



Ministry of Foreign Affairs of the
Netherlands



What have we learned from all the
agricultural microinsurance pilots?

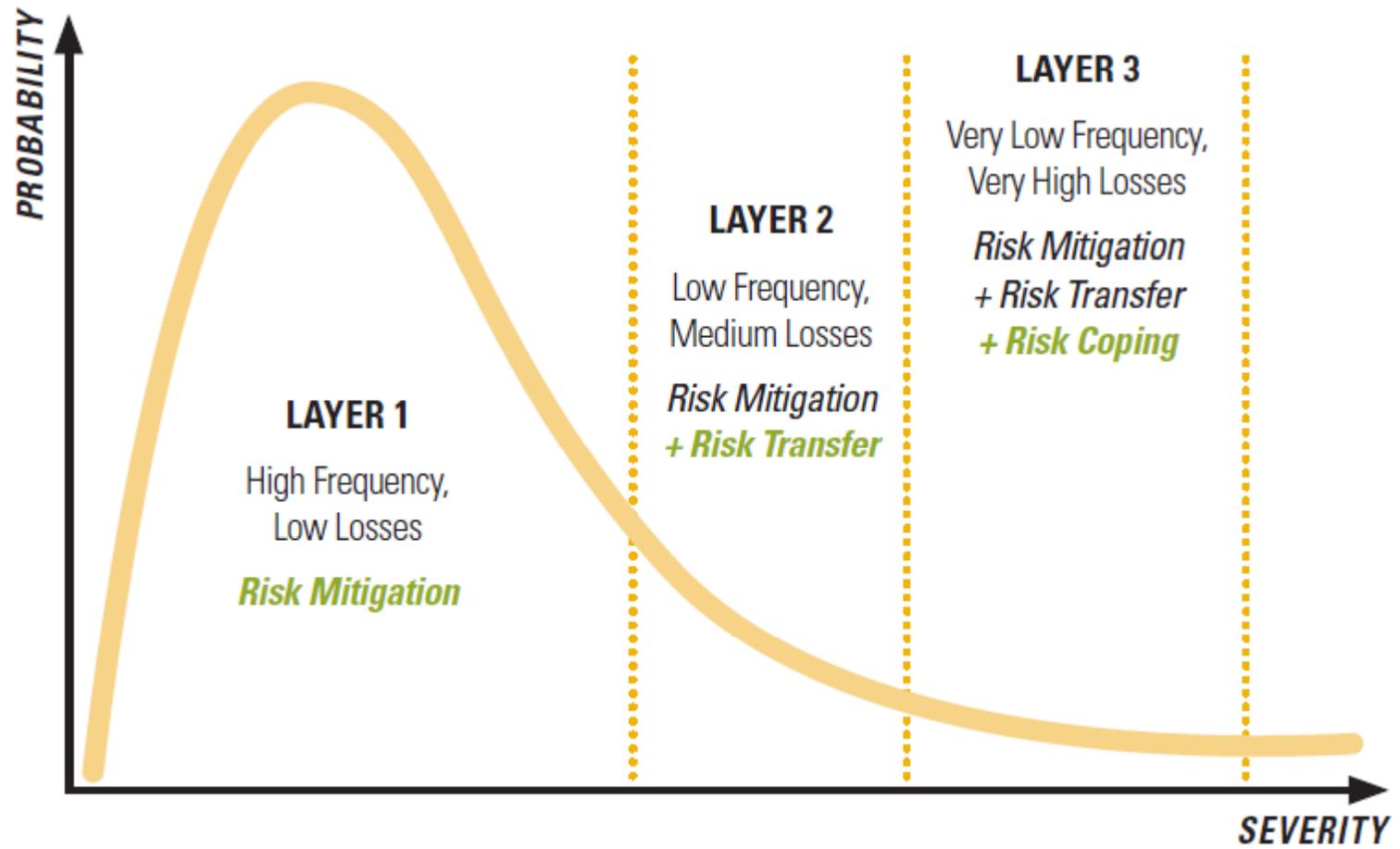
Daniel Clarke
World Bank and University of Oxford
8 November 2012

What was the motivation for all the agricultural microinsurance pilots?

1. **Agriculture is an uncertain business, particularly for the poor**
2. **Risk is costly**
 - Improvements in risk mitigation, transfer or coping could have large benefits
3. **Agricultural insurance can:**
 - Reduce risk
 - Increase productivity (by supporting credit)
4. **Traditional indemnity-based approaches to crop insurance were unsustainable for smallholder farmers**
5. **Agricultural risk is covariate \Rightarrow formal insurance necessary**
6. **Indexed insurance offered the promise of**
 - Low cost
 - Insurer protected against moral hazard
 - Farmers protected against key perils (e.g. low rainfall)

What have we learned from all the agricultural microinsurance pilots?

1. Agricultural insurance is not a complete solution to agricultural risk



2. Public sector roles are critical for sustainable scale-up

- Many pilots have mainly focused on the private sector role in market for agricultural insurance, but public sector role is critical for scale-up
- Successfully scaled-up agricultural insurance programs have typically been *public-private partnerships*
 - Roles can differ from country to country
 - Many aspects of agricultural insurance are *natural monopolies* and therefore require coordination between government and insurance providers
- Pro-poor agricultural insurance is unlikely to scale up without an enabling *risk market infrastructure*
 - Coordinated investments in key public goods that would otherwise be undersupplied by the market, e.g. reliable high quality indices
 - Creation and capacity building of institutions to ensure that the incentives of market participants are aligned with those of farmers

2. Public sector roles are critical for sustainable scale-up

Example: India crop insurance programs (~30m insured)

- Programs were piloted to scale up
 - Commitment to program over a long time period
 - Compulsory for borrowing farmers
 - Large subsidies
 - Coordinated long term investments in risk market infrastructure
 - Crop cutting experiments
 - Weather station infrastructure
 - Remote sensing data
- Substantial involvement of private sector since 2007

3. Farmers want reliable protection

Reasons for policyholders not believing that products will pay when they most need it:

Indemnity insurance (e.g. life insurance)
<ul style="list-style-type: none">• Low trust• Exclusions/'small print'• Risk of insurer default

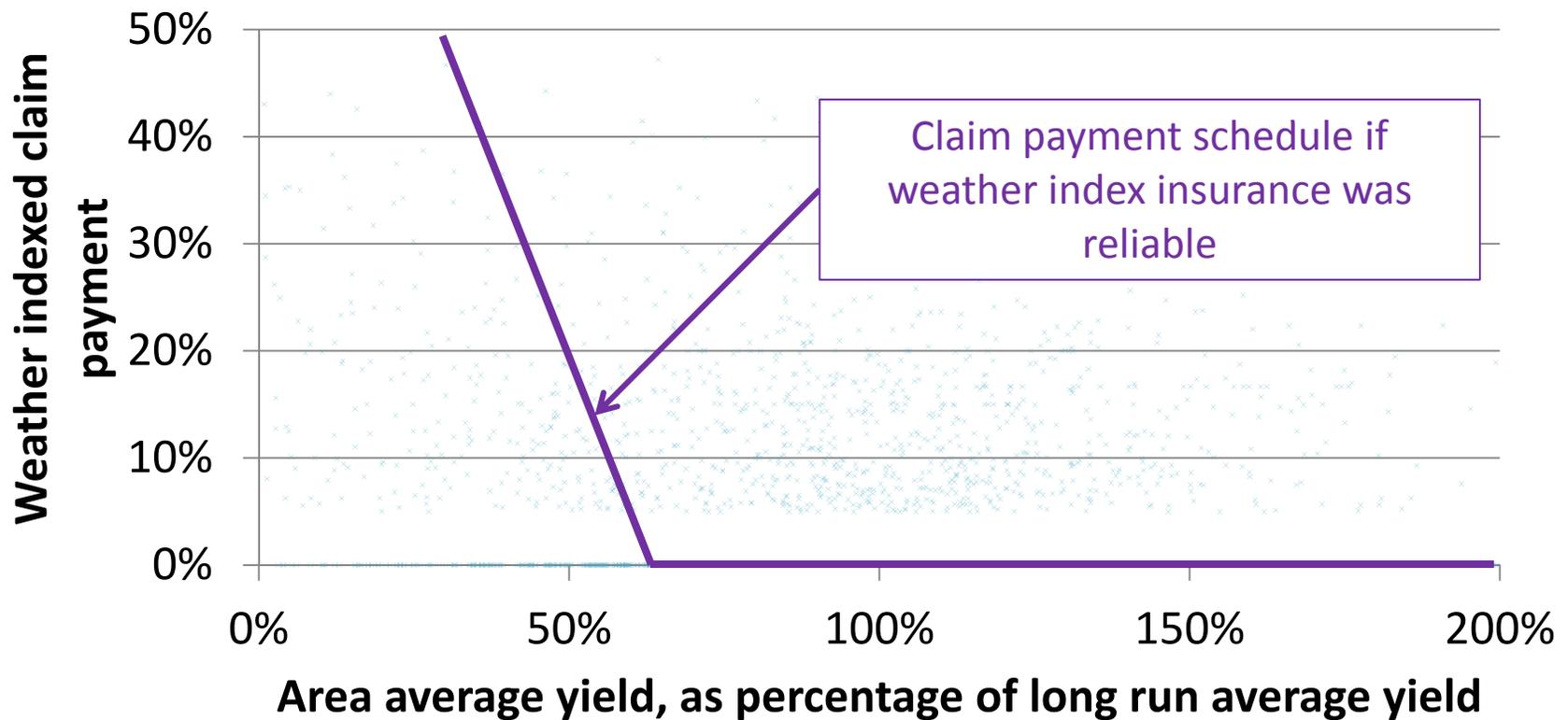
Index insurance (e.g. rainfall index insurance)
<ul style="list-style-type: none">• Low trust• Exclusions /'small print'• Risk of insurer default• Basis risk*

*Basis risk is the risk that the claim payment does not match the farmers' loss

4. Weather index insurance does not (seem to) offer reliable protection for farmers

There is currently no convincing statistical evidence from any program suggesting that weather index insurance can be relied on to pay in years that are bad for smallholder farmers.

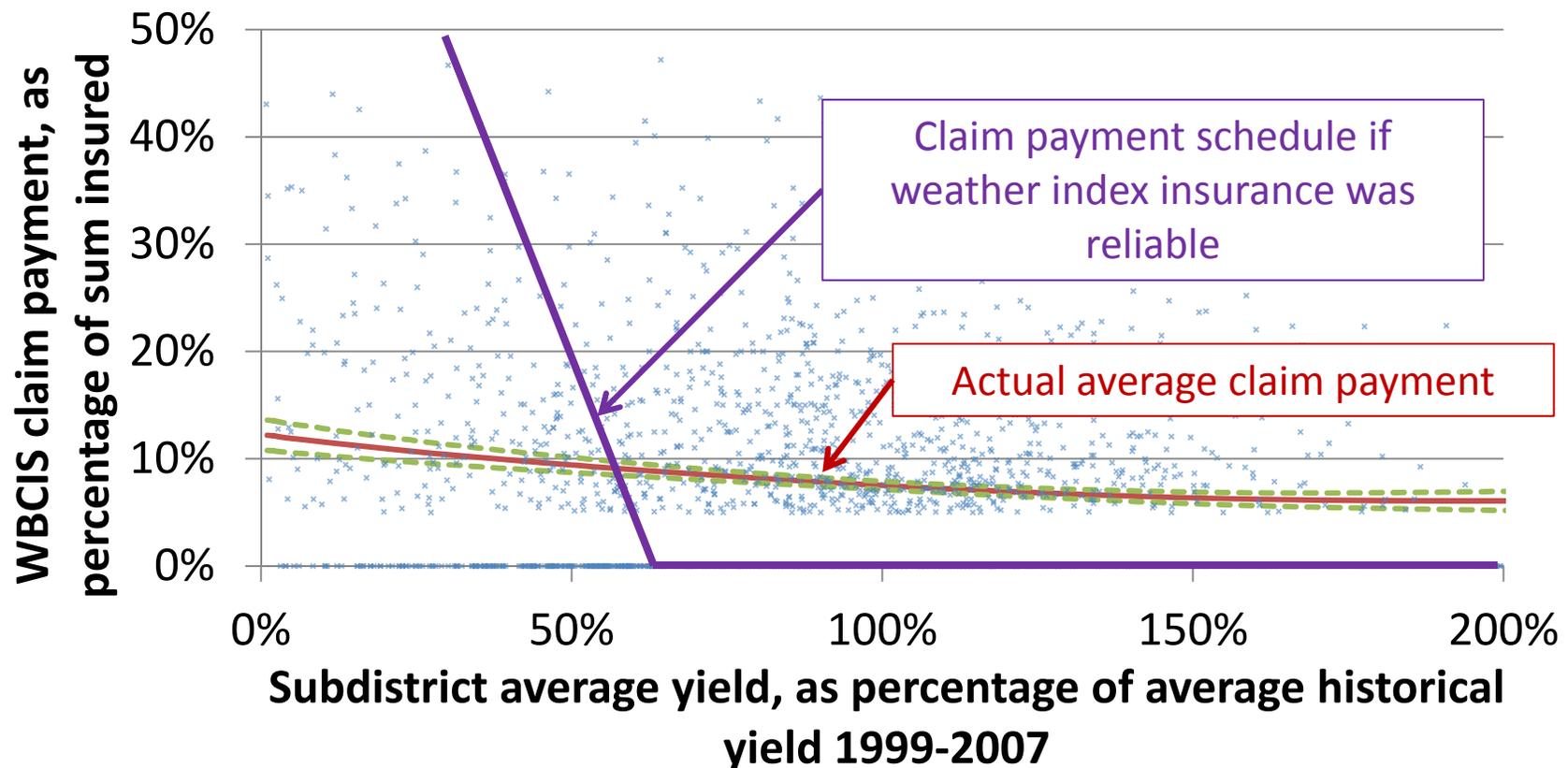
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For example, across an Indian state:

- Correlation between yield and claim payment only -13%



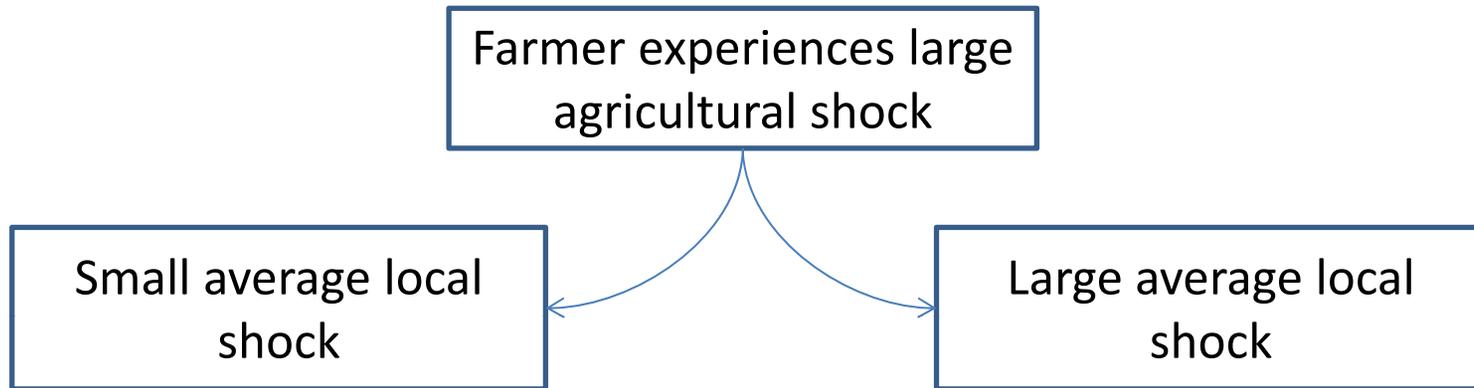
9 years of data, 318 products sold across one state in India. Source: Clarke et al. (2012)

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- Why? Weather is clearly important for agricultural production but
 - Other perils can cause catastrophic losses
 - Pest/disease/wind/flood/frost/hail typically not well captured by weather indices
 - Farmer behaviour difficult to capture
 - Data often not available for proper model calibration
 - 30 years of high quality production data?

5. We need better claim payment rules, and mutuality may be a missing link



Formal sector cannot offer affordable protection for this...

... but communities may be able to

Formal sector needs to be able to offer reliable protection for this

- Group MPCl (e.g. Mexican Fondos)
- Area yield or area revenue (e.g. Indian modified NAIS)
- Satellite or weather data can be used 'behind the scenes' for auditing or targeting

6. Meso-insurance for lenders has potential





**Disaster Risk Financing
and Insurance Program**



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Agricultural Insurance Development Program (AIDP)

Development objective:

Increase the financial resilience of farmers and herders to natural perils through the development of sustainable and cost-effective agricultural insurance solutions as part of their broader agricultural risk management strategy

Program components:

1. Institutional capacity building and policy dialogue
2. Advisory services and technical assistance
3. Knowledge management

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4. Weather index insurance does not (seem to) offer reliable protection for farmers
5. We need better claim payment rules, and mutuality may be a missing link
6. Meso-insurance for lenders has potential