealers and digital platforms, often bundled with input finance. KAIP has insured around two million farmers in nearly 40 counties.

Rwanda – NAIS (premium subsidy model)

Launched in 2019, NAIS is a structured PPP in which government provides a 40 per cent premium subsidy, sets scheme rules and coordinates implementation. Four local private insurers underwrite policies within a pooled risk and co-insurance arrangement. This set up is reinsured by Africa Re and Zep-Re. NAIS operates in 30 districts across multiple crop and livestock value chains. NAIS relies on co-operatives, banks and microfinance institutions to distribute insurance. As of 2025, it has collected over USD 16 million in premiums with more than USD 9 million in claims. Over USD 5 million has been unlocked in credit using insurance as collateral.

Senegal – CNAAS (public insurer PPP model)

Created in 2009, CNAAS is Senegal's dedicated agricultural insurer, structured as a PPP with the state as majority shareholder alongside local financial institutions and insurers. The government subsidises up to 50 per cent of premiums and provides tax incentives, while CNAAS designs crop, livestock and parametric weather products and assumes underwriting risk. Products are distributed mainly via Banque Agricole, producer organisations and value-chain actors, often in bundled credit-insurance offers.

Uganda – UAIS (premium subsidy model)

Established in 2016, UAIS is a PPP where government provides up to a 50 per cent premium subsidy for crops and livestock, with higher support for smallholders. The Ministry of Finance funds the scheme, the Bank of Uganda manages the subsidy account and the Insurance Regulatory Authority oversees innovation. The Agro Consortium of insurers, a private entity, designs and underwrites products. Distribution is through banks, MFIs, co-operatives and agents. UAIS has insured over one million farmers, with total sum insured above USD 500 million.

Zambia – FISP insurance (bundling with programmes model)

Zambia's PPP has embedded crop index insurance within the existing Farmer Input Support Programme (FISP), a national input subsidy scheme. The scheme is supported by a digital farmer management system and e-voucher platform, and uses mobile money for payments. The government owns and funds FISP, provides policy and digital infrastructure, and recently added a 50 per cent subsidy on the insurance premium. A consortium of local insurers design and deliver the index product, backed by international reinsurance. Donors such as WFP initially financed pilots, farmer engagement, and awareness and training schemes.

2.5 The role of donors in PPPs

Across most PPPs in LMICs, donors and development organizations have contributed to the launch and operations of PPPs. They have primarily acted as catalysts by providing financing for a range of activities that governments and local markets typically struggle to fund up front. This includes feasibility studies, index design, data systems, legal and regulatory reform, other technical assistance, and early premium support to prove concepts.

Donors have also played an important convening role: they have brought together ministries, insurers, reinsurers, aggregators and regulators. In some markets, donors have brokered legal agreements and governance frameworks (for example, WFP in Senegal and Zambia and UNDP in Uzbekistan). In some cases, they have underwritten the risk during the first few seasons or absorbed early losses so that local insurers and governments gain confidence. Donors have also supported

farmer education and capacity-building efforts across value chains.

Donor involvement can be beneficial, though there are downsides. Donors can speed up innovation, de-risk early investment and improve technical quality. Importantly, they can often unlock government commitment. When donor funding is absent where needed, promising ideas can stall due to a lack of technical and financial backing.

When donor funding is present but poorly sequenced or relied on for too long, schemes can become dependent and vulnerable to political or budget shocks. This is a significant issue that many PPPs have faced. Grant dependency without a plan on how the PPP should become sustainable can lead to performance issues.

Zambia's FISP is an example of a PPP scheme that has charted a donor-free path. It was funded via farmers' contributions embedded in the input package. Only recently was a 50 per cent premium subsidy added to increase coverage.

▶ 3. How PPPs work in practice

3.1 The steps required to create a PPP

While there is no agreed-upon way to start an agricultural insurance PPP, lessons from previous and existing schemes suggest a five-step process (Table 8). Each stage – diagnosis, architecture, product and systems, piloting and institutionalization – includes objectives that serve as a building block. This enables schemes to move from strategy to institutionalization.

While the suggested steps offer a theoretical sequence, countries rarely move neatly through these steps: political windows, fiscal shocks, and climate disasters often change the order of the phases. However, each building block still tends to appear. For example, Spain's multi-peril agricultural insurance system spent years on diagnosis and institution-building before converging on a public-private pool (AGROSEGURO). In Türkiye, the government restructured a fragmented market into a single pool (TARSIM), clarified roles and introduced premium subsidies. Only then did it centralize loss adjustment and reinsurance.

▶ **Table 8: Components needed to develop agricultural insurance PPPs**^{24 25 26 27}

Stage	Description
1. Diagnose and set objectives	▶ Assess agricultural and climate risks, existing coping mechanisms and market gaps ▶ Define objectives: protect smallholders, stabilize public budgets, support credit and productivity
2. Design PPP architecture and enabling environment	▶ Decide which PPP model to use: premium subsidy, public insurer or pool, or bundling with state programmes ▶ Allocate roles between government, insurers, aggregators, reinsurers, insurtechs, agritechs and development partners ▶ Strengthen regulation, data systems and consumer-protection rules
3. Develop products and delivery systems	▶ Co-design products (including coverage, triggers, pricing, subsidy rules) aligned with crops, seasons and channels ▶ Build operational workflows for enrolment, premium flows, data and index calculation, claims decision and payment
4. Pilot, learn and adjust	▶ Run pilots in selected areas or programmes, using delivery partners ▶ Track uptake, farmer awareness, service quality, loss experience and fiscal impacts ▶ Based on this, refine design, processes and risk-sharing

²⁴ Mahul and Stutley, Government support to agricultural insurance.

²⁵ World Bank, [Public-private partnerships for agricultural insurance](#) (2025).

²⁶ UNDP, Building integrated agricultural insurance agendas (2025).

²⁷ ASEAN, [10 phases in developing a national crop insurance program: Guide overview](#) (2017).

5. Scale and institutionalize

- Gradually expand across regions and programmes, embedding the PPP in national agriculture and disaster-risk-financing strategies
- Establish permanent governance structures, regular reviews and continuous data-driven product improvement

3.2 Design and governance

PPP schemes can be initiated in one of two ways

Across the different schemes considered for this project, PPPs can be initiated in two ways: design can either be led by the private sector or by the government (Table 9).

Each pathway reflects different priorities. Government-led PPPs often emerge from fiscal or policy objectives. They are likely to have budget lines, clear subsidy rules and national targets. However, where private sector input is weak, they can become politically driven or inefficient. In contrast, private sector-led PPPs often begin as commercially driven or donor-backed pilots focused on operational viability and innovation. Without eventual government policy and financial support, these schemes may struggle to scale or remain overly dependent on donor funding.

► **Table 9: Examples of PPP initiatives led by the public or private sector**

Design led by the private sector	Design led by the government
Uganda: The insurer consortium that became the Uganda Agro Insurance Consortium (AIC) convened first, then engaged with the government for the Uganda Agricultural Insurance Scheme (UAIS).	India: The federal government defined objectives, subsidies and tendering. It then brought in private insurers under a national framework.
Colombia: The premium subsidy programme was shaped by Fasecolda (the insurance industry association) and Finagro (the country's development bank) before becoming a cabinet-level commitment.	Rwanda and Zambia: In both countries, the government identified insurance as a driver to achieve national food security or an agricultural development strategy. The private sector was invited to participate through a competitive process.

Source: Key informant interviews

Scheme initiation can determine the governance model

Each initiation pathway comes with distinct governance challenges and impacts the type of governance approach that is adopted. Initiatives driven by the private sector eventually need durable political commitment from the government. Without this, subsidy flows become unreliable and can affect programme continuity. State-led initiatives face different challenges. They need to build technical capacity among insurers and ensure that competitive selection determines which private actors participate in the partnership.

Most schemes rely on a formal written agreement, such as a memorandum of understanding (MOU) or service level agreement (SLA), that sets out the scheme details. In Uganda, a government MOU governs the roles between the Ministry of Finance (which manages the subsidy and leads coordination), the Ministry of Agriculture (which provides extension services), the Bank of Uganda (which handles subsidy disbursement) and the Agro Insurance Consortium (which handles product design, monitoring, and claims management). In Rwanda, the National Agriculture Insurance Scheme (NAIS) operates under service level agreements between insurers. These specify performance standards, data-sharing obligations and claims processing timelines.

PPP schemes tend to have a central coordinator, but this varies by market

Several schemes have benefited from having a single coordinating authority or dedicated technical unit – typically, a government body. Where this exists, governance disputes are managed within established structures. Examples include Rwanda, whose NAIS is coordinated by the Ministry of Agriculture, and Colombia, where Finagro has a dedicated agricultural risk fund management function. Where there is no central body, coordination can fracture across ministries, with each likely to defend its own interests rather than prioritizing programmatic outcomes.

Among the countries surveyed, most PPP schemes are coordinated by the Ministry of Agriculture (MoA) (Table 10), with several advantages to the MoA playing this role. The MoA understands farming systems and risk, and brings agronomic expertise and an understanding of crop calendars and local risk profiles into product design. The Agriculture Ministry also has a widespread extension and outreach presence. Finally, as part of its expertise, it likely holds key historical agricultural data. These can be used to make private insurance technically viable.

► **Table 10: Central PPP coordinating agency by country**

Country	PPP	Central government coordinator (de facto lead)
Colombia	ISA	Ministry of Agriculture and Rural Development (MADR)
India	PMFBY	Ministry of Agriculture & Farmers Welfare, Government of India
Kenya	KAIP	Ministry of Agriculture and Livestock Development
Rwanda	NAIS	Ministry of Agriculture and Animal Resources (MINAGRI)
Senegal	CNAAS	CNAAS itself is the coordinator
Uganda	UAIS	Ministry of Finance, Planning and Economic Development (MoFPED)
Zambia	FISP	Ministry of Agriculture

Source: Stakeholder interviews

Among this list, there is one notable exception: only Uganda's coordinating agency is a different ministry, the Ministry of Finance (MoF). The MoF sometimes leads agricultural insurance PPPs because these schemes are usually a part of a state's disaster risk financing and fiscal risk management. The MoF has the power to decide how much covariate climate risk the government should retain and how much to transfer to insurers and reinsurers. It is also responsible for budgeting for premium

subsidies, public reinsurance, guarantees and pool capitalization over a defined period.

Finance ministries also control the overall budget envelope and must weigh agricultural insurance against competing priorities. This requires coordination across agriculture, social protection and financial-sector regulators, and engagement with global reinsurance and capital markets. These functions require a central macro-fiscal authority, that is, the MoF. Its leadership

can also signal credibility and policy stability to private partners, which is crucial for crowding long-term private capacity into PPP schemes.

PPPs use varied approaches to risk layering

Many PPPs prioritize risk layering as a key structural choice. Risk layering refers to “using different financial instruments for different disaster frequencies”.²⁸ This is an alternative to trying to solve everything with one risk management product or one budget line. The objective across most agricultural insurance PPPs is to spread losses equitably across farmers, insurers, reinsurers or governments. Farmers retain small and more frequent losses, while insurers are used to manage medium-sized losses within defined product

triggers. Catastrophic or systemic risk layers are transferred to reinsurance markets or absorbed by the government as the insurer of last resort.

Countries with PPPs show some similarities in how they layer risks (Table 11). For instance, farmers are expected to absorb small losses across most schemes. There are key differences too, especially in the middle and top layers of risk. For example, in Colombia, approximately 90 per cent of agricultural insurance premiums are ceded to reinsurance. As a result, international reinsurers, not domestic insurers, drive pricing, product terms and market appetite. Colombia’s agricultural insurance market is highly dependent on reinsurers, due to the nature and frequency of risks to be covered.

► **Table 11: Risk layering by selected PPP schemes**

Scheme	Low layer (retained losses)	Middle layer (PPP insurance)	Top layer (sovereign and external funds)
Colombia – ISA	Small shocks managed by households and standard programmes	Publicly supported agricultural insurance; ISA/Fondo provide subsidies and reinsurance	Catastrophic events financed through sovereign DRF mechanisms
India – PMFBY	Small losses handled by farmers and state budgets	Area-yield insurance for covariate shocks	Debt waivers and relief packages for major disasters
Kenya – KAIP	Small losses handled by farmer coping and local safety nets	Index covers for sub-county drought, which is subsidised and reinsured	Severe droughts and floods activate national DRF and emergency support
Rwanda – NAIS	Minor yield variation managed by farmers	Subsidised cover: farmers pay 60 per cent, the state 40 per cent Insurers and reinsurers take the risk	Extra fiscal and external support
Senegal – CNAAS	Frequent small losses borne by farmers and local government	Subsidised multi-risk products; CNAAS and reinsurers hold the risk	Nationwide crises require extra public spending and humanitarian assistance
Uganda – UAIS	Local shocks absorbed by farmers and agriculture budgets	Subsidised crop insurance	Budget reallocations, emergency projects and donor support

²⁸ Centre for Disaster Protection, “Risk layering”, glossary entry: <https://www.disasterprotection.org/glossary/risk-layering>

Zambia – FISP index	Local shocks and input issues handled by farmers	Index insurance bundled with FISP for mid-range weather shocks	Large droughts trigger big payouts plus humanitarian and budget responses
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Source: Author's synthesis based on programme documents and DRF guidance

In contrast, other countries have used their local insurance market first. Rwanda has a co-insurance pool in which four domestic insurers each carry 25 per cent of the underwriting risk. Kenya is similar in this regard. In both countries, the coinsurance arrangement has been designed to limit any single insurer's catastrophe exposure, while retaining meaningful domestic risk ownership in the process. However, these schemes still require reinsurance, due to the nature of risks being covered.

3.3 Operating PPPs to deliver agricultural insurance

Farmer targeting and enrolment are important initial activities

Agricultural insurance PPPs face a common challenge: how to reach large numbers of smallholders with

limited distribution capacity and constrained public budgets. Most countries with PPPs have not solved this through retail insurance sales. Instead, they have used a mix of policy rules (for example, on subsidies), farmer registries and value-chain aggregators to geographically target smallholders. While policies on mandatory insurance and tax waivers exist and can be considered when designing a PPP, these are not used by the schemes covered in this study.

Most farmers are then enrolled mainly via cooperatives, financial institutions, input schemes and digital platforms. For most PPPs, this choice is deliberate. By using existing distribution channels, PPPs can reduce acquisition costs, improve eligibility verification and align insurance with broader policy objectives. These include input support, credit expansion, resilience and social protection. In addition, as targeting is carried out with a range of partners, its implementation relies on working with organizations that farmers are familiar with and already trust (Table 12).

► **Table 12: Summary of targeting and enrolment approaches in selected countries**

PPP scheme	Who is targeted (farmer segment)	How farmers are enrolled (channels)	Why this approach is used
Colombia – ISA	Strong focus on smallholders and low-income producers	Enrolment is through banks, MFIs, co-operatives and input/marketing companies	Sophisticated subsidy targeting is used to concentrate resources on smallholders
KAIP – Kenya	Smallholder crop and livestock producers in priority counties	Enrolment through cooperatives, microfinance institutes, banks, input suppliers and county-level programmes	Matches Kenya's devolved system and existing value-chain and financial networks
Rwanda – NAIS	Farmers in 30 districts, targeting smallholders and key crop and livestock value chains	Enrolment uses farmer registries, public tenders for insurers	Rules-based targeting (on subsidy and geography) with co-operatives and female agents to target women

Uganda – UAIS	Smallholder crop and livestock producers	Enrolment via farmer organisations, NGOs, financial institutions and extension structures	Existing farmer networks and extension staff used instead of building new sales structures
Zambia – FISP	Small-scale farmers, especially maize producers in key provinces	Farmers register on digital system to access FISP e-vouchers; insurance is embedded in the voucher	Farmers already know and use FISP, which avoids stand-alone sales, uses digital enrolment and payments

Source: Key informant interviews

Other factors have enabled enrolment, including the use of aggregators, such as cooperatives, microfinance institutions, input suppliers, rural banks and savings groups. For APA Insurance, a combination of government subsidy and aggregator-based distribution led to scale. Direct-to-farmer distribution through government extension services is slow and expensive. Distributing products through cooperatives and input supply

chains, which have existing trust relationships and transaction points with farmers, can reduce distribution costs and adverse selection. In Rwanda, cooperatives are the primary enrolment channel for NAIS, with women agents playing a central role in reaching female smallholders.

► **Box 2: The role of digital technology in Zambia**

Digital tools are the backbone of Zambia's PPP. The country provides a good example of a scheme that relies on a state-led digital platform to scale agricultural insurance, while specialist insurance technology and analytics are provided by the private sector. Digital tools have helped to enrol farmers at scale, collect premiums and pay-out claims.

Digital farmer registry as core infrastructure

The government developed the Zambia Integrated Agricultural Management Information System (ZIAMIS) as digital infrastructure. ZIAMIS now houses data on over 1.5 million smallholders. It is used for farmer registration, agro-dealer management and real-time reporting.

E-vouchers and embedded premium collection

ZIAMIS is used to run FISP's e-voucher system and has been used to embed insurance within FISP. The system allows insurance premiums to be collected with the farmer's contribution for subsidized inputs, rather than as a separate payment. That has enabled automated insurance enrolment and digital payments.

Overcoming the capacity gap on the insurance side

Technology is the main enabler of scale, targeting and fraud control in Zambia, with strong government digital infrastructure. However, local insurance market analytics and index insurance product technology had to be imported.

Using FISP has enabled the Government of Zambia to insure over one million farmers. The use of digital tools has improved reach among farmers in a cost-effective manner, and using mobile money to pay out claims has also strengthened financial inclusion among farmers.

► **Box 3: PMFBY's new technological initiatives**

PMFBY is increasingly run on digital rails built and regulated by the government, which private insurers plug into. Technology is used across the PPP lifecycle, including satellite and artificial intelligence-based tools, such as YES-TECH, to support yield estimation and crop monitoring. The tools have been rolled out to various states, with Madhya Pradesh the first state to adopt 100 per cent technology-based yield assessment under PMFBY. Weather data systems, such as the WINDS portal, now feed local risk information into underwriting and claims processes.²⁹

Together, YES-TECH and WINDS are positioned by the Government of India as a step-change in PMFBY operations. They enable a move towards fully tech-enabled yield and weather risk measurement to support quicker, more objective claim settlements. Such tools can reduce dependence on manual crop-cutting experiments, improve transparency, and shorten settlement timelines. This allows insurers and technology partners to compete on service and analytics within a common PPP architecture.

This example shows that technological solutions can be seen as public goods, raising questions around who should bear the cost. Currently, PMFBY's technology is financed as part of the scheme's public subsidy. Central and state governments already fund core digital infrastructure and weather data as shared costs. This allows insurers and technology partners to invest their own resources in proprietary value-add. Farmers still pay a subsidized risk premium, based on their income levels. Given the current arrangement, it is unclear how the cost of technology could be borne by stakeholders other than government.

Data access and sharing are key components of all PPPs

Effective design, pricing, targeting, delivery and monitoring of agricultural insurance under PPPs depends on timely access to high-quality data. Governments may hold several types of data, including yield, weather, farmer registry and soil data.³⁰ Private insurers need this information to price and validate products. For data exchange to work effectively, PPP schemes need a formal mandate on how data is collected, stored, processed and shared. Experiences from the markets

covered in this study point to a common set of data-sharing principles that make PPPs workable (Table 13).

However, in most markets, formal data-sharing agreements are either weak or absent. Standards on data protection may vary, while rules on using data in a proportionate way may not exist. In Colombia, cross-ministry data sharing is limited by institutional misalignment and information security concerns. Conversely, Rwanda's integrated data platform serves as a good example: it is managed by the National Bank of Rwanda and is accessible to all NAIS participants.

► **Table 13: Minimum data-sharing principles for an agricultural insurance PPP**

Principle	Details	Examples
Treat climate and yield data as a public good	Governments should finance and provide open access to long-term climate and yield series for PPP partners	Rwanda and Colombia show that 10 to 15 years of rainfall and yield data are essential for accurate pricing, lower basis risk and reinsurance appetite

²⁹ Government of India, Ministry of Agriculture and Farmers Welfare, [Centre launches technological advancements in crop insurance to empowering farmers and streamlining operations in PMFBY](#) (2023).

³⁰ Key informant interviews.

Build and maintain digital farmer registries	A single farmer registry capturing identity, location, crop, farm size and vulnerability status should be updated regularly	Zambia's ZIAMIS has been critical for targeting subsidies, managing enrolment and enabling premium and claims operations at scale
Ensure interoperability across public databases	Agricultural, finance, land, social protection and credit databases should talk to each other, with common identifiers and standards	Kenya recently developed the Kenya Integrated Agriculture Management Information System (KIAMIS), designed as a central data hub
Define clear, reciprocal data-sharing rules in the PPP	Contracts and MOUs should specify what data government shares and what insurers or aggregators share in turn	Rwanda NAIS's delegates reporting to a technical unit and steering committee based on insurer data. Colombia provides detailed market information, including on premiums, pricing and payouts
Balance data access with privacy and consent	Personal data should be shared under clear legal and consent frameworks	Colombia has highlighted the need to use data to target subsidies, as well as the need to protect farmer information
Invest in local data collection and analytical capacity	Allocate resources for continuous data collection and analysis at national and local levels	Rwanda's NAIS promotes district-level data collection, strong links between extension and insurance, and building local risk analytics

Source: Key informant interviews

Use of subsidies varies between PPPs

Subsidies are the main operational drivers behind PPPs. Subsidy flows connect public budgets to insurer balance sheets and farmer protection, allowing PPPs to work in real time. Using law or policy, governments can define which farmers, crops and regions are eligible for subsidies, and the share paid by the state. This informs insurers and aggregators on where to focus distribution, how to design products and which segments will be commercially viable.

Premium subsidies in the range of 50–80 per cent are typically required from the onset to achieve meaningful insurance take-up among smallholders (Figure 2). Below this threshold, price-sensitive farmers may be less willing to pay – especially when there is little experience or awareness of the benefits of insurance. In addition, lower subsidy allocations may limit the depth of cover available for farmers or limit the number of farmers that can be covered. Subsidies above the required thresholds, on the other hand, are likely to lead to fiscal strain.

Subsidy rules that are predictable and consistent across

years can lead to a more stable PPP scheme. This may lead to more reinsurance capacity and insurer investment in systems and product refinement. Volatile or delayed subsidies can delay insurance activation, expose farmers to uninsured periods and create insurer cash flow challenges. This is an important operational bottleneck for many countries, as budget execution constraints are endemic to most public procurement cycles.

Countries are experimenting with subsidy graduation and exit pathways

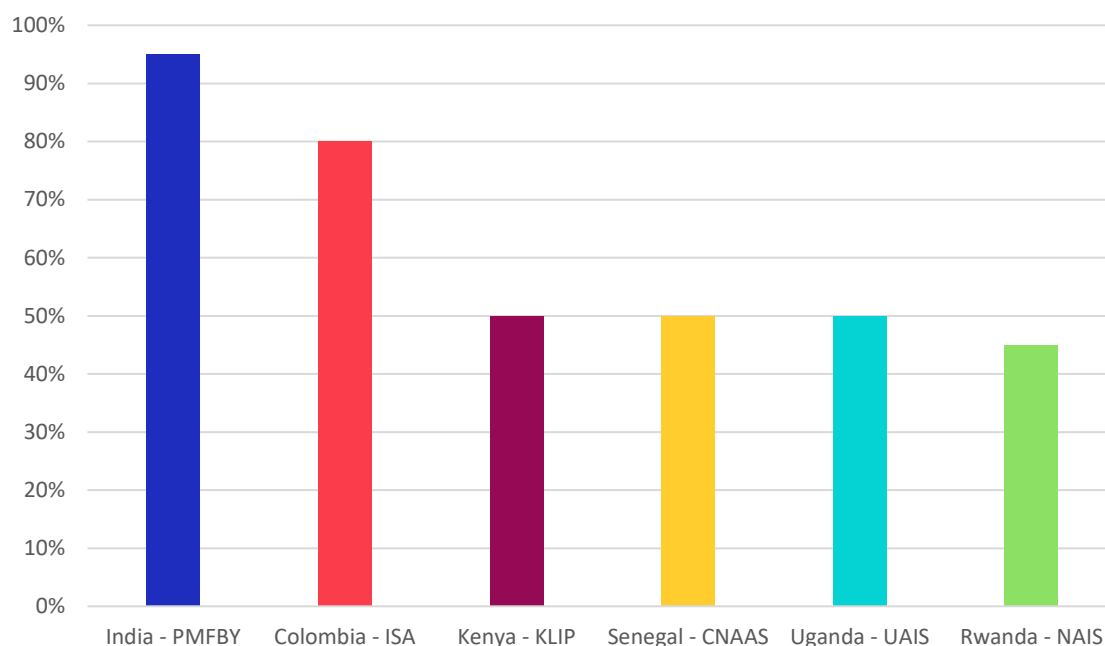
Evidence from the PPPs covered suggests that while few countries use formal, time-bound “digressive” subsidy schedules, several are experimenting with graduation approaches.

- In Rwanda, NAIS envisages graduated subsidy reduction for established farmers while maintaining higher support for the most vulnerable.
- In Colombia, budget pressures led FINAGRO to remove large farmers from the subsidy scheme. This has effectively graduated “better-off” producers out of high subsidy levels.

- Kenya aims to move to targeted subsidies, embedding insurance in credit and value chains so part of the premium becomes commercially viable. Donor

funding is to be phased out, with county governments and local markets expected to take over responsibility for financing.

► **Figure 2: Approximate subsidies by countries**



Strong coordination is vital

On the public sector side, agricultural insurance sits at the intersection of agriculture and finance ministries. However, the institutional incentives of each will differ. Coordination within the government can therefore be affected by fragmented inter-ministerial links, even if there is a central coordinator. Formal coordination mechanisms can include a steering committee, an inter-ministerial working group or a dedicated programme management unit. Without one of these, disputes over subsidy allocations, data-sharing obligations and procurement timelines tend to be resolved on an *ad hoc* basis – often with suboptimal outcomes.

A major structural gap in some markets is the absence of a dedicated centre of competence for agricultural insurance. Coordination between governments and private actors is often weakened as a result. In Colombia, the Ministry of Agriculture has no dedicated technical unit for agricultural insurance. Frequent personnel rotations have not helped, especially in building insurance knowledge and maintaining consistent policy positions

across administrations. Effective programme management requires institutional continuity, knowledge of both agriculture and insurance, and the ability to engage reinsurers and regulators across political transitions.

On the market side, private sector players, such as insurers, reinsurers and their associations, can also play an important coordination role. By forming consortia or co-insurance pools, they can provide governments with a single organized focal point for technical discussions, data standards and product changes. Industry platforms can help to align underwriting practices, portfolio data and delivery arrangements with banks, MFIs and cooperatives. This can make it easier for public coordinators to steer the system through formal steering committees and working groups.

In addition, development partners can also offer a coordination role – albeit in a temporary capacity. Development organizations, such as donors and multilateral organizations, can convene and align ministries, insurers and reinsurers around a shared national programme. They are then likely to gradually step back as domestic institutions take over.

► 4. Outcomes and persistent challenges faced by PPPs

Some agricultural insurance PPPs have moved beyond pilots to national programmes that have yielded positive outcomes. Smallholder resilience has improved, alongside gradual improvements in the predictability and efficiency of public spending on climate shocks. PPPs have allowed governments to shift part of their agricultural risk management from ad hoc disaster relief into pre-arranged, budgeted risk finance. Among the countries covered, more farmers and assets are under protection than ever before. This has led to fewer distress responses and faster recovery after shocks.

Most PPPs covered in this study have faced and overcome significant challenges to operate. Funding volatility and delayed disbursements are recurrent issues in some countries. For instance, delays in Kenya and Uganda have led to cash-flow stress for insurers, affecting claim payment speeds. In Colombia, changes in sectoral priorities have created uncertainty for smallholder farmers, organizations and government agencies involved.

In addition, there is a risk that subsidy dependence can make it harder for PPPs to become commercially viable over time. Stakeholders interviewed for this study have stated that full exit of public support is neither realistic nor desirable for smallholder climate risk. Instead, there are ways to make this support smarter. Few, if any, PPPs have yet adopted “smart subsidies” (subsidies designed to provide maximum social benefits while minimizing distortions in the market and implemented with a clear exit strategy)³¹ in full as a fiscal strategy.

4.1 Outcomes for improved smallholder resilience

PPPs can lead to increased farmer coverage and uptake of insurers’ products

The PPP schemes covered in this report have succeeded in insuring millions of smallholder farmers. They have demonstrated that PPPs can move agricultural insurance beyond short-term pilots towards sustainable national coverage, even though significant protection gaps remain. Penetration remains low in most markets. Uganda’s one million insured farmers are a fraction of the country’s estimated 5–6 million smallholder households. Kenya’s coverage of two million farmers across 38 counties reaches only a minority of its seven million smallholder households.³² Across Africa, the aggregate coverage gap has not significantly narrowed despite a decade of pilot and scale-up activity.³³

For insurers, while adoption helps to grow their customer base, renewal rates are a more reliable indicator of perceived product value than initial uptake. However, uptake can be inflated by mandatory enrolment in bundled schemes. In Zambia, renewals for FISP insurance are automatic. While good marketing campaigns have helped to ensure farmers’ awareness, automatic renewals do not indicate farmers’ willingness to continue with insurance. Some programmes in Colombia have seen renewal rates above 90 per cent, while higher renewal rates typically follow seasons when claims are paid. This shows that a positive claims experience can promote insurance programmes better than marketing campaigns.

³¹ Ruth Vargas Hill et al., [Using subsidies for inclusive insurance: Lessons from agriculture and health](#), ILO Microinsurance Paper No. 29, 2014.

³² Microinsurance Network, [The landscape of microinsurance 2024](#).

³³ UNDP, Building integrated agricultural insurance agendas.

PPPs can achieve faster pay-outs, leading to farmers seeing greater value in insurance

The value of agricultural insurance to smallholders is linked to the speed and adequacy of claim payouts. Farmers tend to value timely payments more than high payouts.³⁴ A modest payout that arrives within days of a loss event enables farmers to continue planting, repay input loans and avoid distress sales. A larger payout that arrives months later, after the cropping window has passed, will often fail to deliver the same value.

In well-designed PPPs, governments can mandate pay-out timelines, co-finance digital claim platforms and use public data (for example, weather and yield statistics) to support timely payouts. Private insurers and insurtechs can use innovation and technology to automate loss assessment and route payments through banks, MFIs and mobile money, together enabling faster, more predictable payouts. Several PPPs covered here have helped farmers recover more quickly from shocks and avoid adopting damaging coping strategies through timely payments. Timely index-based payouts, in particular, have helped to stabilize incomes, reduce distressed sales of livestock and land, and allow reinvestment in the next season without depleting productive assets.

However, experience from India's PMFBY shows that PPP arrangements do not automatically guarantee timeliness. Implementation bottlenecks and delayed claim settlements have prompted some farmers and organizations to turn to mutual insurance solutions as an alternative risk-sharing mechanism. When claims payments are delayed, farmers are likely to engage in expensive and debilitating coping strategies and may lose trust in insurance.

Importantly, payouts should also be adequate in relation to the losses incurred by farmers. Several schemes, though increasingly accessible and affordable, have not always offered sufficient compensation for farmers' losses. This can be attributed to poor product design, which can lead to basis risk events or claim payouts that do not sufficiently compensate farmers. Basis risk is the mismatch between index-based insurance triggers and actual farm-level losses. Reputational risk from basis risk or inadequate pay-outs is seen as a particularly significant constraint in the Colombian market. The dominance of reinsurer-designed parametric triggers means that product terms may not always reflect on-the-ground agronomic realities.

Some PPPs have enabled greater access to other financial services

Higher insurance uptake across several markets via PPPs has improved smallholder resilience, as well as farmers' access to additional financial products, particularly credit. This is both a result of insurance derisking their activities, making them eligible for credit, and a result of accessing financial services as a precondition to access insurance. This is seen across several countries:

- In Uganda, credit access during primary production cycles was low before the UAIS was established. Commercial banks refused to lend for crop production due to the volatile weather and yield risks involved. Following the UAIS's establishment, several commercial banks changed their lending policies to include agricultural lending. This structural change in the financial system is a significant resilience outcome for the country.
- In Rwanda, the NAIS has documented US\$5 million in agricultural credit being unlocked because insurance was used as loan collateral. Banks have extended credit to farmers because NAIS coverage has derisked their exposure. This increased credit access has led to productive investment in improved seeds, fertiliser and farm infrastructure.
- In Colombia, around 60 per cent of insured farmers in 2020 were new to the formal financial system. This suggests that insurance coverage has directly enabled financial inclusion for a population previously outside the credit system's reach.
- In Zambia, farmers were enrolled by agents using mobile technology. Claims were paid via mobile money, which farmers can use to make payments and access digital loans.

4.2 Financial and institutional performance

PPPs enable greater levels of pre-arranged, budgeted risk finance instead of ad hoc relief

Insurance can shift government expenditure from reactive, unpredictable and inequitable post-disaster relief toward pre-arranged, structured risk financing with transparent subsidy allocations. Subsidies tend to be cheaper than ex-post relief, potentially avoiding large bailout payments after climate shocks. Such pay-outs

³⁴ IIED, [Making crop insurance work for small-scale farmers: A review of recent evidence](#) (2025).

are harder to control, often poorly targeted and can create an additional debt burden.

This motivation is seen across most PPPs covered in this report. Uganda has explicitly aimed to eliminate the need for ad hoc assistance and reduce reliance on government emergency payments when losses occur. Rwanda's NAIS has used planned premium subsidies to replace unstructured disaster spending and acts as a highly efficient social safety net. In Colombia, use of international reinsurers has effectively shifted a substantial share of systemic climate risk off the country's balance sheet.

PPP schemes can improve the efficiency of public spending

Several PPPs show that existing public budgets are now being used more efficiently via agricultural insurance. For instance, the Colombian government's subsidy expenditure (around US\$36 million in 2025) remained stable while the sum insured increased by roughly 40 per cent. In Zambia, farmers' existing contributions for inputs were used to finance premiums; only later did the government add a 50 per cent subsidy to increase insurance coverage and benefits.

These examples show that PPPs can increase the resilience achieved by public spending, especially when subsidies are well-targeted and paired with strong product design and data.

PPPs offer a better subsidy structure and potential for commercial viability

None of the PPPs covered in this report has achieved commercial viability without direct subsidies. Historically, agricultural insurance for smallholder farmers has been seen as unlikely to be sustaining based on farmer-paid premiums alone.³⁵ Despite this, there are a few examples of PPPs making progress towards sustainability, such as Rwanda and Colombia.

Each country has approached sustainability differently. Rwanda has achieved a loss ratio which has allowed the scheme to break even. When combined with time-bound technical assistance and commercially engaged private insurers, this represents a credible sustainability path. Colombia offers the most advanced evidence of graduation: it has moved on from donor dependence but still relies on the government, with the ISA programme funded entirely by the government and private sector resources. The government has the fiscal capacity to support its PPP scheme.

For some PPP schemes, reducing or eliminating public co-financing is seen as a fundamental misconception. Smallholder farmers feed populations, and the systemic risk they face is fundamental to the country. Public benefits, such as reduced emergency relief spending, stable rural incomes and reduced migration pressure, cannot be captured by commercial insurers. Based on this logic, asking smallholders to pay for insurance is akin to a country's defence needs being commercially funded. Rather than agreeing on whether to maintain public support or not, there is a case to focus on fiscal efficiency, targeting and long-term predictability.

4.3 Key challenges faced by PPPs

Across the PPP schemes assessed, several common challenges emerged – particularly around funding and data. These include unstable public funding, data and systems gaps, weak coordination, political risk and difficulty reaching and retaining the most vulnerable farmers (Table 14). All schemes depend heavily on large premium subsidies – yet these are often inconsistent, delayed or decided annually. This dependence can clash with limited fiscal space, especially as the number of insured farmers increases. Data and systems can compound the problem: fragmented climate, yield and farmer data and non-interoperable registries can affect the adequacy of payouts. Slow product approvals in some cases have led to products launching after planting windows.

Governance and inclusion have presented challenges, too. PPPs require strong coordination between ministries, insurers, aggregators and donors. They often encounter fragmented responsibilities, political turnover and operational bottlenecks. A change in political priorities has reshaped Colombia's PPP scheme, while Kenya and Rwanda highlight coordination gaps between national and local levels.

Cooperatives, MFIs and input schemes are used to reach smallholders. However, farmers outside these structures, including youth, ultra-poor households and remote, data-poor regions remain underserved. Limited extension capacity and financial literacy can further undermine farmers' awareness of and trust in insurance products, especially in years without climatic events.

³⁵ Mahul and Stutley, Government support to agricultural insurance.

► **Table 14: Summary of challenges faced by selected PPPs**

Challenge	Types of challenge seen
1. Unstable and delayed subsidies	► Delays in subsidy disbursement driven by broader fiscal pressures ► Lack of budget for premiums has affected levels of cover
2. High subsidy dependence vs limited fiscal space	► Large-scale farmers are excluded from subsidies due to budget constraints ► Despite significant subsidies, some poor farmers still cannot afford premiums
3. Weak climate, yield and farmer data	► Gaps in weather stations, poor historical yield data and weak farmer registries were observed in some countries in this study
4. Fragmented, non-interoperable systems	► Some countries have multiple, non-interoperable government databases, hindering eligibility checks and subsidy execution ► There is also weak integration between registry, subsidy and insurance systems in some markets
5. Basis risk and product mis-match	► In Senegal and Uganda, non-trigger seasons have affected renewals even if products have been statistically sound
6. Multi-actor coordination problems	► Kenya suffers from gaps between national and county governments, leading to uneven coverage and delays ► In Colombia and Rwanda, fragmented coordination across ministries and agencies has slowed down implementation
7. Political turnover and policy swings	► In Colombia, shifting sector priorities and annual budget politics reshape targeting and funding, creating uncertainty
8. Limited actuarial capacity among regulators	► In some markets, insurance regulators lack the actuarial expertise to assess agricultural insurance products ► Some regulators are proactively changing this: Uganda's Insurance Regulatory Authority operates a regulatory sandbox to quickly approve products

Source: Key informant interviews

► 5. Lessons for better PPPs

Governance clarity and the presence of a single coordinating authority matter more than model type

A well-designed PPP model should have roles that are written down, enforced and subject to oversight by a single coordinating entity. The entity should have the authority to resolve disputes. To ensure good governance, there is a need for a formal memorandum of understanding or service-level agreement, in addition to a dedicated coordinating function.

Digital infrastructure is a key multiplier

Farmer registries, e-voucher systems and digital payment platforms do more than reduce transaction costs: they make certain programme designs operationally viable that would otherwise be impossible. Investment in digital infrastructure that is publicly accessible is a prerequisite for ambitious smallholder insurance PPPs.

Building domestic insurance and reinsurance capacity will be vital in continuing to advance PPPs

International reinsurers are dominant in pricing, product terms and risk transfer due to the high percentage of risk that is transferred to them. This means that domestic insurers and governments often have less control over programme parameters than their governance roles suggest. There is a need to build domestic insurance and reinsurance capacity and negotiate direct data-sharing relationships with reinsurers. This could improve alignment between programme objectives and reinsurer incentives.

Development partners are powerful catalysts but require built-in exit plans

Programmes designed around sustained technical assistance or grant dependency consistently underperform – especially when compared to programmes designed to transition to government and private-sector financing from the outset. The FISP model in Zambia offers a good example of how such a transition can be planned and executed.

Multi-year commitments are important

An important indicator of success is sustained uptake by the target farming population. Premium subsidy programmes are more likely to fail through political disruption rather than due to actuarial problems. PPPs operating under annual budget cycles can face higher risks of disruption than those with multi-year frameworks. In Colombia, for instance, changes to the agricultural insurance subsidy budget – such as in 2018 and 2026 – have led to lower farmer coverage or programmatic delays.³⁶

Evidence and data are central to sustainability

Achieving sustainable agricultural insurance requires tracking more than growth in premium volume. It requires data on loss ratios, credit market activation and documented evidence of outcomes for farmer resilience. Programmes that invest in monitoring, evaluation, documentation and communication can create the evidence base that justifies a multi-year government commitment. This can be used to attract private investment on commercial terms.

³⁶ Key informant interviews.

► 6. Conclusions and recommendations

This report shows how agricultural insurance PPPs have become a core tool to protect smallholder farmers from rising climate and disaster risks. The schemes analysed differ by approach and the scale they have achieved. Across these schemes, a set of design and governance choices are made about how governments and markets share roles, risks and resources over time.

PPP design choices and public roles strongly shape structure, financing and governance

Programmes perform well where governments make clear decisions about the risks they will absorb, how subsidies are targeted and allocated, and which entity will coordinate. Where roles, rules and risk-sharing are ambiguous, PPPs can become prone to several problems. These include funding volatility, weak accountability and distorted incentives – irrespective of whether they follow a premium subsidy, public pool or bundling model.

Operational arrangements and delivery channels are decisive factors of scale and inclusion

Digital farmer registries, e-voucher systems and electronic payments can lower transaction costs and make complex programme designs workable at scale. Importantly, they can improve the timeliness of claims. In addition, the choice of distribution partners can determine which smallholder segments are reached. Scale, service quality and inclusion follow when data systems, workflows and partner incentives are designed for specific farmer segments.

PPP outcomes for resilience and public finances are positive but uneven

Schemes that have reached farmers at scale have reduced governments' reliance on unplanned relief efforts. They have also enabled credit and supported investment in higher-return activities, while making fiscal costs more predictable over time. Yet many PPPs remain dependent on annual budget cycles and political priorities and are often shaped by international reinsurers or development partners. The most promising programmes combine multi-year public commitments with the tracking of loss ratios, fiscal costs and smallholder outcomes, and designs adjusted based on evidence.

Combining disparate incentives in a PPP can lead to greater farmer resilience

Ultimately, no single actor can make agricultural insurance work at scale alone. Governments can provide the policy direction, public investment and long-term commitment needed to reach vulnerable farmers. Private insurers can bring the technical expertise, operational efficiency and risk management capacity required for sustainable delivery. When these strengths are combined effectively, PPPs can help to expand protection to millions of smallholder farmers while making public spending more predictable and financially efficient. While public and private actors may enter these partnerships with different incentives, they share a common interest in strengthening the resilience of the farmers who feed the world.

Four key recommendations have emerged from this research for more effective smallholder insurance PPPs:

- **Start with the foundations.** Governments and their partners should first stabilize the basic conditions required for PPPs to function. This means putting in place multi-year commitments, agreeing on a single coordinating authority with a clear mandate, data collection and sharing rules, and investing in core digital infrastructure. Scheme participants should also agree on how risks, responsibilities and incentives are shared. Without these foundations, PPPs risk repeated disruption from budget shocks, political turnover and operational bottlenecks.
- **Optimize design, risk sharing and institutional resilience.** Once the foundations are established, governments and insurers should jointly review product terms, subsidy rules and reinsurer engagement to ensure that risk layers, pricing and coverage align with smallholder inclusion and fiscal sustainability. Simultaneously, resilience objectives should drive PPP design, through transparent insurer selection, rules-based subsidy allocation and good governance arrangements.
- **Invest in evidence and continuous learning.** Sustainable PPPs depend on the systematic collection and use of evidence. Programmes should commit

to a monitoring a minimum set of indicators that includes coverage, loss ratios, fiscal cost per farmer, credit unlocked and simple proxies for resilience outcomes. Regular multi stakeholder reviews should use this data to adjust design, delivery and risk sharing over time, rather than treating PPP parameters as fixed.

- **Digital infrastructure should be treated as core PPP design, not an afterthought.** Governments can prioritize farmer registries, e-voucher platforms and digital payments as public goods that crowd in private innovation. Insurers, agribusinesses and fintechs can then leverage

these to target clients, bundle insurance with inputs or credit, automate small premium deductions and deliver fast payouts. Clear data-governance rules, standards on payout timelines and incentives for private platforms to link with public systems are necessary for this to work.

Taken together, these recommendations offer practical steps that can help move PPPs from subsidy dependent arrangements towards sustainable public-private systems. Ultimately, their aim should always be to protect smallholder farmers at scale while managing fiscal and market risks more predictably.



► Appendix A: Interview questions used

No.	Question
1. Introduction	
1	Which specific programmes or schemes should we focus on during this conversation, and what is your organization's role in it?
2. PPP model and design	
2.1	How are the different risks, responsibilities and financial flows shared between government, private insurers, aggregators and development partners?
2.2	Is there a pathway to reduce donor funding or public support over time, without collapse and ensure scheme and product viability?
3. Government roles	
3.1	Which parts of implementation depend on government capacity, and where are there possible bottlenecks (procurement, extension staff, budget execution, data systems)?
3.2	If you could change one government process to improve the PPP, what would it be?
3.3	How supportive are current policy and regulatory frameworks for PPPs in agricultural insurance (for example, clarity of subsidy rules, licensing, product approval, data sharing rules)? [Collect details on enabling regulations.]
4. Operations	
4.1	What are your latest coverage numbers on farmers insured, sum insured, claims ratio and subsidy spend)?
4.2	Which of these key factors enabled growth from pilot to scale: subsidy reform, digital enrolment, new partner, new data source, new product design, or other?
5. Outcomes	
5.1	What evidence do you have, formal or informal, on the PPP's effects on smallholder resilience (for example, uptake, renewal, reduced distress sales, faster recovery, credit access)?

- 5.2 Which farmer segments have benefited the most (by crop, region, gender, farm size) and who has been or is still being left out? How were they targeted?

6. Challenges

- 6.1 What are the incentives for government, insurers and aggregators to stay in the PPP? I.e., what does each partner get out of it?
- 6.2 What have been the major challenges in designing or operating this PPP (for example, funding volatility, subsidy politics, data gaps, basis risk, low awareness, delays)?

7. Lessons and replication

- 7.1 If another country wanted to replicate or adapt this PPP model, what three or four design or governance features would you recommend?
- 7.2 What are the preconditions required to replicate the PPP (data infrastructure, legal authority for subsidies, distribution rails, capable insurer market)?

8. Closing

- 8 Are there one or two concrete episodes (good seasons or crises) that would make strong case examples for the report, and can we follow up for more detail?

► Appendix B: Individuals interviewed

Interviewee	Organization
Zeynab Cissé	African Risk Capacity
Munyaradzi Daka	Agro Consortium, Uganda
Jacobeth Barno	APA Insurance, Kenya
Jaime de Pinies	Blue Marble Microinsurance, Switzerland
Paola Torres Armenta	FASECOLDA, Colombia
Mónica Rangel	FINAGRO, Colombia
Tara James	IFAD
Pranav Prashad	ILO
Kipkorir Koskei	Insurance Development Forum
Sarfraz Shah	Pula Advisors, Kenya
Ovia Tuhairwe	Radiant Yacu, Rwanda
Alejandra Agudelo Dias	Seguros Bolivar, Colombia
Emanuele Moretti and Gaia Falabella	UNDP IRFF
Andrea Camargo	WFP

► Appendix C: Selected PPP scheme details

Country	PPP	Year	Farmers covered	Total sum insured	Premiums collected	Claims paid out	Claims ratio
Colombia	ISA	2025	>75,000	USD 362 m	USD 31 m	USD 18 m	58 per cent
India³⁷	PMFBY	2024	42m ³⁸	USD 32 bn	-	>USD 20m	-
Kenya	KAIP	2023	2m	-	USD 9.6m (cumulative)	USD 6m (cumulative)	64 per cent
Rwanda	NAIS	2024	-	-	USD 16m	USD 9m	59 per cent (combined)
Senegal	CNAAS	2022	612,000	-	-	-	-
Uganda	UAIS	2024	>1m	USD 530m	-	-	47 per cent
Zambia	FISP	2024	>1.5m	USD 830m (cumulative)	USD 5.1m (2023)	USD 10.6m (cumulative)	~150 per cent

Source: Key informant interviews

³⁷ Singh, A. (2024). [PMFBY presentation at ICII 2024](#)

³⁸ As of 2024

► Appendix D: Best-practice tool – A checklist of actions for more effective agricultural insurance PPPs

Checklist 1: Start with the foundations

- **Agree on a single coordinating authority** with a clear mandate and the authority to resolve disputes between partners. ☐
- **Put in place a formal written agreement** (a memorandum of understanding or service-level agreement) setting out roles, responsibilities, data-sharing obligations, subsidy rules and claims processing timelines for all parties. ☐
- **Establish formal coordination mechanisms**, such as a steering committee or dedicated programme management unit, to manage disputes and drive implementation. ☐
- **Invest in a dedicated technical function for agricultural insurance** within the lead coordinating authority to maintain institutional continuity across political transitions. ☐
- **Clarify which risks each party will absorb**. Define the layers of risk retained by farmers, managed by insurers and reinsurers, and absorbed by the government as insurer of last resort. ☐
- **Make explicit trade-offs** between smallholder inclusion, fiscal sustainability and market development from the outset. ☐
- **Seek multi-year budget frameworks** rather than annual subsidy cycles and set subsidy rules that are consistent and predictable across years. ☐
- **Plan for the role of development partners from the outset**, designing programmes to transition to government and private-sector financing rather than around sustained grant dependency. ☐

Checklist 2: Optimize design, risk-sharing and institutional resilience

- **Set premium subsidies in the range of 50–80 per cent** to achieve meaningful uptake among smallholders at the outset, and target them by farm size, crop type, region and vulnerability status. ☐
- **Co-design** product coverage, triggers, pricing and subsidy rules in alignment with specific crops, seasons and distribution channels. ☐

- **Invest in reducing basis risk.** Reputational risk from index triggers that do not reflect farm-level losses can undermine farmer trust and renewal rates more severely than marketing campaigns can recover. ☐
- **Mandate payout timelines in the PPP agreement.** Timely payouts deliver more value to farmers than larger payouts that arrive too late. ☐
- **Use competitive tendering and performance-based contracts** for insurer selection to maintain pricing, underwriting and operational standards close to actuarial reality. ☐
- **Use existing distribution channels,** including cooperatives, MFIs, input schemes and digital platforms, rather than building separate sales structures, to reduce acquisition costs and align insurance with broader policy objectives. ☐
- **Design enrolment approaches** that actively reach underserved segments, including women, youth and farmers in remote or data-poor regions. ☐
- **Encourage private insurers to form consortia or co-insurance pools,** providing governments with a single organized focal point for technical discussions, data standards and product changes. ☐

Checklist 3: Invest in evidence and continuous learning

- **Track a core set of indicators** including number of farmers covered, loss ratios, fiscal cost per farmer, credit unlocked, subsidy disbursement timelines, payout speed and renewal rates by farmer segment. ☐
- **Conduct regular multi-stakeholder reviews** using monitoring data to adjust product design, delivery and risk-sharing over time, rather than treating PPP parameters as fixed. ☐
- **Document and communicate evidence on fiscal costs, loss ratios and resilience outcomes** to build the evidence base that justifies multi-year government commitment and attracts private investment. ☐
- **Focus on fiscal efficiency, subsidy targeting and long-term predictability** rather than necessarily a full exit from public support. Some level of public co-financing is likely to remain necessary and is justified by the public benefits PPPs generate. ☐

Checklist 4: Treat digital infrastructure as core PPP design

- **Prioritize farmer registries, e-voucher platforms and digital payment systems as public goods,** financed and maintained by government. ☐
- **Build and maintain a single digital farmer registry** capturing identity, location, crop type, farm size and vulnerability status, accessible to all PPP participants. ☐
- **Ensure interoperability across public databases,** including agricultural, financial, land, social protection and credit databases, using common identifiers and standards. ☐
- **Treat climate and yield data as a public good.** A total of 10 to 15 years of rainfall and yield data are essential for accurate pricing, lower basis risk and reinsurer appetite. ☐

- **Define clear, reciprocal data-sharing rules in the PPP agreement**, specifying what data government shares with insurers and aggregators, and what partners share in return. ☐
- **Set clear data governance rules and incentives for private platforms to link with public systems**, enabling insurers, agribusinesses and fintechs to bundle insurance with inputs or credit, automate premium deductions and deliver fast payouts. ☐



About the Microinsurance Network

The Microinsurance Network is the global multi-stakeholder platform for professionals and organisations that are committed to making insurance inclusive. Membership-based, they bring together diverse stakeholders from across the value chain who share our vision of a world where people of all income levels are more resilient and less vulnerable to daily and catastrophic risks. The Network encourages peer-to-peer exchange and learning, facilitates the generation of knowledge and research, and acts as an advocate, promoting the role that effective risk management tools, including insurance, play in supporting the broader development agenda.

About the ILO's Impact Insurance Facility

Housed in the Social Finance Programme of the International Labour Organization, the ILO's Impact Insurance Facility enables the financial services industry, governments and their partners to realise the potential of insurance for social and economic development. Impact insurance reduces vulnerability, promotes stronger enterprises and facilitates better public policies. The ILO's Impact Insurance Facility has nearly two decades of experience of supporting insurance innovations, connections to an extensive network, a qualified technical team, leadership in customer-centricity and the largest one-stop shop for inclusive insurance know-how. Since 2008, the Facility has pushed the innovation frontier through grants and technical support for product and process innovations.

The Facility has established itself as a global hub for knowledge and capacity development, extracting lessons from pioneers, facilitating learning and sharing successes and challenges with all interested stakeholders. In collaboration with local insurance schools, the Facility's capacity building programme trains hundreds of insurance professionals every year. The Facility's knowledge management platform is visited by over 4,000 online users every month with access to over 40 practitioner-oriented papers, tools and training modules, another 40 plus research studies and 100 plus bite-sized insights on burning issues.

About IFAD's INSURED programme

IFAD's INSURED II programme aims to scale up agricultural and climate risk insurance to build the climate resilience of poor rural households.

The programme drives action and innovation at every level:

- ▶ Providing technical assistance to IFAD project teams and partners in agricultural and climate risk insurance schemes for poor rural producers.
- ▶ Scaling up inclusive risk transfer solutions to protect more rural households and to de-risk public and private investments in agriculture.
- ▶ Fostering partnerships across the public and private sectors to strengthen in-country and regional impact.

INSURED II has been designed as a global technical assistance programme, built on the INSURED I pilot phase. It has initial funding from Sida and is being implemented over the period 2025 to 2027.

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