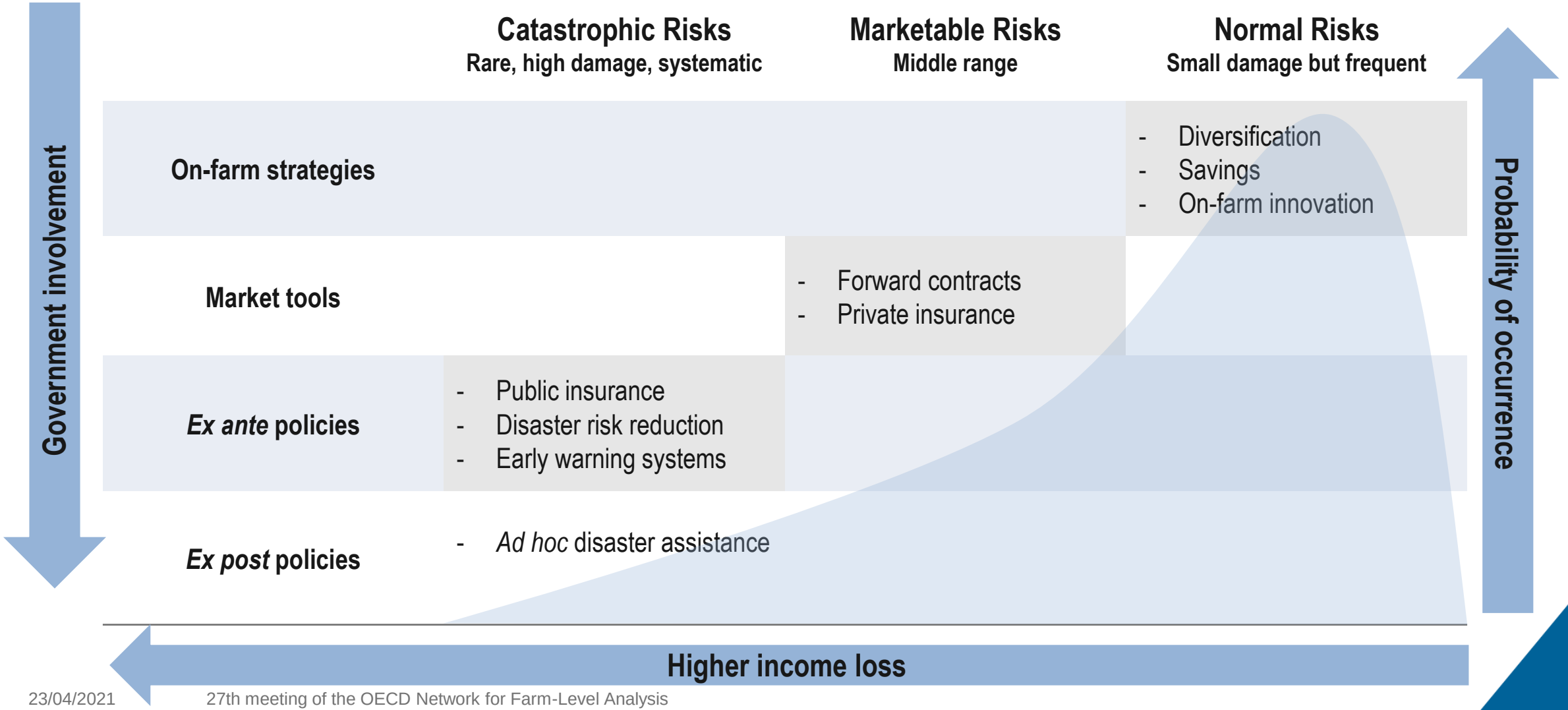
WHAT CHARACTERIZES RESILIENCE IN AGRICULTURE?

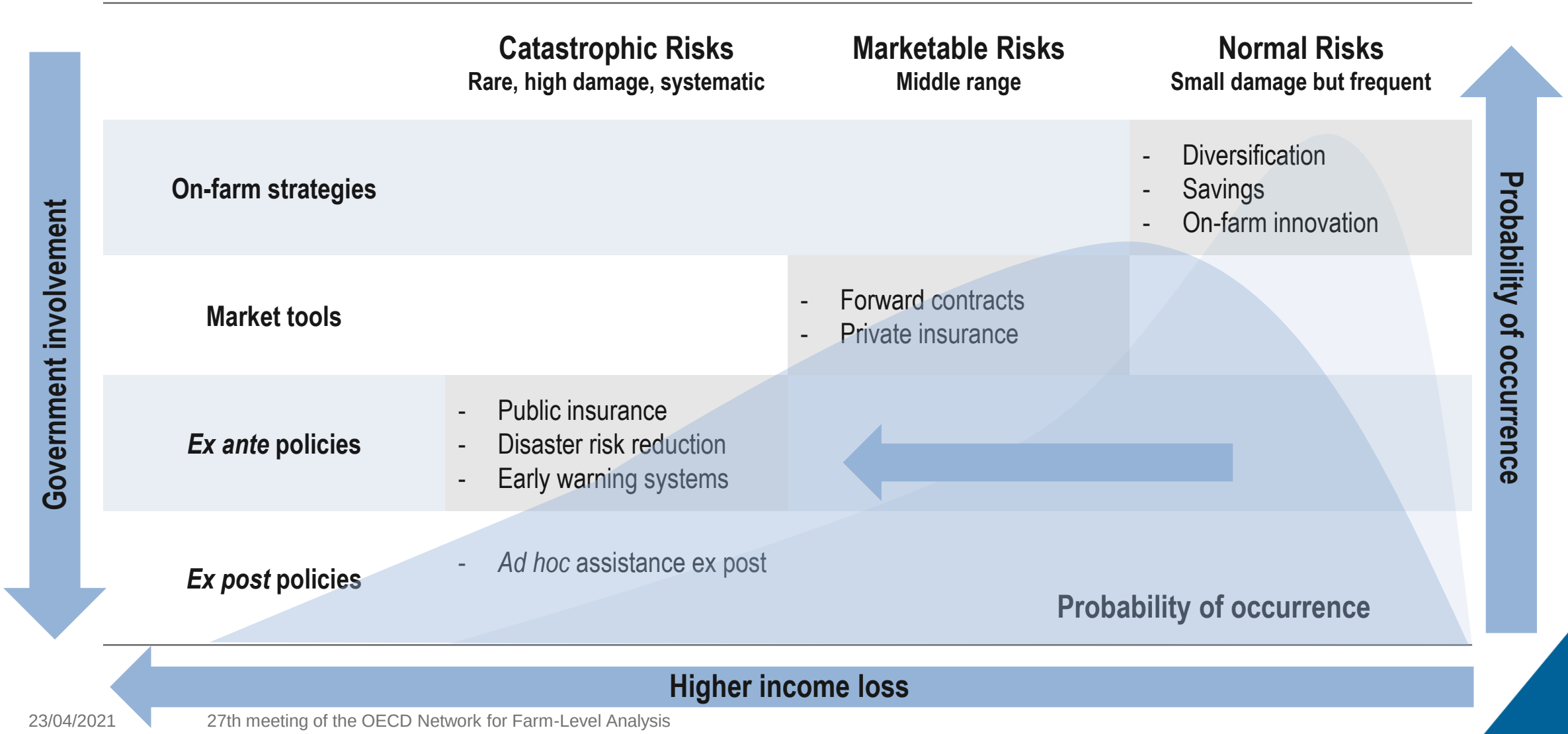
Emily Gray

OECD Trade and Agriculture Directorate

A “layered approach” to agricultural risk management (ARM)



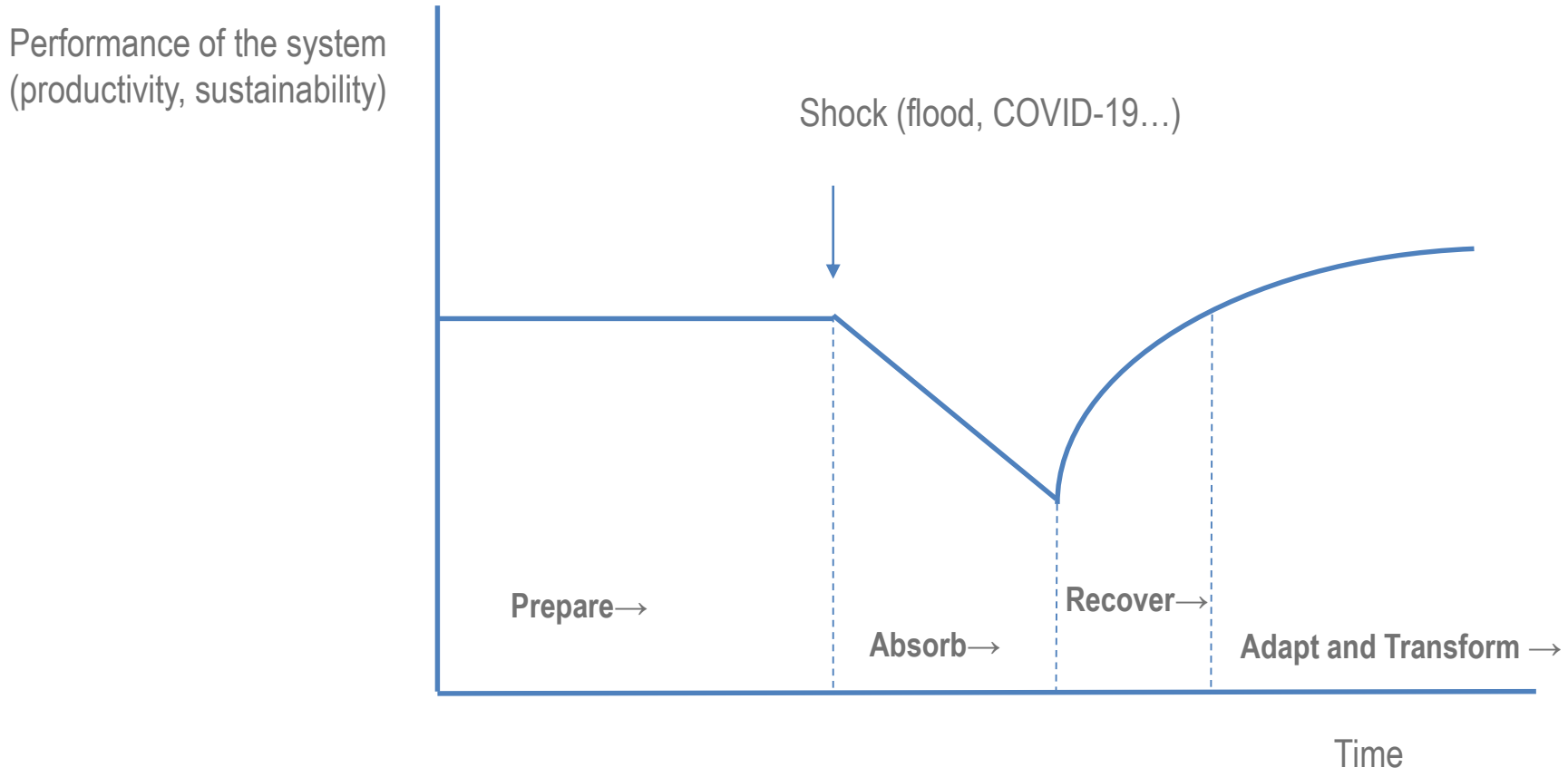
But a “business as usual” approach to agricultural risk management will shift more responsibility to governments in the long run



Applying a '*resilience lens*' to agricultural risk management

- What is resilience?
  - the ability to **prepare** and plan for, **absorb**, **recover from**, and more successfully **adapt** and **transform** in response to adverse events
- Core resilience capacities
  - The capacity to **prepare** for likely or imminent shocks
  - The capacity to **absorb** the impacts of shocks, including mitigating or preventing risks
  - The capacity to **recover** from a shock
  - The capacity to **adapt** to an evolving risk environment
  - The capacity to **transform** if the current system is no longer able to adapt or recover

Characterising resilience capacities

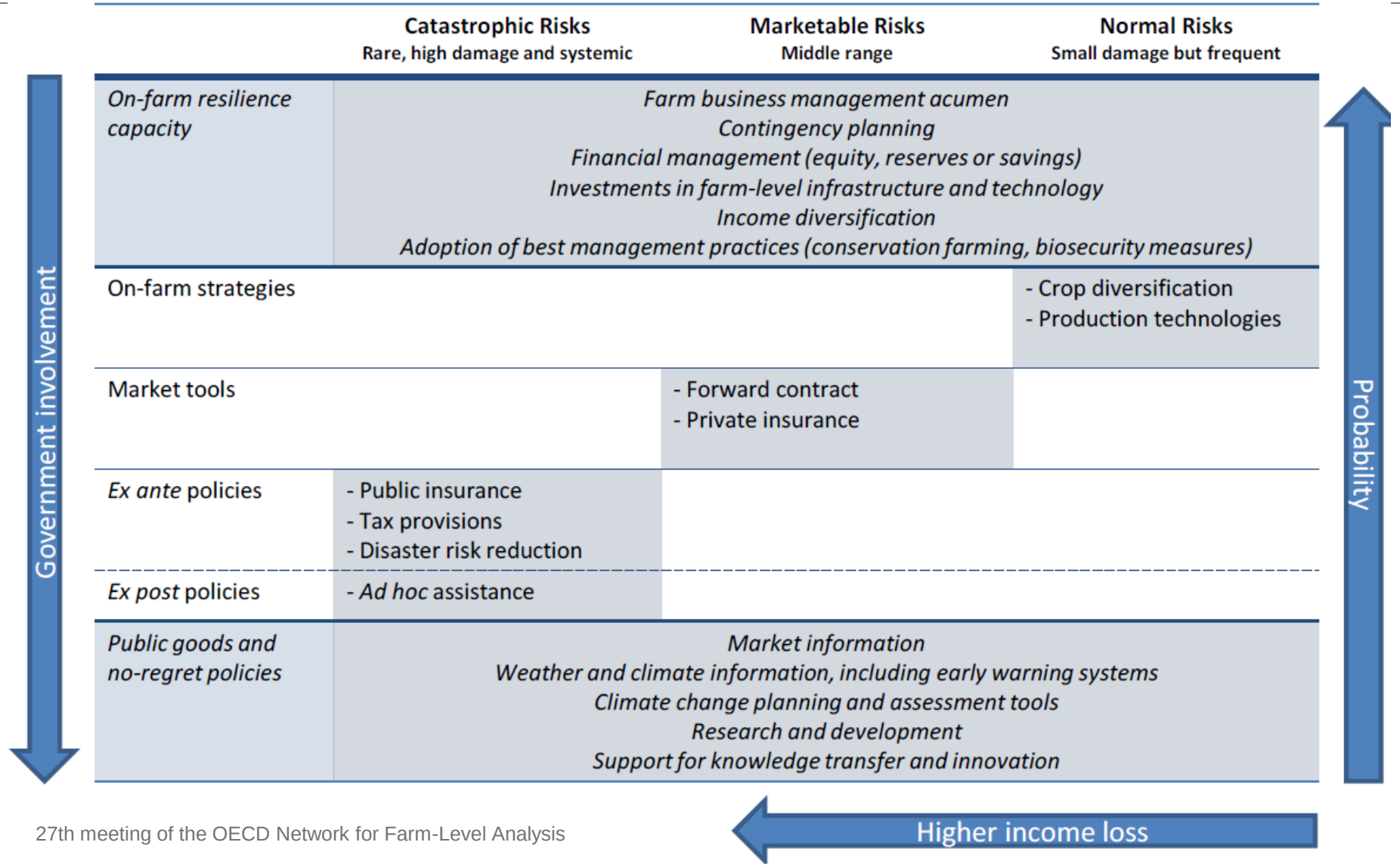


Applying a '*resilience lens*' to agricultural risk management

…Continued

- Five new dimensions for agricultural risk management for resilience:
  - Time frame: greater focus on *ex ante* policies and strategies
  - Trade-offs: consider outcomes and interests of stakeholders under different policy approaches
  - Participatory and collaborative processes: for defining strategies and responsibilities
  - **Investments in on-farm resilience capacities**
  - **No-regret policies and investments in public goods**

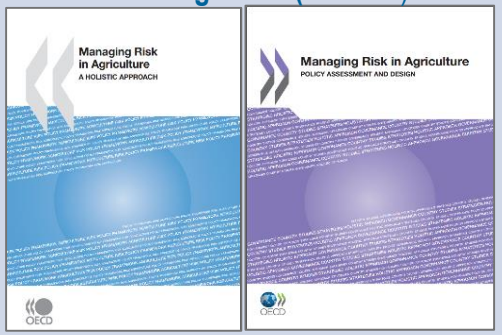
A holistic approach to risk management for resilience



A decade of policy work on agricultural risk and resilience

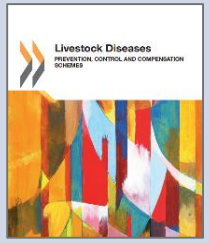
AGRICULTURAL RISK MANAGEMENT

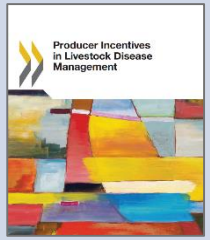
Holistic approach to agricultural risk management (2009-13)



- Farm level analysis of risk management strategies (2010-11);Case studies on Australia, EU, Canada, Netherlands, New Zealand, Spain (2011)); risk management under climate change(2012); Small holder risk management in developing countries (2013)

Livestock disease risk management (2013-17)

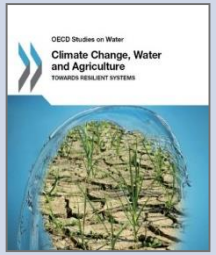


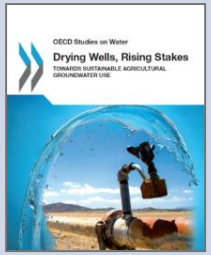


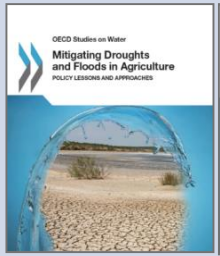
Agriculture adaptation to climate change (2014-*)

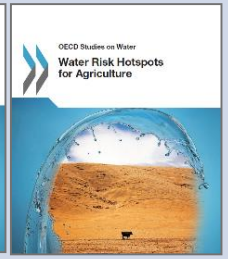
- Modelling climate change adaptation (2014)
- Adapting Agriculture to Climate Change: A Role for Public Policies(2015)
- Overcoming barriers to the adoption of climate friendly practices (2017)
- Synergies and trade-off between adaptation, mitigation and agricultural productivity (2018)

Water risk management in agriculture (2014-*)

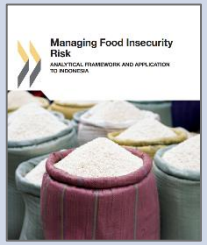


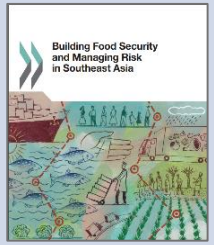


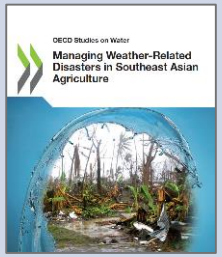




Food security and risks in Southeast Asia (2015-18)

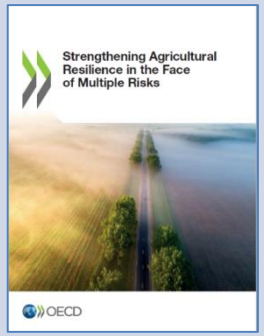






AGRICULTURAL RESILIENCE

Strengthening resilience to multiple risks (2017-*)

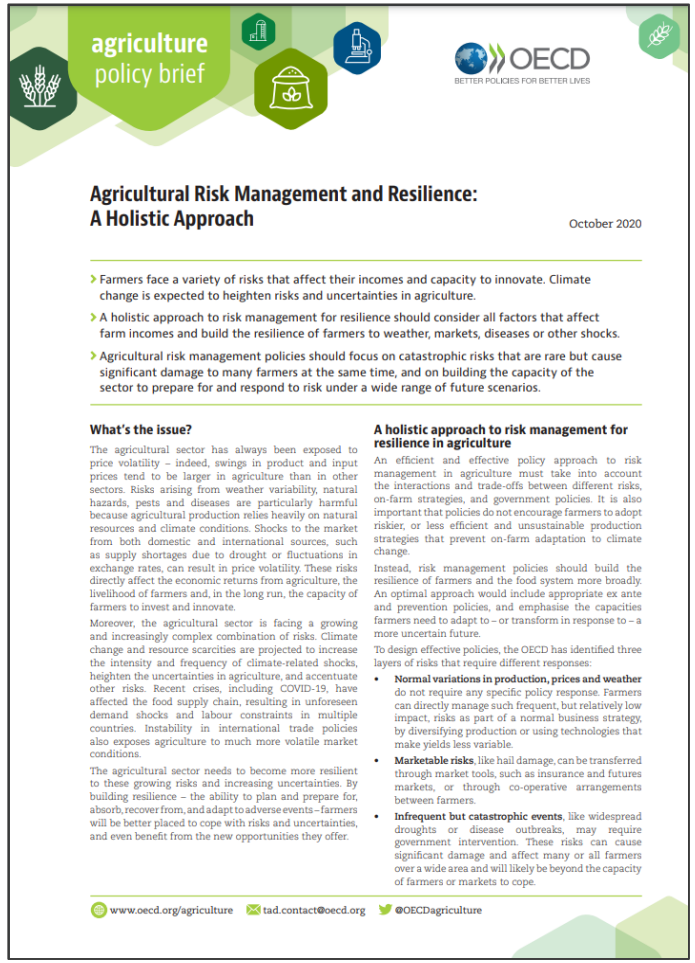


- Guidelines on risk management instruments
- Building resilience to Natural hazards
- COVID-19 emerging policy responses

>Integration into country reviews, policy evaluations, and the agriculture policy M&E report>

*Continued ongoing area of work in 2020

Thank you for your attention!



agriculture policy brief

OECD
BETTER POLICIES FOR BETTER LIVES

Agricultural Risk Management and Resilience: A Holistic Approach

October 2020

- Farmers face a variety of risks that affect their incomes and capacity to innovate. Climate change is expected to heighten risks and uncertainties in agriculture.
- A holistic approach to risk management for resilience should consider all factors that affect farm incomes and build the resilience of farmers to weather, markets, diseases or other shocks.
- Agricultural risk management policies should focus on catastrophic risks that are rare but cause significant damage to many farmers at the same time, and on building the capacity of the sector to prepare for and respond to risk under a wide range of future scenarios.

What's the issue?

The agricultural sector has always been exposed to price volatility – indeed, swings in product and input prices tend to be larger in agriculture than in other sectors. Risks arising from weather variability, natural hazards, pests and diseases are particularly harmful because agricultural production relies heavily on natural resources and climate conditions. Shocks to the market from both domestic and international sources, such as supply shortages due to drought or fluctuations in exchange rates, can result in price volatility. These risks directly affect the economic returns from agriculture, the livelihood of farmers and, in the long run, the capacity of farmers to invest and innovate.

Moreover, the agricultural sector is facing a growing and increasingly complex combination of risks. Climate change and resource scarcities are projected to increase the intensity and frequency of climate-related shocks, heighten the uncertainties in agriculture, and accentuate other risks. Recent crises, including COVID-19, have affected the food supply chain, resulting in unforeseen demand shocks and labour constraints in multiple countries. Instability in international trade policies also exposes agriculture to much more volatile market conditions.

The agricultural sector needs to become more resilient to these growing risks and increasing uncertainties. By building resilience – the ability to plan and prepare for, absorb, recover from, and adapt to adverse events – farmers will be better placed to cope with risks and uncertainties, and even benefit from the new opportunities they offer.

A holistic approach to risk management for resilience in agriculture

An efficient and effective policy approach to risk management in agriculture must take into account the interactions and trade-offs between different risks, on-farm strategies, and government policies. It is also important that policies do not encourage farmers to adopt riskier, or less efficient and unsustainable production strategies that prevent on-farm adaptation to climate change.

Instead, risk management policies should build the resilience of farmers and the food system more broadly. An optimal approach would include appropriate ex ante and prevention policies, and emphasise the capacities farmers need to adapt to – or transform in response to – a more uncertain future.

To design effective policies, the OECD has identified three layers of risks that require different responses:

- **Normal variations in production, prices and weather** do not require any specific policy response. Farmers can directly manage such frequent, but relatively low impact, risks as part of a normal business strategy, by diversifying production or using technologies that make yields less variable.
- **Marketable risks**, like hail damage, can be transferred through market tools, such as insurance and futures markets, or through co-operative arrangements between farmers.
- **Infrequent but catastrophic events**, like widespread droughts or disease outbreaks, may require government intervention. These risks can cause significant damage and affect many or all farmers over a wide area and will likely be beyond the capacity of farmers or markets to cope.

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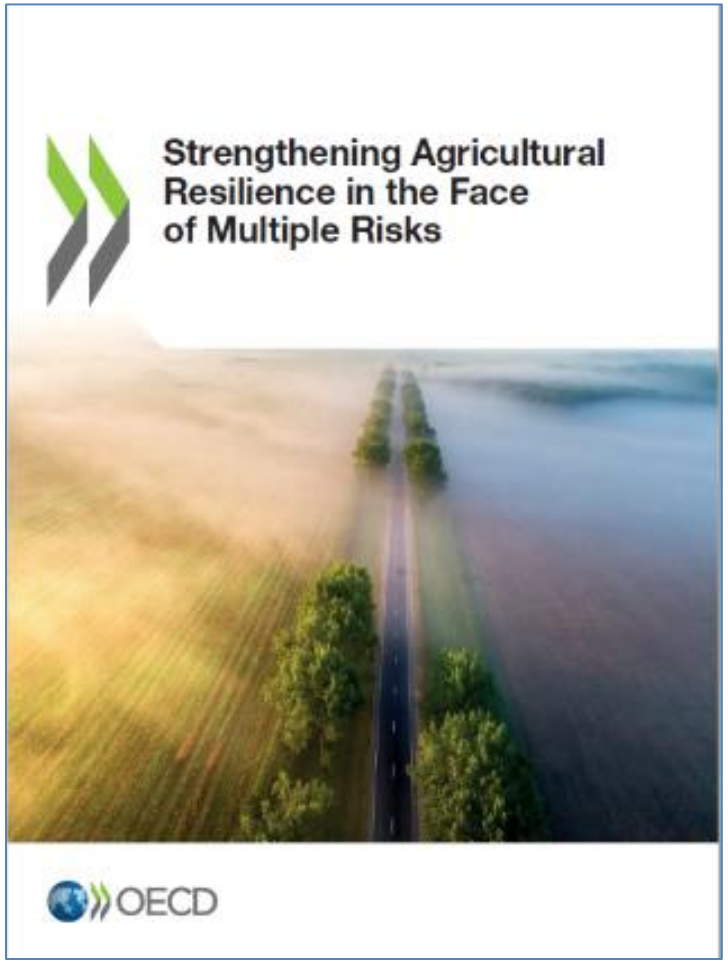
Visit our website:

http://www.oecd.org/agriculture/topics/risk-management-and-resilience/



New! Updated policy brief

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