



Insurance and  
Risk Finance  
Facility

# GOVERNMENT PATHWAYS TO TRANSFORM AGRICULTURAL INSURANCE SYSTEMS

JUNE 2026



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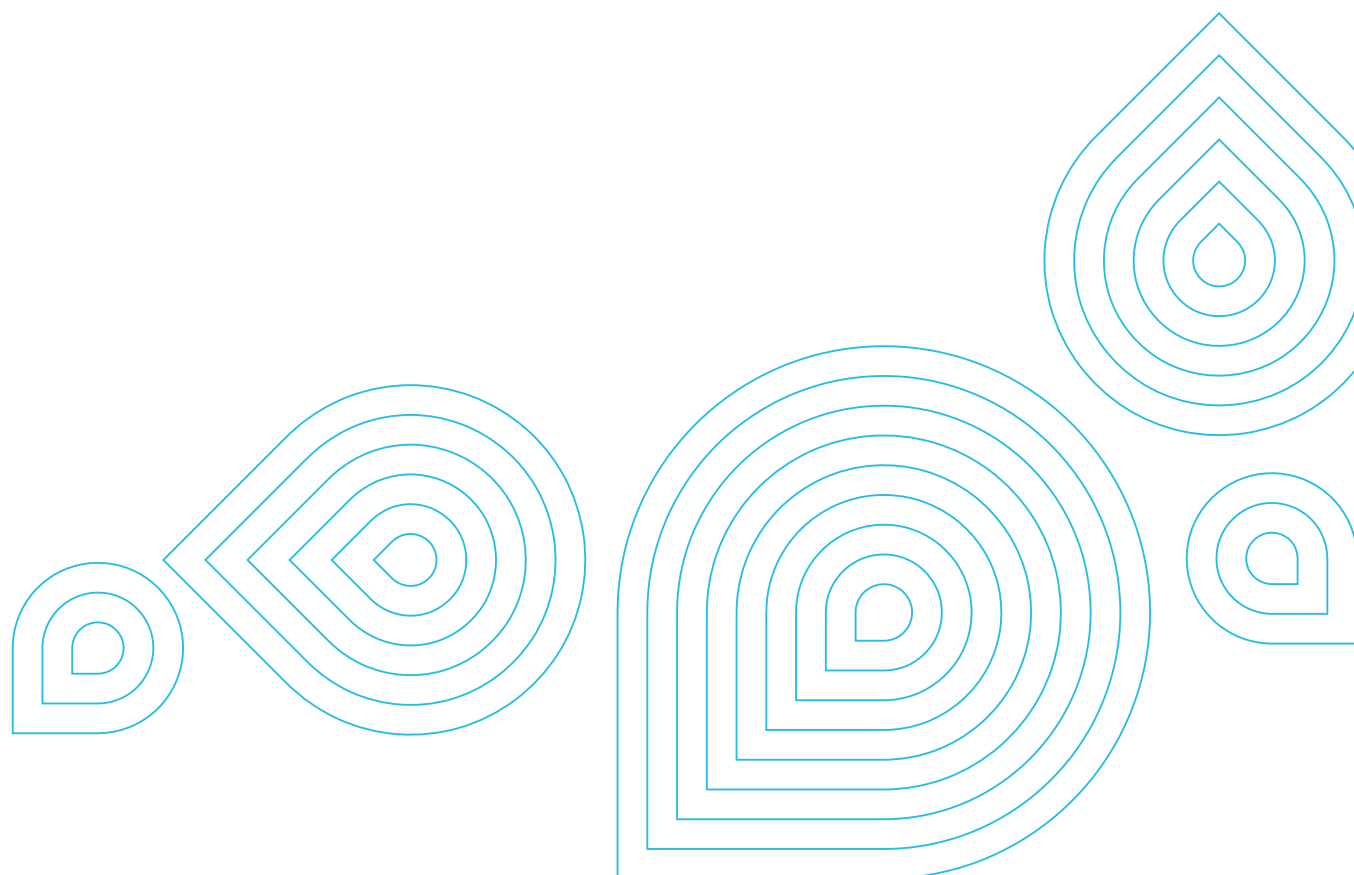


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# Abbreviations

<b>CNAAS</b>	Compagnie Nationale d'Assurance Agricole du Sénégal (National Agricultural Insurance Company, Senegal)
<b>FAO</b>	Food and Agriculture Organization
<b>FRA</b>	Financial Resilience in Agriculture
<b>GDP</b>	Gross domestic product
<b>IRFF</b>	UNDP Insurance and Risk Finance Facility
<b>OECD</b>	Organisation for Economic Co-operation and Development
<b>PMFBY</b>	Pradhan Mantri Fasal Bima Yojana (Prime Minister's Crop Insurance Scheme, India)
<b>PPP</b>	Public–private partnership
<b>TARSİM</b>	Agricultural Insurance Pool (Türkiye)
<b>UNDP</b>	United Nations Development Programme
<b>UNFSS+4</b>	United Nations Food Systems Summit Stocktake



# Executive Summary

Agricultural insurance has been available in many low- and middle-income countries for decades, but in most, it has not scaled. Drawing on international experience and country-level evidence, this paper sets out what it takes for governments to build integrated agricultural insurance agendas that achieve lasting scale and impact.

**Governments that successfully scale agricultural insurance act as market shapers, not market correctors.** Where governments have focused narrowly on correcting isolated market inefficiencies, insurance agendas have remained fragmented and externally dependent. Where they have aligned institutions, incentives and resources around broader public value objectives, insurance has become a driver of climate resilience, financial inclusion and food security. This shift determines whether agricultural insurance delivers lasting impact or remains confined to stand-alone interventions. It is the central argument of *section 1*.

**The lead institution shapes the pathway.** Whether an agricultural insurance agenda is anchored in a Ministry of Agriculture, a Ministry of Finance or the centre of government (e.g., Prime Minister's Office or equivalent) fundamentally shapes how it is framed, which dimensions are emphasized and how systems evolve over time. Each pathway has distinct strengths and limitations, and effectiveness ultimately depends on the ability to progressively build coordination and alignment across institutions. There is no universally superior entry point, but understanding which one is being used is essential to navigating what comes next. *Section 2* introduces three institutionalization market shaping pathways and maps the distinct trajectories for each.

**Coherence across the system enables scale.** Scaling agricultural insurance requires alignment across policy, regulation, programmes and financing. As programmes become more coherent, they evolved from stand-alone risk transfer mechanisms into instruments embedded within the delivery systems governments already operate, such as input subsidies and digital platforms. This integration reduces transaction costs, generates predictable demand and produces the data needed to refine policy, regulation and financing over time. *Section 2* examines how governments have built this coherence into practice and what has enabled the shift.

**Government coordination crowds in the private sector.** Agricultural insurance markets cannot develop sustainably through private sector action alone. High upfront costs, systemic risks and demand constraints limit insurer incentives, particularly in contexts where underwriting capacity, data infrastructure and distribution systems remain underdeveloped. Governments that provide scale, regulatory clarity and coordinated public financing change that picture, attracting private insurers and reinsurers and making markets viable over time. As markets mature, the role of the government evolves from direct provider to strategic steward, ensuring that systems remain inclusive, sustainable and aligned with national development goals. The implications of this for policymakers at different stages of institutionalization are drawn out in *section 3*.

This paper is designed for policymakers and practitioners at all stages of institutionalization, offering analytical tools, country evidence and practical lessons to inform the path forward.

# Introduction

Climate change is accelerating at an alarming pace, and low-income countries are bearing the brunt of its consequences, including increasingly frequent droughts, floods and other climate-related disasters. In 2024, economic losses from extreme weather events grew faster than gross domestic product (GDP), with profound environmental, social and economic implications (OECD, 2025). Farmers are among the most affected: agriculture absorbs approximately 23 percent of all disaster-related economic losses. This is particularly concerning given that, in many low-income economies, agriculture contributes over one-quarter of GDP and employs more than half the workforce (FAO, 2023).

Smallholder farmers play a central role in global food security, producing around one-third of the world's food. Yet most lack access to effective risk management tools. This gap not only undermines farmers' resilience to climate shocks but also constrains investments in climate adaptation and agricultural transformation, slowing progress toward more resilient and sustainable food systems. At the same time, food systems themselves contribute to systemic risks, accounting for nearly one-third of global greenhouse gas emissions, up to 80 percent of biodiversity loss and 70 percent of freshwater use (UNFSS+4, 2025). These interdependencies highlight the urgency of strengthening resilience while accelerating food systems transformation.

Unlocking finance is critical to addressing these challenges. Smallholder farmers across Latin America, South and South-East Asia and sub-Saharan Africa need estimated annual financing of US\$323 billion, but current supply is only about \$95 billion – leaving a funding gap of over \$200 billion (ISF Advisors, 2025). Within this context, agricultural insurance has emerged as a key instrument for managing risk, enabling investment and supporting access to finance. Evidence shows that insurance can

increase farmers' investments, incomes and food security, while strengthening the stability and lending capacity of financial institutions (UNDP, 2025; see also annex 2).

Despite its potential, agricultural insurance remains significantly underdeveloped. Globally, less than 20 percent of the world's 608 million smallholder farmers are insured, with coverage particularly low in Asia, Latin America and sub-Saharan Africa. In many countries, agricultural insurance has failed to scale beyond short-term, donor-driven pilot initiatives that remain disconnected from national policies, markets and financing systems. As a result, the contribution of agricultural insurance to resilience, financial inclusion and agricultural transformation has remained limited.

To address this gap, UNDP, through its Financial Resilience in Agriculture (FRA) initiative, is working with governments, the insurance industry and partners to support the development of inclusive and resilient agricultural insurance markets that reach millions of smallholder farmers, build resilient business models for public and private market players and deliver long-term, transformative impact.

Central to this work is contributing to a shift in how governments see their role. By moving from correcting market inefficiencies to shaping markets that create public value, governments can lead the institutionalization process of an integrated agricultural insurance agenda. This agenda involves aligning four strategic pillars – policies, regulations, programmes and financing mechanisms – and integrating these strategic pillars within broader national development frameworks, while continuously adapting to evolving market and political dynamics.

Institutionalization should be understood, therefore, not merely as a market-correcting intervention,

but as an active and adaptive form of market shaping, in which governments set direction, align priorities across the public sector and co-create public value with market actors.

This paper presents institutional pathways for the institutionalization of integrated agricultural insurance agendas, drawing on international experience and country-level evidence, and building on our previous paper, “[Building integrated agricultural insurance agendas: A framework for government action](#)”. It examines how agricultural insurance systems have evolved over time, and how different countries have structured and coordinated the four pillars to achieve scale, impact and sustainability. Designed for policymakers, this paper identifies and provides key institutional pathways for integration, sets

out the required government capabilities for creating public value and shaping markets and distills actionable lessons. By focusing on institutionalization, rather than on individual instruments, the analysis emphasizes the importance of coordination, long-term capability-building and adaptive implementation.

Ultimately, institutionalizing an integrated agricultural insurance agenda is a complex and evolving process. As risks, markets and policy priorities shift, approaches must remain flexible, supported by continuous learning, adaptation and innovation. This paper therefore, serves as a resource for both mature markets and countries at earlier stages of development, helping them navigate the transition from fragmented interventions to coherent, scalable systems.



A group of people, mostly women wearing blue shirts, are shown from the chest up, pouring golden grains (likely sorghum or millet) from their hands into a large pile on the ground. The grains are captured in mid-air, creating a dynamic, cascading effect. The background is slightly blurred, showing more people and a bright, outdoor setting.

SECTION

1

# Governments as market shapers

Agricultural insurance scales when governments move beyond correcting isolated market failures to actively shaping markets — aligning policy, regulation, programmes and financing around broader public value objectives.

**Governments can drive the institutionalization of an integrated insurance agenda by acting proactively to shape markets.** This involves moving beyond a narrow focus on just correcting market failures or inefficiencies, which often results in fragmented or uncoordinated interventions. Market shaping, by contrast, means that governments provide both leadership and stewardship in a purpose-driven institutionalization process.

Many governments begin by addressing market failures and progressively transition towards shaping markets. This shift is critical, as it enables the institutionalization of an integrated insurance agenda that can achieve scale, build sustainable business models and deliver sustained impact. By making this transition, public institutions move from being solely market correctors or service providers

to becoming proactive participants in steering the direction, pace and composition of innovation and economic growth (Mazzucato and Kattel, 2026).

Global experience suggests that governments have generally approached agricultural insurance through three progressively more integrated approaches:

1. Correcting market inefficiencies;
2. Enabling markets;
3. Strategically shaping markets to create public value.

These approaches differ not only in the role governments play, but also in how policy, regulation, programmes, and financing are coordinated over time.

FIGURE 1

### Government approaches to agricultural insurance markets





## APPROACH 1

### Market correcting

Historically, agricultural insurance markets have been characterized by structural inefficiencies that have limited their ability to reach scale and deliver appropriate coverage. These include high systemic risks, limited availability and quality of data, low and fragmented farmer demand, high transaction costs and weak incentives for private sector participation. As a result, insurance products have often been unaffordable, poorly tailored to local risks or commercially unviable.

Governments have intervened to address these constraints and correct market inefficiencies. Common measures have included premium subsidies to improve affordability, reinsurance to absorb catastrophic risk and regulatory adjustments to enable product development. These interventions remain essential and continue to underpin agricultural insurance systems today.

However, experience across countries shows that the challenge has been not only the absence of these tools, but also the way in which they have been deployed. In many contexts, measures have been implemented through fragmented, donor-driven projects, often disconnected from national systems, weakly coordinated across institutions and not embedded within long-term policy and financing strategies. For example, early agricultural insurance initiatives in many countries struggled with low uptake and high premiums in the absence of coordinated subsidies and government leadership, limiting their scalability and impact. As a result, many schemes have struggled to achieve scale, sustainability and lasting impact.

Countries where insurance has not reached scale are also often characterized by low levels of national

ownership and technical capacity. In developing country contexts, there is a shortage of domestic expertise in actuarial science, risk modelling, product design and pricing. These functions are frequently outsourced, which can increase costs, slow innovation, weaken regulatory effectiveness and limit national ownership. As a result, insurance products often struggle to align with local risks, farming systems and policy frameworks.



## APPROACH 2

### Market enabling

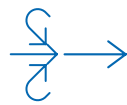
Over time, efforts have evolved toward enabling markets, and governments have worked to create more supportive environments for agricultural insurance to emerge and grow. This has involved strengthening regulatory frameworks, fostering public–private partnerships (PPPs) and improving coordination across stakeholders. Spain’s agricultural insurance system provides an effective example of this approach: a well-defined institutional framework, combining public subsidies, private insurers and a public reinsurance mechanism, has enabled efficient delivery and long-term market stability. Similarly, Türkiye’s Agricultural Insurance Pool (TARSİM) system demonstrates how coordinated regulation, risk pooling and government-backed reinsurance can support widespread adoption and financial sustainability.

As agricultural insurance systems mature, several common characteristics begin to emerge. Institutional arrangements become stronger and more coordinated, allowing governments to move beyond fragmented interventions toward more stable and integrated systems. At the same time, private sector participation increases, with insurers and reinsurers investing more actively in underwriting capacity, data systems, and product innovation. Delivery mechanisms also improve, as insurance becomes embedded within

broader agricultural and financial systems, including credit programmes, farmer organizations, extension services, and digital platforms.

This evolution is also reflected in the relationship between the four pillars. In early stages, policy, regulation, programmes, and financing often operate in isolation, with interventions focused on addressing immediate market constraints. Over time, however, stronger alignment emerges across these dimensions. Regulatory frameworks become better connected to financing strategies, programme delivery aligns more closely with national policy objectives, and public financing mechanisms are designed to support both farmer protection and market development. As a result, agricultural insurance evolves from a collection of stand-alone interventions into a more coherent and institutionally integrated system.

These efforts have been critical in expanding participation in agricultural insurance schemes and improving market functioning. However, even well-functioning systems at this stage remain limited in their ability to deliver broader development outcomes if they are not fully aligned with national priorities.



### APPROACH 3

## Market Shaping

This paper now points toward a more ambitious approach: shaping markets. This approach builds on, rather than replaces, market correction and enabling functions. In this model, governments use the same instruments more deliberately and in combination to drive and facilitate public value creation, influencing how agricultural insurance systems evolve, how they segment and serve different categories of farmers, and the outcomes they generate.

Within the FRA Institutionalization Framework (see annex 2), this role is operationalized through the alignment of the four pillars – policy, regulation, programmes and financing – into an integrated agricultural insurance agenda. Rather than treating these pillars as separate technical components, governments can use them as coordinated levers.



Global experience shows that when governments adopt this market-shaping role as public value co-creators, a set of core principles consistently emerge:

1

**Governments progressively align the four pillars around clearly defined public value objectives.** In most contexts, agricultural insurance agendas begin within a single pillar, often programmes or financing, and are aimed at addressing specific market constraints. However, as objectives expand to include resilience, financial inclusion, gender integration and food security, governments move past disconnected interventions and increasingly coordinate policy, regulation, programmes and financing. Rather than deploying instruments in isolation, they use them in combination to drive coherent, system-wide outcomes and support long-term scale and sustainability.

2

**Agricultural insurance is integrated within broader economic and agricultural systems, rather than functioning as a stand-alone product.** Insurance schemes are embedded within credit programmes, input distribution systems and value chain initiatives, addressing demand-side constraints and linking risk management with productive investment.

3

**Public financing is used strategically not only to improve affordability but to shape market behaviour and crowd in private sector participation.** Subsidies, reinsurance and budget allocations are designed to create scale, reduce uncertainty and incentivize investment in underwriting capacity and innovation.

4

**Public value is co-created through structured collaboration between governments, private insurers, reinsurers and other ecosystem actors.** Governments provide direction, incentives and coordination, while the private sector contributes technical expertise, innovation, delivery capacity and risk transfer.



These principles differentiate integrated, scalable agricultural insurance systems from fragmented or project-based approaches.

In India, for example, the national crop insurance scheme, Pradhan Mantri Fasal Bima Yojana (PMFBY), combines large-scale premium subsidies from the central and state Governments (the financing pillar) with a strong regulatory framework and a nationwide programme integrated with agricultural credit systems to expand coverage and stabilize farm incomes. Similarly, in Senegal, agricultural insurance is embedded within national development strategies and delivered through a public-private insurance entity (Compagnie Nationale d'Assurance Agricole du Sénégal, CNAAS – National Agricultural Insurance Company). Insurance is bundled with credit and input programmes to increase uptake and align with broader food security goals.

In both of these cases, subsidies are not only used to reduce costs, but to target underserved farmers and support national policy objectives. Insurance programmes are linked to credit, inputs and extension services to influence farmer behaviour and strengthen value chains. Regulatory frameworks are adapted to enable innovation, such as index-based products, while ensuring consumer protection and market stability.

Crucially, this approach is based on co-creation of public value. Outcomes are not delivered by governments or markets alone, but through coordinated action between public institutions, private actors and other stakeholders. PPPs, such as Spain's Agroseguro and Türkiye's TARSİM, play a central role in aligning incentives, sharing risk and enabling solutions that neither side could achieve independently.

This integrated approach allows governments to enable system-level transformation. Evidence from countries such as China shows how phased programme development, starting with pilots and scaling through continuous adaptation, can build large, responsive insurance systems aligned with local realities. Similar lessons emerge from other contexts, where stronger institutional coordination and alignment across policy, financing and delivery mechanisms have been key to achieving scale.

At its core, market shaping reflects a shift toward public value creation. In the context of agricultural insurance, this means that the objective is not simply to increase coverage or improve market efficiency, but to achieve broader development outcomes, such as strengthening farmers' resilience to climate shocks, stabilizing rural incomes, enabling access to finance and supporting food system transformation. Insurance becomes a tool through which these outcomes are actively pursued, rather than an end in itself.

Delivering on this vision requires a different kind of government capacity. Institutionalization is a dynamic process that depends on continuous learning, coordination and adaptation. Governments must be able to experiment, adjust policies over time and align diverse stakeholders around shared objectives. This is particularly important in developing countries, where structural constraints, climate vulnerability and institutional capacity gaps make passive or fragmented approaches insufficient.




In this context, the role of the government evolves over time. In early stages, stronger government involvement may be required to coordinate actors and absorb risk. As markets mature, the role shifts toward stewardship and strategic direction-setting,

ensuring that agricultural insurance systems remain inclusive, sustainable and aligned with national development goals.

By adopting this integrated and adaptive approach, governments can transform agricultural insurance from a series of disconnected interventions into coherent, scalable systems that not only function effectively, but also deliver lasting public value.

FIGURE 2

### Government approaches to agricultural insurance markets: the four pillars

	PILLAR 1 Policy	PILLAR 2 Regulation	PILLAR 3 Programmes	PILLAR 4 Financing
 <p><b>APPROACH 1</b> Market correcting</p>	Limited or fragmented	Minimal adjustments	Pilots or stand-alone schemes	Subsidies/ reinsurance addressing specific failures
 <p><b>APPROACH 2</b> Market enabling</p>	Emerging strategic direction	Enabling frameworks for participation and innovation	PPPs and expanded delivery systems	Structured and more predictable financing
 <p><b>APPROACH 3</b> Market shaping</p>	Integrated national objectives	Regulation aligned with public value goals	Embedded within broader economic systems	Strategic financing to create scale and crowd in markets



SECTION  
2

# Pathways for institutionalizing the agricultural insurance agenda

The lead institution anchoring an agricultural insurance agenda fundamentally shapes how it develops. This section maps three distinct pathways — through the Ministry of Agriculture, Ministry of Finance and centralised government leadership — and examines what each enables and where each requires reinforcement.

**The institutionalization of agricultural insurance must be driven by public sector priorities, such as fiscal resilience, food security and rural livelihoods and development.** Local insurance markets can evolve in response to these priorities to support the creation of public value.

This section outlines a series of pathways that illustrate the different routes governments can take to institutionalize agricultural insurance within their development strategies. In this context, pathways are shaped by the primary governmental or institutional entry point, typically a lead ministry, through which an integrated agricultural insurance agenda is advanced.

These pathways are grounded in existing local insurance markets, while also influencing how these markets evolve to align with the government's priorities and the creation of public value. The role of the private sector in this process will be investigated in future publications.

## Institutionalization pathways

Global experience shows that agricultural insurance agendas achieve scale and sustainability only when a clear government institution takes ownership and leads their institutionalization. Strong political commitment is essential, as it enables the agenda to be embedded within broader national development, agricultural and climate strategies, while ensuring coordination across ministries and alignment across policy, regulation, programmes and financing.

A key barrier to scaling agricultural insurance is fragmented governance. In many contexts, responsibilities are dispersed across institutions, leading to weak coordination, duplication of efforts and gaps between policy design and implementation.

To address this, a lead institution should be designated, with a clear mandate, sufficient authority and adequate capacity to drive the agenda forward.

At the same time, the effectiveness of these governance arrangements is closely linked to the maturity of the domestic insurance market. In contexts where insurance markets are underdeveloped, with limited underwriting capacity, weak data infrastructure and low private sector participation, stronger public coordination and direct involvement are often required to build foundational capabilities. Conversely, in more mature markets, where insurers and reinsurers possess greater technical capacity and operational experience, governments can place greater emphasis on regulatory oversight, strategic direction and targeted incentives to guide market development.

The intended outcomes of agricultural insurance, such as strengthening farmers' financial resilience, promoting the adoption of improved agricultural practices and expanding access to credit, are broadly consistent across countries. However, the policy rationale, sequencing and implementation pathway are shaped by the mandate of the lead institution. The ministry or agency anchoring the agenda influences how priorities are framed, which dimensions are emphasized and how interventions evolve over time. In practice, this means that the starting point of the agenda plays a critical role in determining how the different components of the system are activated and aligned.

In many cases, agricultural insurance agendas begin by addressing specific market inefficiencies, such as affordability constraints, data gaps or limited private sector participation. These early interventions, often led by a single institution, are essential to initiate market development, but are typically implemented in isolation and remain insufficient to achieve scale or long-term sustainability. As agendas evolve, the

focus shifts toward creating public value, driven by broader policy objectives such as climate resilience, financial inclusion and food system transformation. This shift creates the logic for integration, because achieving these outcomes requires coordinated action across policy, regulation, programmes and financing. In this sense, integration reflects a transition from fragmented, market-correcting interventions to more coherent, purpose-driven approaches that shape how markets develop and whom they serve.

This section, therefore, identifies a set of institutional pathways, reflecting different entry points through which agricultural insurance agendas are initiated and scaled.

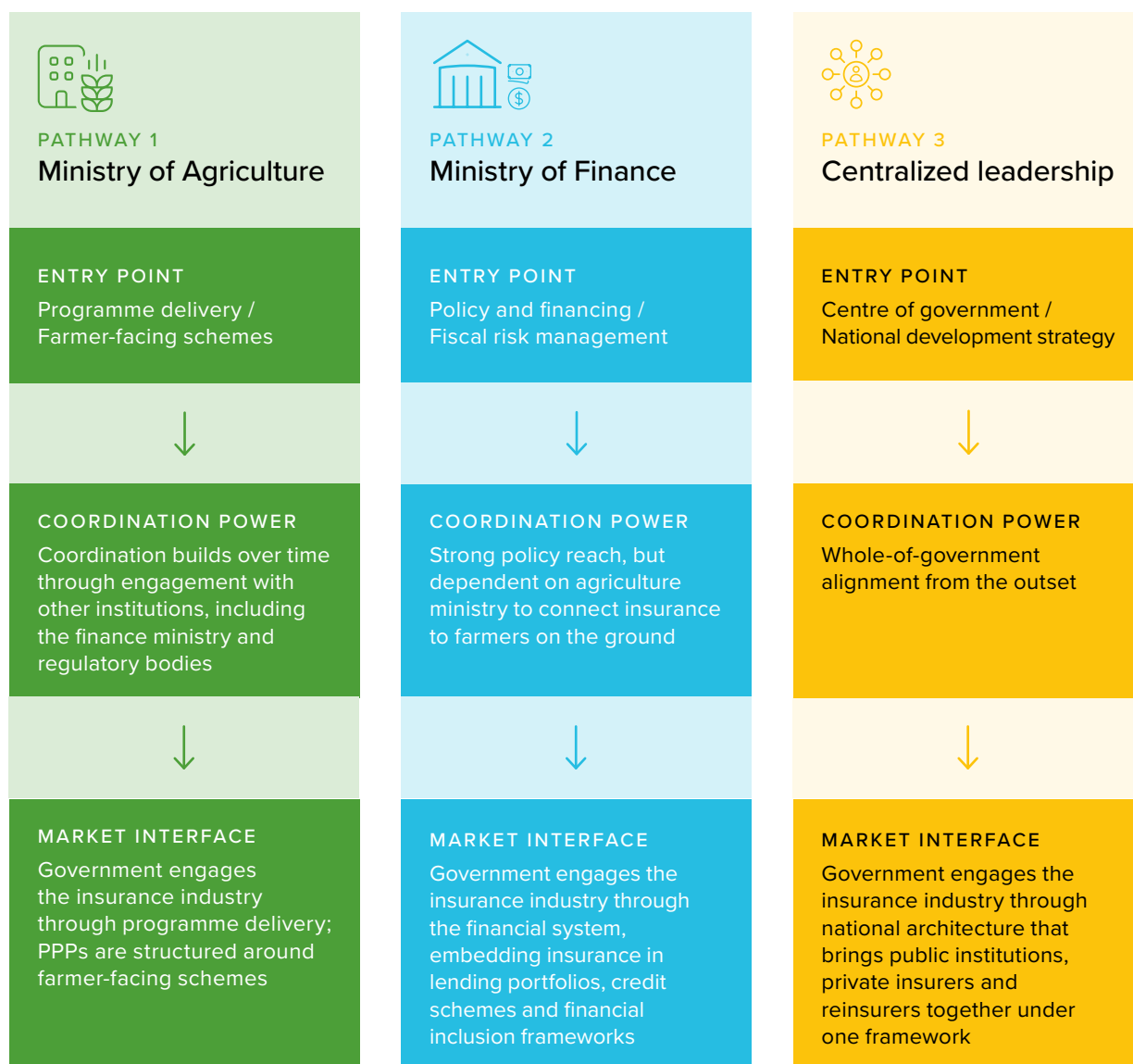
The pathways can be understood along three defining principles:

- **Entry point:** The institutional anchor through which the agricultural insurance agenda is initiated
- **Coordination power:** The ability of the lead institution to align actors, mandates and the four pillars across government
- **Market interface:** How government engages with and shapes the insurance market, including its relationship with private insurers, reinsurers and financial actors.



FIGURE 3

## Three government pathways for integrated agricultural insurance institutionalization



The pathways presented here are not prescriptive templates. No two countries will follow the same path, and this paper is not designed to impose one. It is designed to inform and inspire – to help policymakers understand where they are, draw on the experience of others and move forward with greater confidence in their own decisions.



## PATHWAY 1

## Ministry of Agriculture

In this pathway, agricultural insurance is primarily anchored within the programme dimension, and agriculture ministries lead its design and implementation. These ministries are responsible for advancing national agricultural priorities, including food security, productivity and rural development, and they often serve as the main interface with farmers. In many emerging economies, where agriculture plays a central role in employment and economic activity, they are also key actors in promoting inclusive growth and resilience.

### Entry point

In this pathway, agricultural insurance is typically framed as a tool to support farmers and enhance productivity. It is frequently integrated into existing agricultural programmes, such as input subsidy schemes, extension services and value chain initiatives. Insurance is often bundled with inputs or services, which encourages farmers to adopt improved technologies, such as climate-resilient seeds or fertilizers, while simultaneously protecting both farmers and public investments from climate-related risks. Programmes are typically implemented through structured PPPs with the domestic insurance sector; governments provide financial support and oversight, while leveraging private sector capacity for delivery and innovation.

Because this pathway is rooted in programme delivery, it often achieves strong outreach and farmer engagement in its early stages. However, if other dimensions of the system are not sufficiently

developed, limitations can emerge as programmes expand. In particular, strong engagement with finance ministries is needed to ensure the long-term sustainability of subsidies and risk financing mechanisms, while scaling and innovation depend on the evolution of appropriate regulatory frameworks. As a result, the effectiveness of this programme-based pathway ultimately hinges on its ability to progressively align with the financing and regulatory pillars.

### Coordination power

As agricultural insurance agendas led by agriculture ministries evolve, the need for integration across the four pillars becomes increasingly evident. As shown above, these agendas typically begin within the programme delivery pillar, to address immediate market constraints such as low farmer uptake or limited access to risk management tools. However, as governments add objectives like resilience, financial inclusion and food security, they begin to align policy, regulation, programmes and financing around these broader public value goals. Instruments start to be combined in a coordinated way, enabling programmes to move from stand-alone interventions towards coherent, system-wide approaches.

This transition is closely linked to the integration of agricultural insurance within wider economic and agricultural systems. Insurance is increasingly embedded within input subsidy schemes, extension services, agricultural credit programmes and value chain initiatives, allowing it to address demand-side constraints while linking risk management to productive investment. At the same time, engagement with finance ministries becomes critical to ensure sustainable public financing, while collaboration with regulators supports product standardization, innovation and market development. Through this

alignment, programme-led approaches evolve into integrated agendas capable of achieving scale and long-term sustainability.

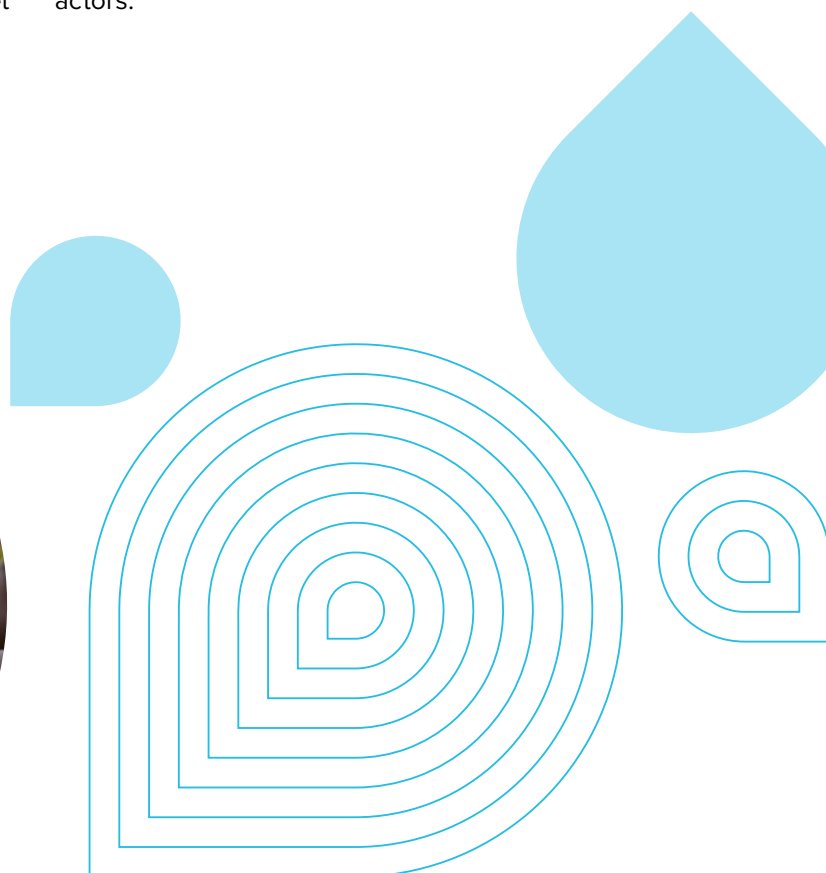
### Market interface

As programmes scale and become more predictable, they send strong signals to the domestic insurance market. Sustained public commitment, combined with coordinated action across policy, regulation, programmes and financing, create the scale and certainty needed for insurers to invest in underwriting capacity, data systems and product innovation. Strategic public financing plays a particularly important role in this process, as it reduces risk, stabilizes demand and incentivizes private sector participation.

At the same time, embedding insurance within broader agricultural and financial systems expands distribution channels and improves market viability. This integrated approach reduces operational uncertainty and transaction costs, making the market

more attractive to both insurers and reinsurers. Over time, these dynamics contribute to deeper market participation, stronger technical capacity and more diversified insurance offerings. In this way, a programme-led pathway, when progressively aligned across the four pillars, evolves from addressing immediate farmer needs to actively shaping the development and maturity of the agricultural insurance market.

As programme-led approaches mature and align across policy, regulation, programmes and financing, what began as a tool to support farmers and improve productivity evolves into a system-level instrument that contributes to food security, financial inclusion and rural economic stability. In this transition, governments shift from delivering isolated interventions to shaping how agricultural insurance markets develop, while public value is co-created through sustained collaboration between public institutions, private insurers and other ecosystem actors.



## BOX 1

## The case of India

In India, agricultural insurance was initially introduced as a programme-led intervention aimed to support farmers and stabilize agricultural incomes, with strong leadership and involvement from the Ministry of Agriculture. Over time, in order to scale insurance schemes such as PMFBY, deeper integration was needed with the financing and regulatory dimensions, including substantial fiscal support from central and state governments, standardized frameworks for tech-based implementation and expanded participation from private insurers. This evolution enabled the programme to transition from a standalone intervention into a large-scale system with national, extensive coverage and increasing private sector engagement.

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## PATHWAY 2

## Ministry of Finance

In this pathway, agricultural insurance is anchored more firmly within the policy and financing dimensions, and finance ministries lead the agenda. These institutions are responsible for managing public resources, shaping fiscal policy and safeguarding macroeconomic stability. Increasingly, they are also central actors in climate finance and national risk management strategies.

### Entry point

Agricultural insurance in this context is framed less as a sectoral support instrument and more as a mechanism for managing systemic risk. It is used to reduce the fiscal impact of climate-related shocks, enhance financial resilience and support broader economic stability. As with agriculture ministry-led schemes, programmes are typically implemented through structured PPPs in cooperation with the domestic insurance sector. In many cases, these programmes are closely linked to financial inclusion and access-to-finance initiatives, in which insurance is embedded within agricultural credit schemes or lending portfolios to reduce default risk, strengthen farmers' creditworthiness and incentivize lending to the agricultural sector.

This approach facilitates a shift from reactive crisis response toward proactive risk management. By transferring and pooling risk, governments can reduce the need for ad hoc disaster spending and maintain more stable and predictable investments in long-term development priorities. At the same time, strong regulatory frameworks are often established early to enable market participation, ensure consumer protection and support product innovation.

However, because this pathway is less directly connected to farmers, its effectiveness depends on effective collaboration with actors responsible for programme delivery, particularly agriculture ministries and value chain players. Without such coordination, there is a risk that well-designed financial and regulatory systems may not fully translate into uptake or impact at the farm level. Bridging this gap often requires leveraging existing financial distribution channels, such as banks, microfinance institutions and digital financial systems, to connect insurance products to farmers. As such, strengthening the link between financing, regulation and programme delivery is essential for achieving inclusive outcomes.

### Coordination power

In pathways led by the Ministry of Finance, integration is driven by the need to connect macro-level policy and financing decisions with effective delivery at the farm level. In most cases, these agendas begin within the policy and financing pillars, focusing on establishing risk financing mechanisms, fiscal frameworks and enabling regulatory environments to address systemic risks. As financial inclusion, agricultural productivity and resilience become additional objectives, governments align policy, regulation, programmes and financing to achieve public value based on these goals.

This requires stronger coordination with delivery-oriented institutions, particularly agriculture ministries, to ensure that insurance products are effectively embedded within agricultural credit schemes, financial inclusion programmes and rural development initiatives. Through this process, agricultural insurance becomes increasingly integrated within broader financial and economic systems, linking risk management with access to finance and productive investment, and thereby transitioning into a coherent, system-wide agenda capable of achieving scale and sustainability.

### Market interface

Finance ministry-led approaches project clear and credible commitments to the domestic insurance market through the scale, predictability and financial backing of programmes. Coordinated action across the four pillars, supported by clear policy direction and sustained public financing, reduces uncertainty and creates the conditions for long-term investment.

Concurrently, embedding insurance within financial systems, particularly through banks, microfinance institutions and digital finance platforms, expands distribution channels and strengthens commercial viability. Strategic public financing further incentivizes insurers to invest in underwriting capacity, data systems and product development, while attracting reinsurers through increased scale and predictability. Through this approach, over time, market participation

is increased, technical capacity is built and insurance systems become more resilient. In this way, finance-led pathways evolve from managing systemic risk to actively shaping the development and maturity of the agricultural insurance market.

In time, as they align across the four pillars, finance-led approaches move beyond managing systemic risk toward generating broader public value. Originally aimed at ensuring fiscal stability and risk management, the tool evolves into a system-level instrument that supports financial inclusion, expands access to credit and stimulates investment in the agricultural sector. Governments move from deploying financial instruments in isolation to actively shaping how agricultural insurance markets develop, and public value is co-created through coordinated action between public institutions, financial actors, insurers and other ecosystem stakeholders.

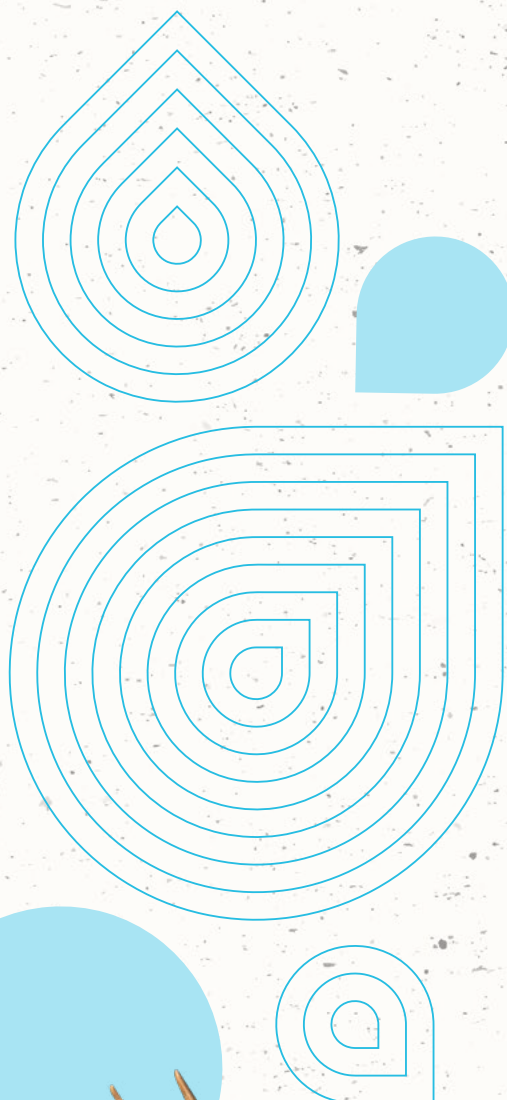


## BOX 2

## The case of Uganda

In Uganda, agricultural insurance has been closely linked to financial inclusion and agricultural finance initiatives. Public support, combined with regulatory engagement, has enabled the development of insurance products integrated into credit schemes and value chain financing. This has helped to reduce lending risks for financial institutions while improving farmers' access to finance. At the same time, ongoing coordination between government institutions has strengthened programme delivery, expanded outreach and ensured that financial instruments translate into tangible benefits at the farm level.

To read the full case study  
online [click here](#) →





## PATHWAY 3

## Centralized leadership

In this pathway, agricultural insurance is anchored at the centre of government, typically within the Prime Minister's Office, President's Office or a central planning or coordination unit. This model is often adopted in contexts where agricultural risk, climate vulnerability or food system transformation is recognized as a national strategic priority requiring whole-of-government coordination.

### Entry point

When the agenda is positioned at this level, agricultural insurance is framed not as a stand-alone sectoral or financial instrument, but as a cross-cutting policy tool that contributes simultaneously to climate adaptation, economic stability, food security and social protection. This high-level anchoring allows for stronger alignment across ministries and facilitates the integration of agricultural insurance within broader national strategies and flagship programmes.

A defining feature of this pathway is its ability to coordinate across all four pillars from the outset. Policy direction is set at the national level, ensuring alignment with development and climate priorities, while regulatory, programme and financing components are mobilized in a coordinated manner across relevant institutions. This often enables faster decision-making, clearer role allocation and stronger political backing for implementation.

In practice, this model is particularly effective in overcoming the fragmentation challenges that often constrain agricultural insurance agendas. By providing a central mandate, it reduces institutional silos and facilitates collaboration between agriculture

ministries, finance ministries, regulators and other stakeholders. It can also accelerate the mobilization of public resources and crowd in private sector participation by signalling strong and sustained government commitment.

However, while centralized leadership can drive alignment and momentum, its effectiveness depends on the ability to translate high-level coordination into operational delivery. Implementation still relies on sectoral ministries and institutions, particularly for programme roll-out and farmer engagement. Without clearly defined roles, accountability mechanisms and institutional capacity at the implementation level, there is a risk that central direction may not fully translate into impact on the ground.

As such, the success of this pathway depends on balancing strategic leadership with effective delegation, ensuring that coordination at the centre is matched by strong execution across ministries. When well implemented, this model can serve as a powerful mechanism for accelerating institutionalization, enabling agricultural insurance to evolve rapidly into a coherent, government-wide agenda aligned across policy, regulation, programmes and financing.

### Coordination power

In this pathway, integration is embedded from the outset, rather than emerging progressively as schemes develop. By anchoring the agenda at the centre of government, coordination across policy, regulation, programmes and financing is established early, enabling governments to align the four pillars around clearly defined public value objectives from the beginning. This reduces the fragmentation typically observed in other pathways and allows for a more rapid transition from individual interventions to a unified, system-wide approach.

Agricultural insurance is deliberately embedded within broader economic and agricultural systems,

including national climate strategies, social protection programmes and rural development initiatives, ensuring that risk management is directly linked to investment, resilience and growth. Effectiveness depends on how well this central strategic direction is translated into coordinated action across ministries and delivery systems: the key challenge is not initiating integration, but sustaining it through clear institutional roles, accountability mechanisms and continuous coordination between central and sectoral actors.

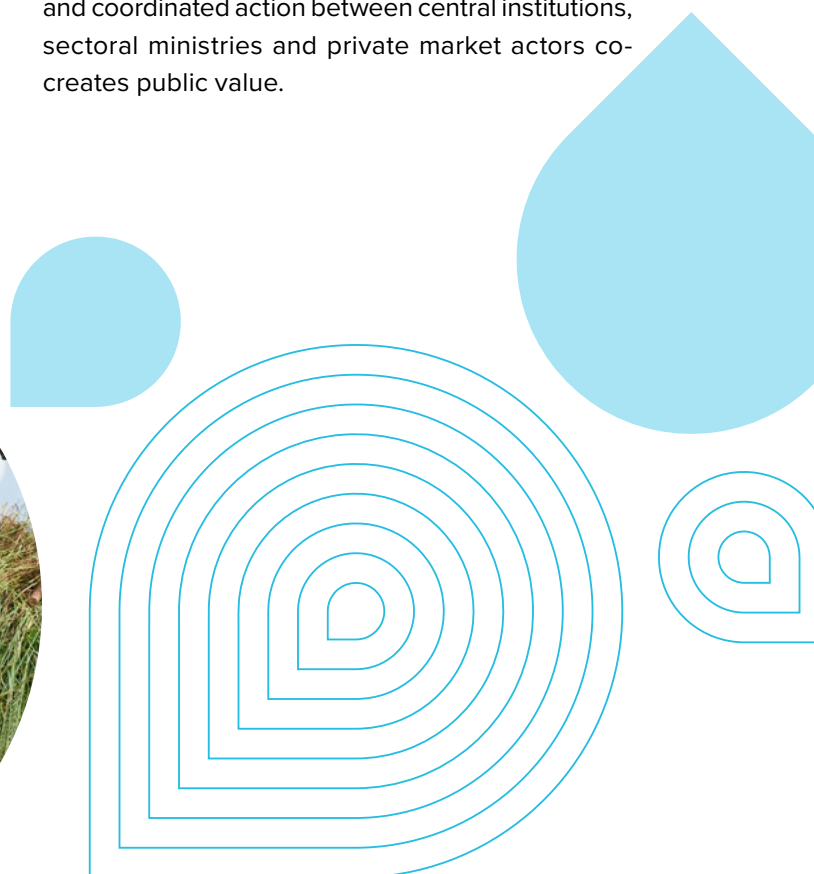
### Market interface

Of all the pathways, this one sends the strongest and most coherent signals to the insurance market. High-level political commitment, clear national strategies and coordinated action across the four pillars create a stable and predictable environment for investment. The alignment of policy, regulation, programmes and financing reduces uncertainty and establishes clear long-term expectations for market actors.

Meanwhile, embedding insurance within broader national systems expands scale and strengthens market fundamentals. Strategic public financing and coordinated programme design stimulate investment

by insurers in underwriting capacity, data systems and product innovation, and attract reinsurers through increased predictability and risk pooling. Over time, these dynamics contribute to deeper, more resilient and more diversified insurance markets. In this way, centralized leadership enables coordination at the same time as it shapes the structure, maturity and evolution of the agricultural insurance market.

In centrally anchored pathways, agricultural insurance is conceived from the outset as a tool for delivering public value. As coordination across policy, regulation, programmes and financing is established early, the agenda rapidly moves past isolated interventions towards a fully integrated, system-wide approach. Approaching agricultural insurance as a nationally driven priority enables the creation of a comprehensive policy instrument that simultaneously advances climate adaptation, food security, economic stability and social protection. In this model, governments play a decisive role in shaping how agricultural insurance markets develop, and coordinated action between central institutions, sectoral ministries and private market actors co-creates public value.



## BOX 3

## The case of Türkiye

In Türkiye, agricultural insurance has been developed within a strongly coordinated national framework. Through the establishment of TARSİM, the government created a centralized structure that brings together public institutions, private insurers and reinsurers under a unified system. This model is supported by clear policy direction, sustained public financing and a well-defined regulatory framework, enabling agricultural insurance to operate at scale. Central coordination has facilitated alignment across institutions, ensured consistency in programme design and strengthened the integration of insurance within broader agricultural and risk management strategies. As a result, Türkiye has been able to develop a comprehensive and resilient agricultural insurance system that combines strong public oversight with private sector delivery.

To read the full case study  
online [click here](#) →





SECTION

3

## Key takeaways

Five cross-cutting lessons for policymakers at any stage of institutionalization, drawn from global evidence.

# 1.

## When the government acts as a market shaper, it can move from market correction to public value creation

Agricultural insurance has the potential to serve as a powerful instrument for climate adaptation, financial resilience and inclusive agricultural transformation. However, global experience shows that its impact and sustainability depend less on product design alone than on how effectively it is embedded within broader institutional systems. Initiatives that remain confined to often externally-driven pilot projects or stand-alone interventions struggle to achieve scale and systemic impact because they focus primarily on correcting isolated market inefficiencies, such as affordability constraints, data gaps or limited insurer participation.

This paper demonstrates a broader shift in the role of the government: from correcting market failures to shaping markets in pursuit of public value. In this context, governments act not only as regulators or service providers, but as strategic actors that align incentives, coordinate stakeholders and influence how markets evolve and whom they serve. Agricultural insurance thus becomes a means to achieve wider development outcomes, including resilience, financial inclusion and food system transformation, rather than an end in itself.

# 2.

## Institutional entry points shape pathways towards institutionalizing agricultural insurance agendas

Institutionalization is a nationally led and politically anchored process that requires clear government ownership. The choice of lead institution, whether an agriculture ministry, a finance ministry or a central public planning unit, fundamentally shapes how agricultural insurance agendas are framed, how the four pillars are activated and how systems evolve over time.

While agriculture ministries tend to position insurance as a tool for farmer support, productivity and access to credit, finance ministries frame it within broader objectives such as climate finance, fiscal risk management, financial sector development and financial inclusion. Central government leadership enables whole-of-government coordination and alignment across sectors. These pathways represent different entry points into the same process, each with distinct strengths and limitations. Their effectiveness ultimately depends on their ability to evolve toward stronger coordination and business models, along with alignment across the system.

### 3.

#### Integrated systems are needed for agricultural insurance to scale

A central finding of this paper is that scaling agricultural insurance requires a transition from fragmented interventions to integrated systems. While early efforts often focus on specific market failures within a single domain, achieving sustainability and impact requires alignment across policy, regulation, programmes and financing.

Integration is not automatic; it is intentional and driven by the pursuit of public value. As governments seek to achieve broader objectives, such as climate resilience, financial inclusion and economic stability, they are compelled to coordinate across institutions and policy domains. This process transforms agricultural insurance from a sector- and product-specific intervention into a cross-government policy instrument embedded within national development strategies.

Successful institutionalization, therefore, depends on governance arrangements that enable coordination, align incentives and ensure coherence across the four pillars. Without such mechanisms, systems are at risk of fragmentation, limiting their ability to scale and deliver sustained impact.

### 4.

#### Programmes can transform from stand-alone schemes to systemic instruments

Institutionalization fundamentally reshapes how agricultural insurance programmes are designed, delivered and scaled. Programmes evolve from stand-alone risk transfer mechanisms into integrated policy instruments that reflect broader national priorities.

At the design level, insurance products become aligned with objectives such as food security, climate resilience and financial stability. At the delivery level, programmes increasingly leverage existing systems, such as extension services, credit schemes and digital platforms, to expand outreach and reduce transaction costs. As programmes scale, they also strengthen market capabilities by generating predictable demand, enabling risk pooling and encouraging investment in underwriting and data systems.

Programmes thus act as both a transmission mechanism and a feedback loop: they operationalize system-wide alignment, while generating the data and scale needed to refine policy, regulation and financing. When effectively institutionalized, they become the engine through which agricultural insurance delivers coherence, efficiency and public value.

## 5.

### Private sector involvement is key, but governments must catalyse participation and enable market development

Agricultural insurance markets cannot develop sustainably through private sector action alone. High upfront costs, systemic risks and demand constraints limit incentives for insurers to invest, particularly in contexts where underwriting capacity, data infrastructure and distribution systems remain underdeveloped. In such environments, low levels of financial literacy and fragmented delivery channels further constrain demand, meaning that market creation requires coordinated public intervention.

In this context, governments play a catalytic role in crowding in private sector participation. Through coordinated interventions across the four pillars, public financing stimulates demand, programme integration expands distribution, regulatory frameworks enable innovation and ensure consumer protection, and clear policy direction reduces uncertainty for market actors. At the same time, the government plays a critical coordination function, bringing together insurers, reinsurers, financial institutions, data providers and farmers to establish the ecosystem required for market development.

The maturity of the domestic insurance market influences the effectiveness and nature of this role. In underdeveloped markets, where technical capacity and private sector participation are limited, stronger public coordination and more direct involvement are

often necessary to build foundational capabilities, including risk modelling, data systems and distribution networks. In contrast, in more mature markets, where insurers and reinsurers possess greater operational and technical capacity, governments can play a more strategic role, focusing on regulatory oversight, market guidance and targeted incentives.

When these elements are effectively aligned, the impact on market development is significant. Public programmes generate the scale and predictability needed to attract private insurers, incentivize investment in innovation and strengthen underwriting practices. At the same time, they make markets more attractive to global reinsurers, improving risk-sharing arrangements and enhancing system resilience. Over time, this leads to more efficient, diversified and sustainable agricultural insurance systems.

As markets mature, the role of the government evolves accordingly. Rather than withdrawing, governments reposition themselves from direct providers toward strategic stewards, maintaining alignment across the system, ensuring inclusivity and sustaining market functioning while continuing to crowd in private sector participation.

To conclude, agricultural insurance is not an end in itself. When institutionalized effectively and aligned across policy, regulation, programmes and financing, it becomes a strategic tool through which governments can drive resilience, support inclusive growth and advance climate-smart development pathways. For policymakers, therefore, the challenge – and the opportunity – is not only to implement insurance programmes, but to build the systems and institutions that enable them to deliver lasting public value.

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# Annexes

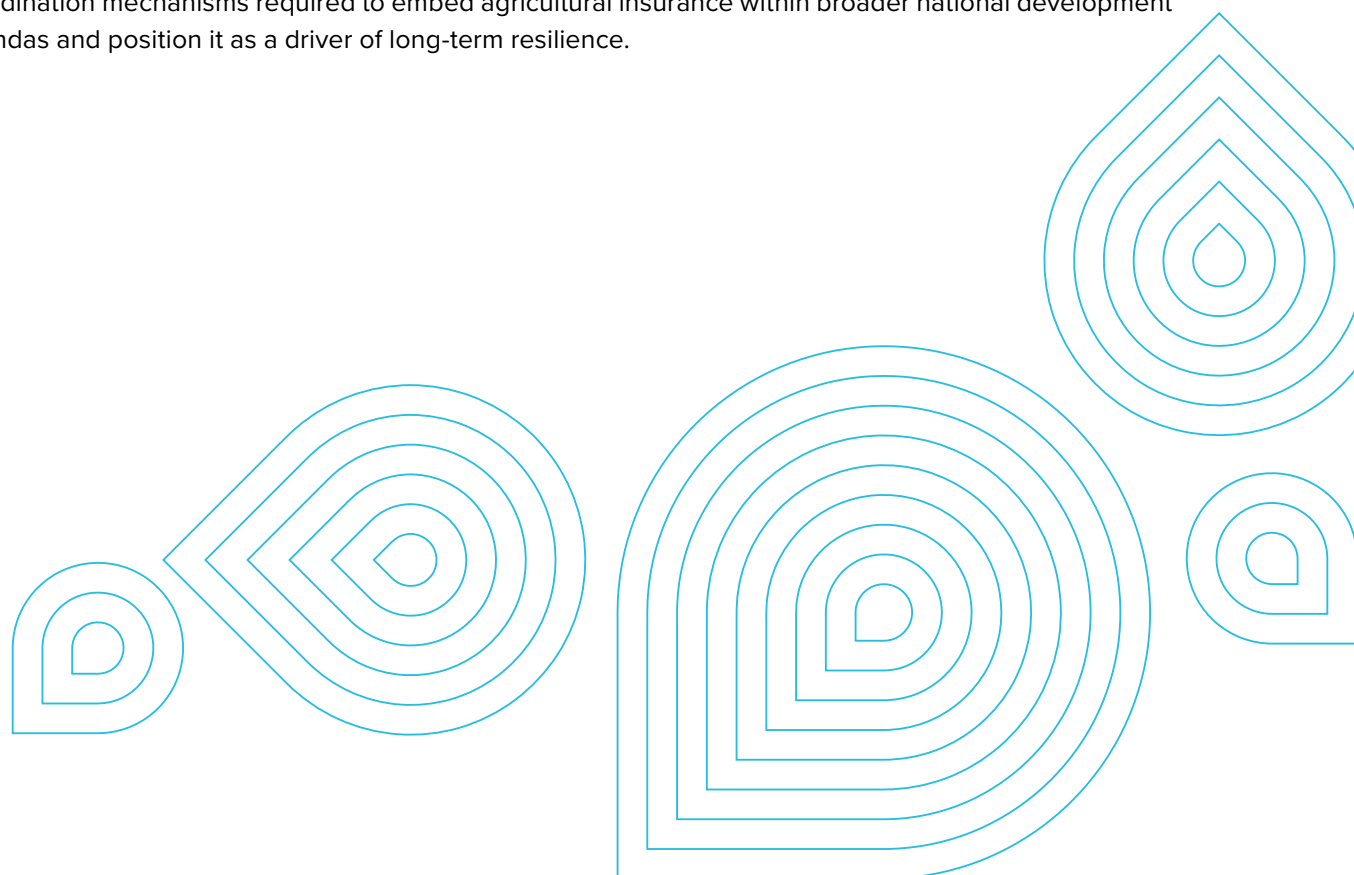
## ANNEX 1:

### UNDP FRA Institutionalization Framework

#### Government action plan for institutionalizing agricultural insurance

An agricultural insurance agenda is a comprehensive plan that aligns four strategic pillars that frame the collaboration between the government and the insurance industry to deliver effective insurance solutions to smallholder farmers and their value chains. These pillars are: policy, regulations, programmes and financing mechanisms. To institutionalize agricultural insurance as a driver of financial resilience and climate adaptation, governments must take deliberate and coordinated action across the four pillars. Given the diverse contexts of countries and their markets, these actions should be tailored to the role each government intends to play in the agricultural insurance market, their development objectives and the maturity of their insurance sectors, in the short, medium and long term.

In order to drive this process, UNDP FRA has developed a framework for government action to institutionalize agricultural insurance (UNDP, 2025). It sets out the institutional arrangements, policy considerations and coordination mechanisms required to embed agricultural insurance within broader national development agendas and position it as a driver of long-term resilience.



The following pillars have been used to analyse the 14 country cases informing this report, highlighting the varied approaches taken by governments and stakeholders.



**ANNEX 2:**

## Evidence on the impact of agricultural insurance

To assess the impact of agricultural insurance, UNDP commissioned a study conducted by Wageningen Social & Economic Research surveying the evidence base on agricultural insurance interventions between 2000 and 2024. The following are key takeaways from that research.

### Takeaways for policymakers – farmer-level impacts

#### **Adoption of agricultural insurance**

The demand for – and adoption of – agricultural insurance is often limited to a minority of farmers, particularly for index insurance. This limitation is associated with factors related to risk and value, behaviour and understanding, as well as liquidity and credit constraints.

Bundling insurance with other farmer services or making it compulsory can increase uptake. However, this approach may also reduce the effect of insurance on farmers' behavioural choices.

#### **Impact on farmers' economic development**

The available literature provides evidence that insurance can increase farmers' purchases of inputs, although in some cases no impact on input use is observed.

Insurance influences crop allocation decisions, leading in some cases to increased acreage, in others to decreased acreage, and affecting patterns such as crop diversification or the substitution of staple crops with cash crops.

Several studies highlighted a positive relation between risk mitigation through insurance and farm productivity.

Multiple studies provided evidence that insurance payments have a positive impact on farmers' incomes, though the evidence is mixed.

#### **Impact on climate adaptation**

The first-order effect of agricultural insurance is to stabilise revenues in years of climatic shocks. In that sense, agricultural insurance is an important instrument for farmers' climate adaptation.

Insurance-related changes in farming practices lead to both positive and negative effects on the environment. Evidence for the hypothesis that insurance increases climate-smart practices is thus mixed.

Insurance can act as either a complement to or a substitute for other risk management practices. This effect may depend on the type of strategy considered – for example, on-farm versus off-farm diversification – and on the presence of existing strategies prior to the introduction of formal insurance.

#### **Impact on food security**

Insurance helps smooth consumption during adverse weather conditions by providing financial support, allowing farmers to maintain their needs and avoid reducing essential consumption.

Insurance for food crops boosts food production because the protection against climate-related crop losses encourages investments in better and more productive farming practices.

Insurance promotes long-term food security by enabling farmers to improve their production methods and increase crop yields.

#### **Impact on financial resilience**

Insurance stabilises income by providing a safety net against risks such as adverse weather causing crop damage.

Insurance prevents the depletion of savings by helping farmers avoid selling valuable assets such as livestock, maintaining herd sizes during difficult periods.

Insurance offers financial protection during crises, enabling farmers to manage climate-related risks and recover from losses. Nonetheless, this financial protection is limited because of the restrictions in insurance coverage.

Insurance can have negative effects, such as increased financial strain when premiums are paid without corresponding indemnities if losses occur, leading to reduced resources for essential investments.

While insurance can reduce poverty risk and enhance economic stability, its impact on rural poverty remains limited, particularly for lower-income households.

Insurance improves access to loans, helping farmers manage financial risks, reduce debt, and use credit for production costs or investment purposes.

#### **Impact on (gender) equality**

Gender-disaggregated data on agricultural insurance are available only in a minority of cases. Where such information was available, women represented 41 percent of the policy holders and 36 percent of the people insured.

Agricultural insurance adoption among women remains low due to accessibility issues.

Wealthier households are more likely to adopt insurance. Poorer households face barriers due to high costs and liquidity constraints, preventing them from benefiting, despite potential advantages.

#### **Cost-effectiveness of agricultural insurance**

Cost-effectiveness of agricultural insurance is not sufficiently investigated. Only in a few cases are the costs of an insurance promotion policy compared with its effects.

The evidence does not allow concluding that insurance is a cost-effective policy tool for achieving financial resilience among farmers.

Evidence on the extent to which insurance can serve as a cost-effective tool for promoting farmers' economic development is limited and highly context-dependent.

## Takeaways for policymakers – selected policy instruments

### Cost-effectiveness of premium subsidies

In the initial stages of agricultural insurance markets, premium subsidies are often a necessary but seldomly a sufficient condition to enhance adoption of agricultural insurance.

Generic premium subsidies can become a significant burden to the public budget when agricultural insurance is scaled up nationally.

To remain cost-effective, longer-term subsidies for agricultural insurance should be targeted towards specific social target groups, climate hazards or objectives. Depending on the objective, alternative subsidy modalities, other than premium subsidies, should be equally considered.

The impact of premium subsidies on the adoption of insurance should be distinguished from the impact of insurance on developmental outcomes.

### Regulatory good practices for agricultural insurance

Agricultural insurance should be regulated under the general insurance law.

Agricultural insurance needs specific regulatory provisions, regarding the use of index insurance and consumer protection.

Pilots and innovations in agricultural insurance require an enabling and knowledgeable role of the regulator.

## Takeaways for private sector aggregators

### Impact on aggregators' de-risking

There is evidence that insurance can help protect loan portfolios against the risk of loan repayment defaults. In certain situations, an insurance can also lead to higher loan defaults.

No research was found on the de-risking effects of insurance for other types of aggregators, such as value chain companies, digital platforms, or international investors.

Bundling of insurance can help to enhance the uptake of insurance, but the package of services should provide real and additional value, both to the farmers and to the aggregators.

### Impact on aggregators' sales of inputs and credit

Although there is evidence that insurance can lead to increased use of inputs and credit, we found no direct evidence that this can benefit the sales of input providers or financial service providers who serve as aggregator for the insurance.

The full study is available [here](#).

**ANNEX 3:**

## Country Case Studies

Full country case studies underpinning this paper's analysis are available online:

- China: [How China built one of the world's largest agricultural insurance systems](#)
- India: [How India scaled crop insurance for millions of farmers](#)
- Indonesia: [How Indonesia built agricultural insurance around rice farmer protection](#)
- Italy: [Italy's shift from disaster compensation to proactive agricultural insurance](#)
- Kenya: [Kenya's pathway from insurance pilots to a national agricultural risk framework](#)
- Mexico: [Mexico's macro-level approach to protecting vulnerable farmers](#)
- Philippines: [How the Philippines is modernizing public agricultural insurance](#)
- Rwanda: [How Rwanda is building agricultural insurance into its rural development agenda](#)
- Senegal: [How Senegal is using rainfall data to protect smallholder farmers](#)
- Spain: [Spain's four-decade journey to structured agricultural insurance](#)
- Türkiye: [What Türkiye's insurance pool shows about risk sharing at scale](#)
- Uganda: [From pilots to farmer protection: Uganda's agricultural insurance journey](#)
- United States: [How federal crop insurance became central to agricultural risk management in the United States](#)
- Zambia: [Zambia's digital approach to crop index insurance and mobile payouts](#)



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