



INTERNATIONAL
FOOD POLICY
RESEARCH
INSTITUTE

The State of Agricultural Insurance

A global review of agricultural
insurance in a changing
climate



The current insurance system does not protect farmers from increasing climate risk

\$3.8

trillion dollars

**of disaster loss in
crop and livestock
production in the past
30 years; average
losses increasing in
the last 10 years**

Source: FAO

Threatens global
food supply
and stability

55%

**of global
insurable crop
value remains
unprotected**

Source: Swiss Re

Governments make up the
difference with expensive
post disaster payments

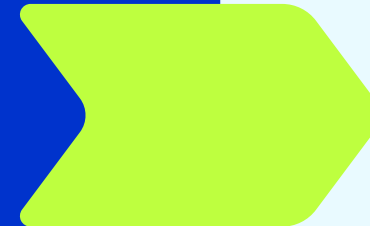
**reinsurance prices
rose significantly in
2023 due to both
inflationary effects
and more frequent
and costlier natural
hazards**

Source: OECD

Insurers increasing
prices or exiting some
markets all together

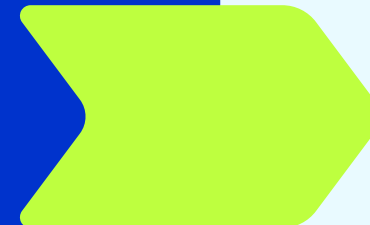
The role of agricultural insurance

**Protects farmers
from physical risks**



by stabilizing farm income in the face of adverse weather outcomes

**De-risks lending
and investing**



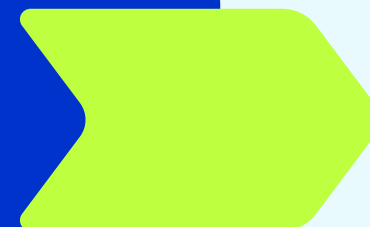
by enabling broader and more equitable access to credit

**Stabilizes markets
and public budgets**



by reducing the fiscal burden of post-disaster relief and supporting production of key crops

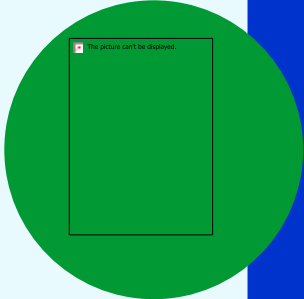
**(can) Incentivize
practice change**



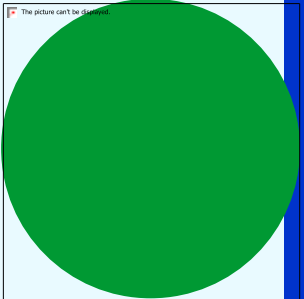
If designed well, insurance products can incentivize farmers to reduce underlying risk through adoption of resilient practices

Snapshot: Insurance is uneven and highly concentrated

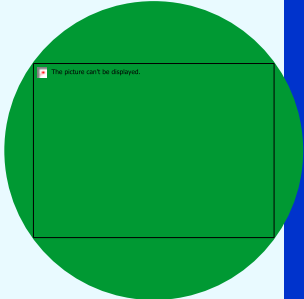
Region/Country	Market Size <i>(Premiums collected USD Billions)</i>	Share of Global Maret
China	18.1	28%
United States	17.7	27%
EU (Combined)	9.0	14%
India	4.3	6.5%
Canada	3.9	6%
Total	53	81.5%



countries make up 67.5% of the total USD \$65 billion global market for crop agricultural insurance



LMICs make up about 15% of global premiums collected; 2/3rds of farmers in developing countries are uninsured



Livestock accounts for about ~13% of agricultural insurance, with crops accounting for ~80% of coverage

Compared to other markets, agriculture is relatively difficult to insure

Losses spatially correlated + increasingly severe

Climate change contributing to increasingly unpredictable losses that affect multiple regions at once

Losses and yields are difficult to measure

Losses and historical yields not always verifiable, leading to **basis risk**

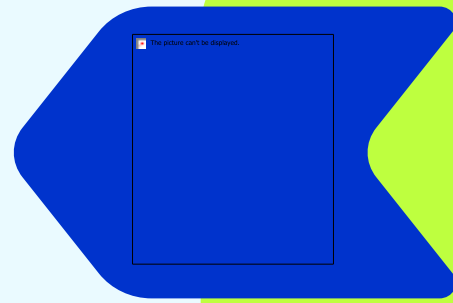
Low and uneven farmer demand

Misalignment between insurance products and farmers' risk management needs

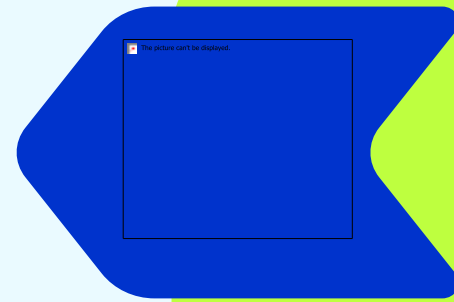
Policy hurdles + inadequate delivery systems

Insufficient legal, regulatory, and institutional environments; limited capacity to reach farmers

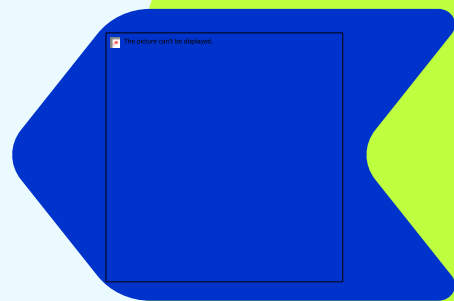
Key considerations for effective insurance



Product design



Government support



Product delivery

Sustainability and resilience can be integrated across all three of these domains

No one-size-fits-all: the best product design depends on the geography and the end-user

Indemnity MPCI Insurance

- Compensates farmers based on actual losses incurred
- MPCI is the most prevalent form of agricultural insurance globally
- Requires insurance agents to verify losses

Index Insurance

- Predefined payouts when a specified trigger is reached
- Lower administration and transaction costs
- Reduced moral hazard risk; potentially higher basis risk

Product design considerations

**Premium pricing,
deductible levels,
maximum payout**

**Clearly defined
insured perils and
trigger mechanisms**

**Transparent loss
assessment protocols**

**Minimized risk of moral
hazard (for indemnity)**

Governments play three essential roles in agricultural insurance markets

Deploying subsidies

\$30B USD

In annual global premium subsidies

- 80–85% in China and India
- 60% in the U.S. and Canada
- Up to 65% under EU's CAP

Design principle:

Target support carefully to avoid market distortion, unintended environmental impacts and crowding out private insurers

Absorbing catastrophic risk

Risk sharing

keeps private insurers in the market

- Public reinsurance
- Meso-insurance
- CAT bonds

Why it matters:

Government backstops allow private insurance to function through severe, correlated losses

Regulating and enabling markets

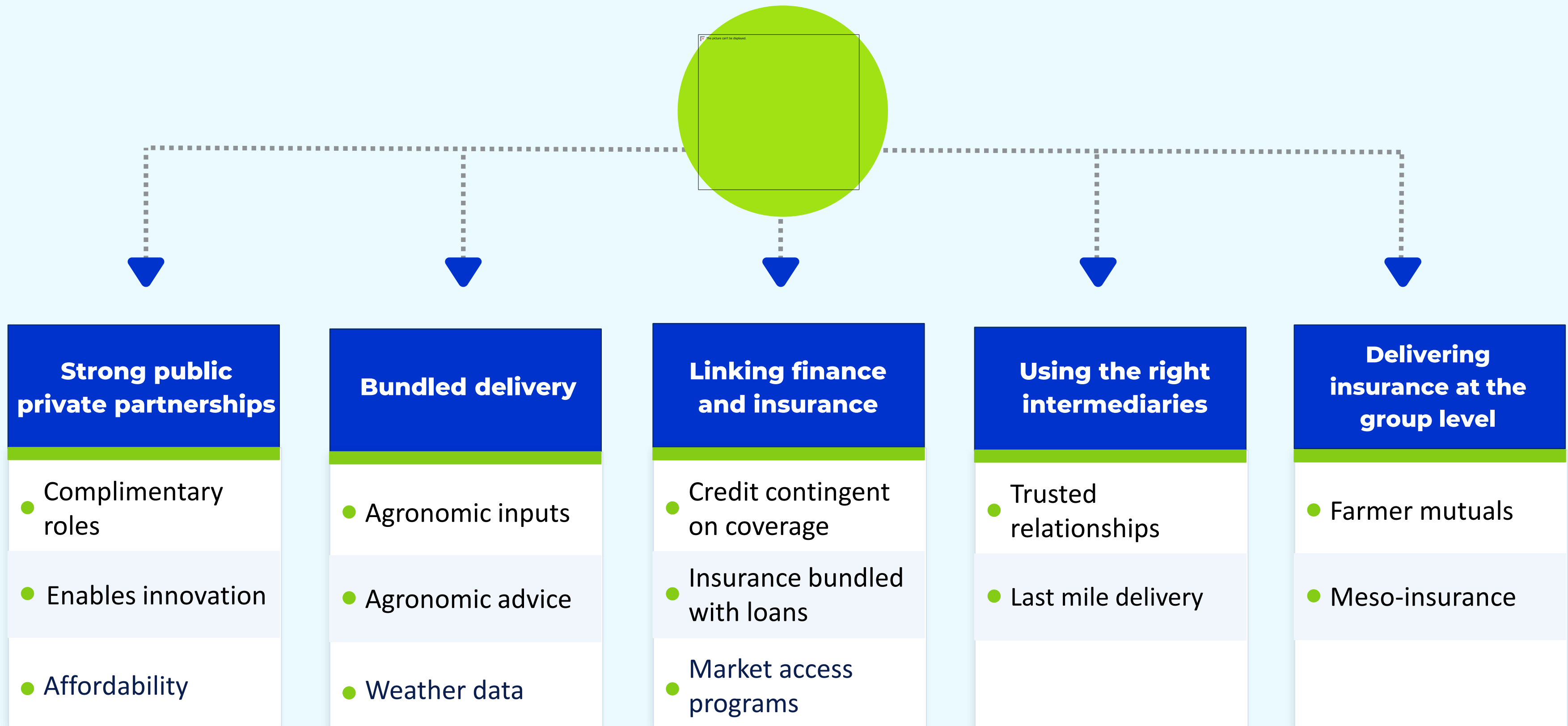
Policy levers

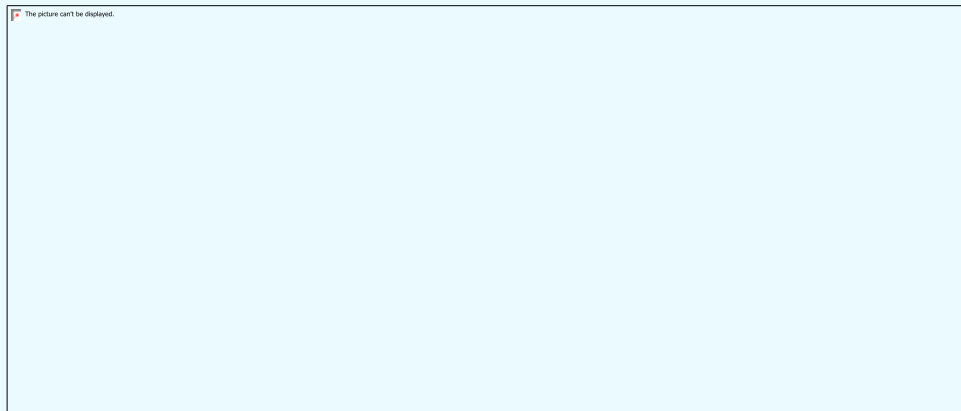
to strengthen access and delivery

- Legal and regulatory frameworks
- Investment in public infrastructure and data
- Mandating that farmers purchase insurance
- Farmer education and extension services
- Aligning disaster management policy with insurance markets

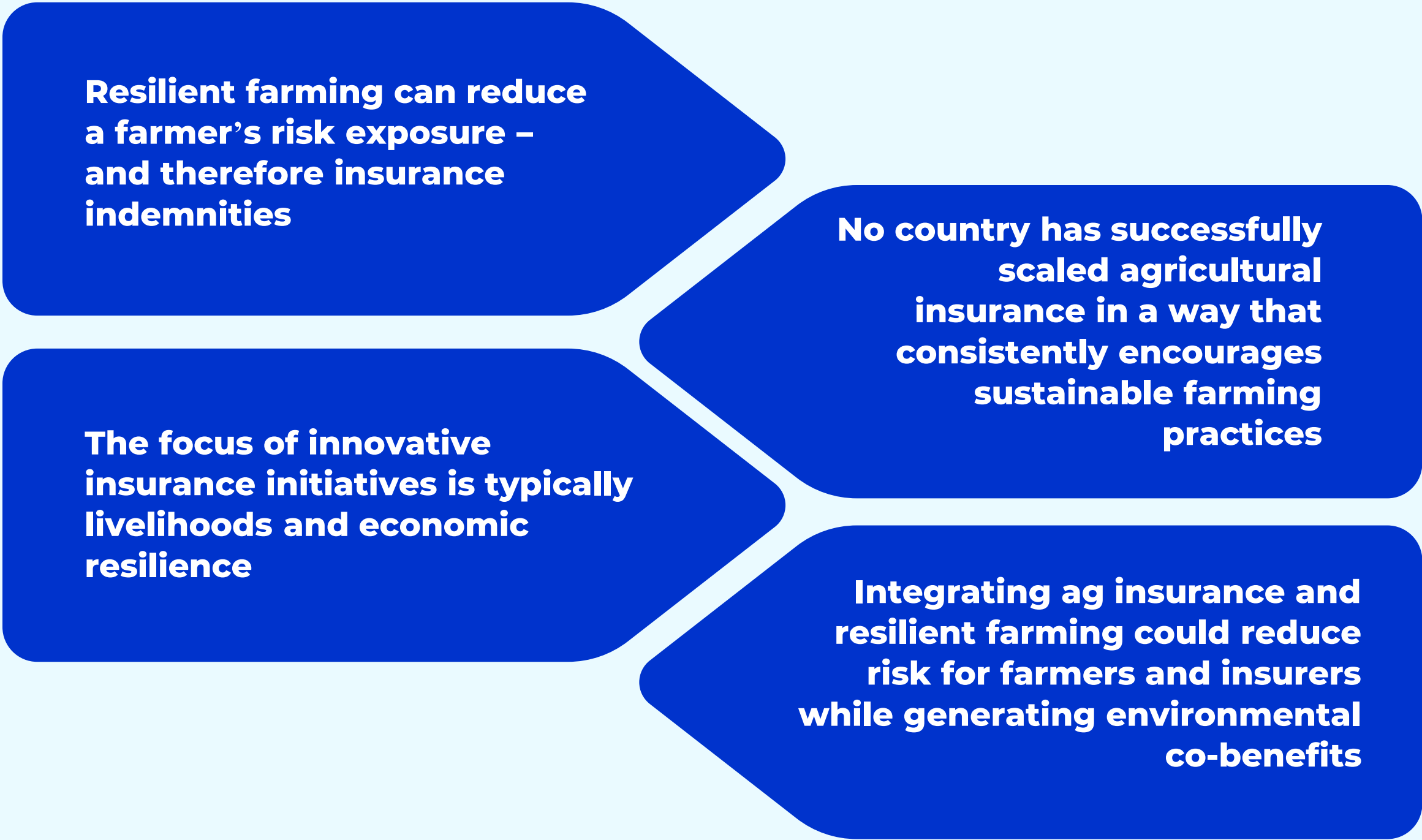
Proactive insurance investment is more cost-effective than repeated ad-hoc emergency relief

Strong product delivery mechanisms are needed to reach more farmers and unlock credit

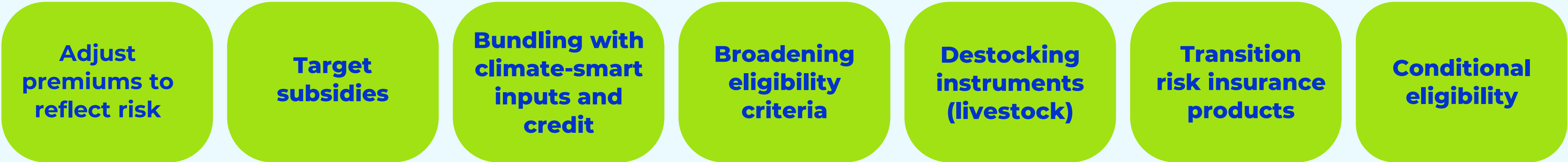




Aligning insurance with resilient farming practices: opportunities and approaches



Insurance design tools to incentivize practice change:



Recommended actions



Government

- Smart subsidy design
- Enabling business environment
- Prearranged financing = reduced costs
- Layer catastrophic risk management
- Ag policy alignment with insurance



Private sector

- Link improved risk quantification + resilience financing
- Deploy alternative risk transfer solutions
- Use product design to incentivize sustainable practices
- R&D for new technology such as remote sensing, drones, mobile phone tech, and new modeling approaches



Climate finance and multilaterals

- Design and test insurance-based incentives
- Technical assistance and concessional capital
- Influence national adaptation planning
- Multilateral agreements and commitments

Download our report here:

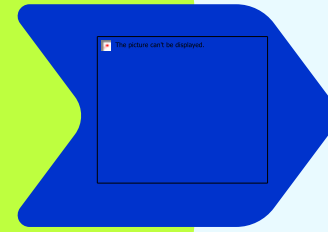


<https://business.edf.org/insights/the-state-of-global-agricultural-insurance-under-a-changing-climate/>

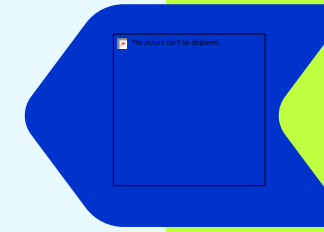
Contact me:
eleonard@edf.org

<https://www.linkedin.com/in/erinsleonard>

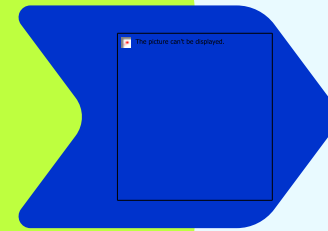
Global agricultural insurance markets are deeply uneven



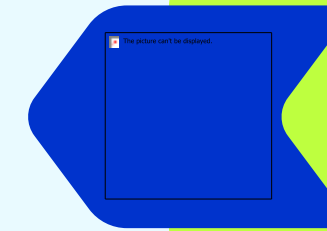
Agricultural insurance can de-risk lending and unlock investment in resilience



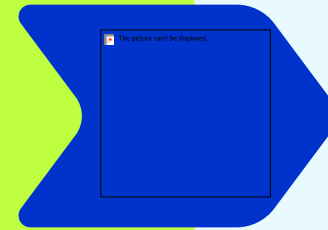
Low demand for insurance products is a challenge; especially for smallholders



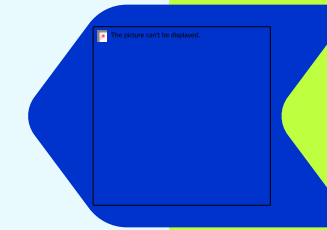
Advances in technology can make insurance products more efficient and financially sustainable



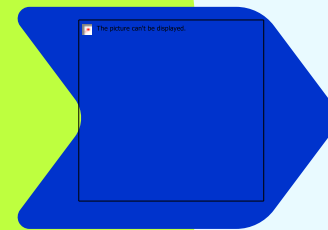
Well-designed public sector support is key for scale



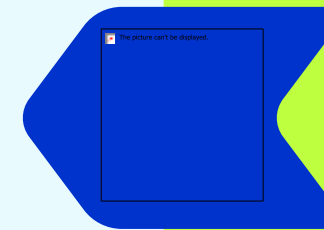
Insurance must be better integrated with broader climate adaptation and resilience efforts



Product design and delivery mechanisms are as important as funding

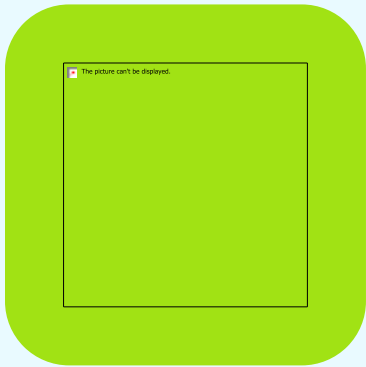


No country has successfully scaled agricultural insurance in a way that consistently encourage sustainable farming practices

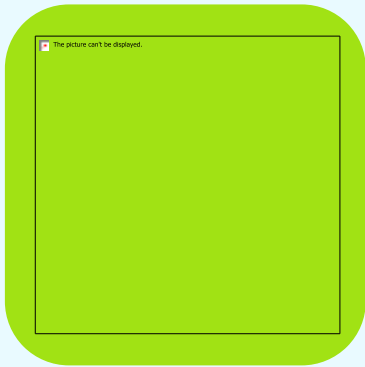


Key findings

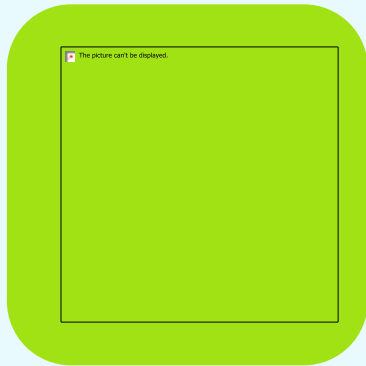
Advances in technology can make insurance products more efficient and financially sustainable



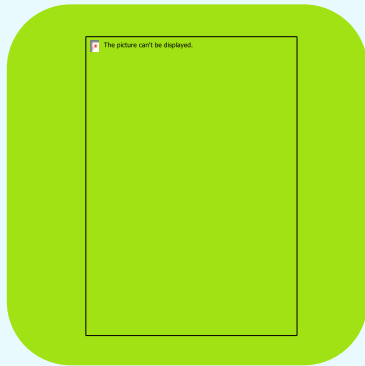
**Remote
sensing**



Drones



**Mobile Phone
Technology**



**New modeling
approaches**