

# Risk Management & Financing for Food Security

An insurance industry perspective  
August 2014, Singapore

SWISS RE  
**150**  
YEARS

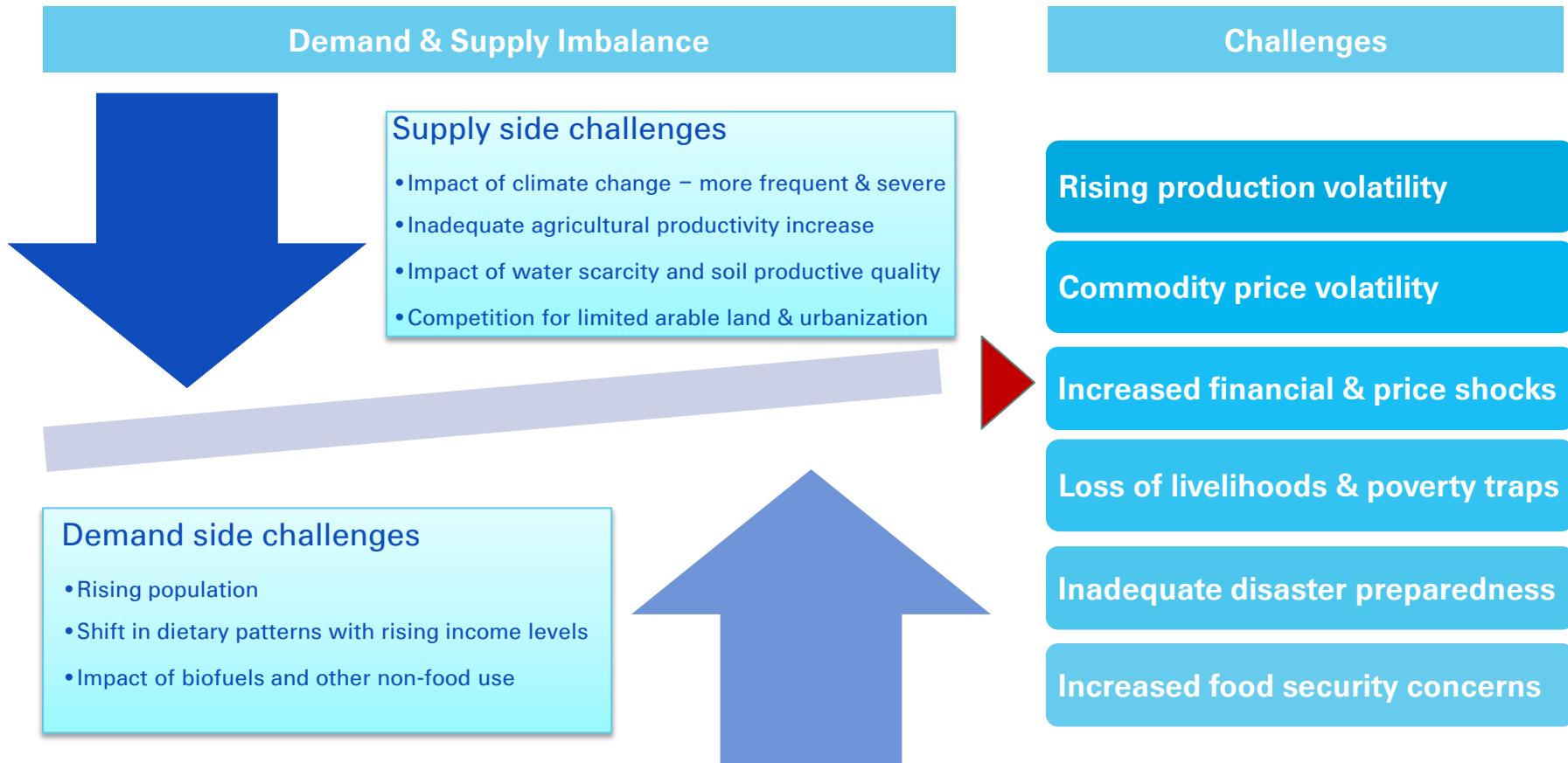


Ivo Menzinger  
Managing Director  
Global Partnerships

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- Agriculture is a risky business
- Rationale for Insurance
- Ingredients of a sustainable agriculture insurance scheme
- Case studies

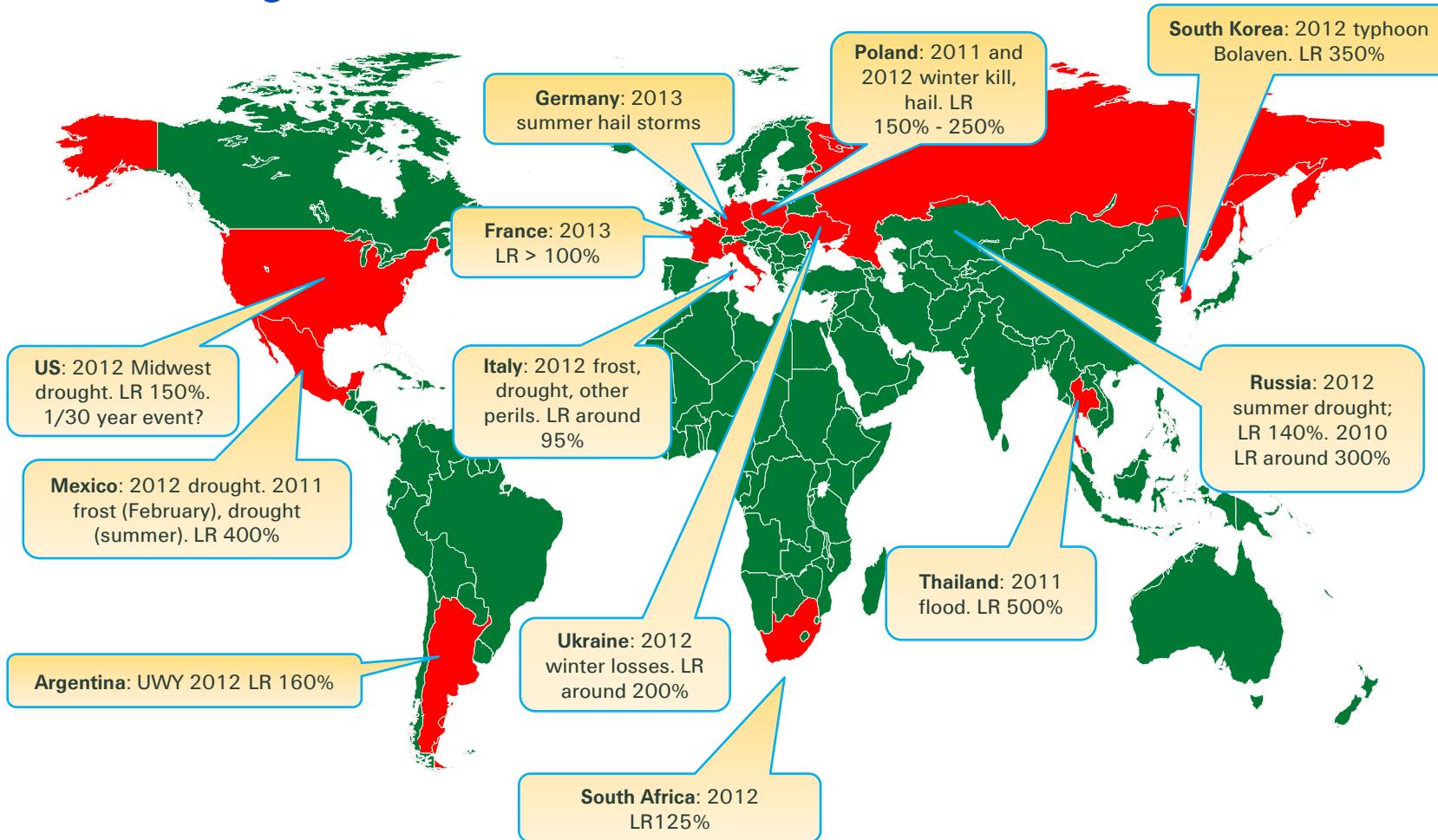
# Context: Challenges in Agriculture



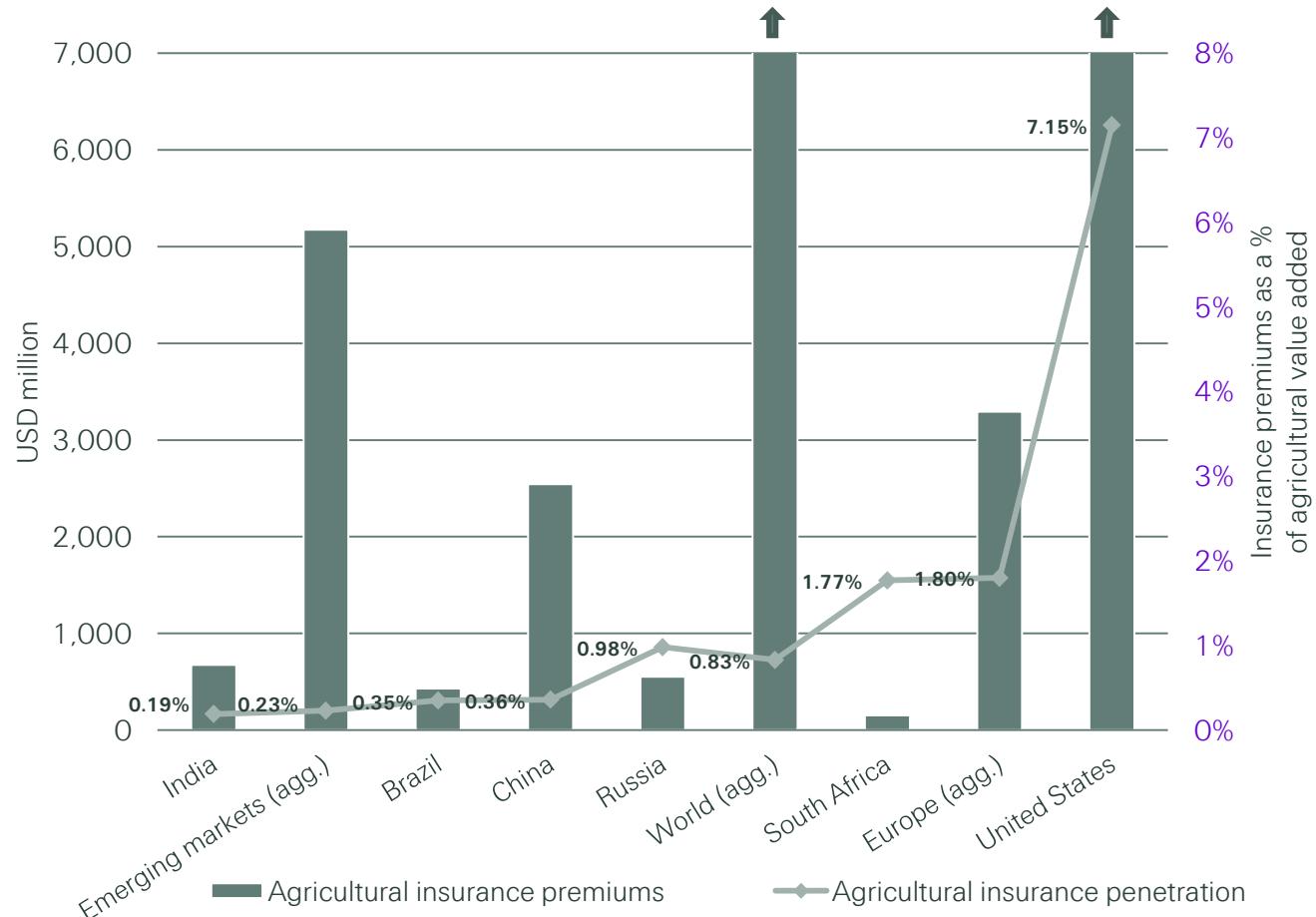
→ We need to keep farmers farming!

# Agriculture is a risky business

## Selected large loss events 2011-13



.. but agricultural insurance penetration in many parts of the world is very low...



Source: Swiss Re Economic Research & Consulting, 2009 data

## ... notwithstanding significant benefits of insurance

### Securing liquidity

- Fulfilment of obligations in case of a disastrous loss
- Avoiding sale of assets
- Reducing reliance on government post-disaster aid

### Enabling investments

- Enabling farmers to invest (other crops, extended surface, fertilizers, machinery, irrigation, etc)
- Reducing risks for investors

### Access to Credit

- Insurance as a collateral for credit
- No need to pledge other assets

# What is needed for a sustainable agricultural insurance scheme for smallholders?



- Cost effective and simple products
  - Effective distribution (alternative channels)
  - Effective claims adjustment process
    - index products, remote sensing, community based
  - Effective administration (mobile platform)
- Infrastructure
  - Data
  - Payment systems
- Incentives
  - Awareness & training
  - Premium subsidies
  - Conducive regulatory environment

# Effective distribution & administration

## Alternative channels & mobile platforms



### Effective distribution

- agro input providers, distributors and/or offtakers
- (agro) banks, MFIs
- government networks

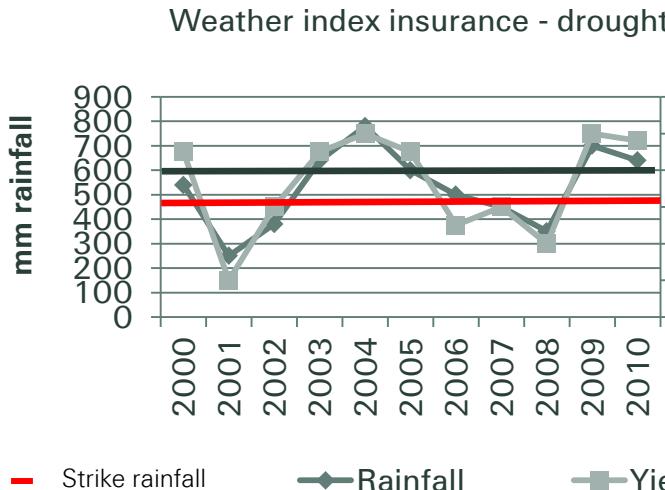


### Effective administration

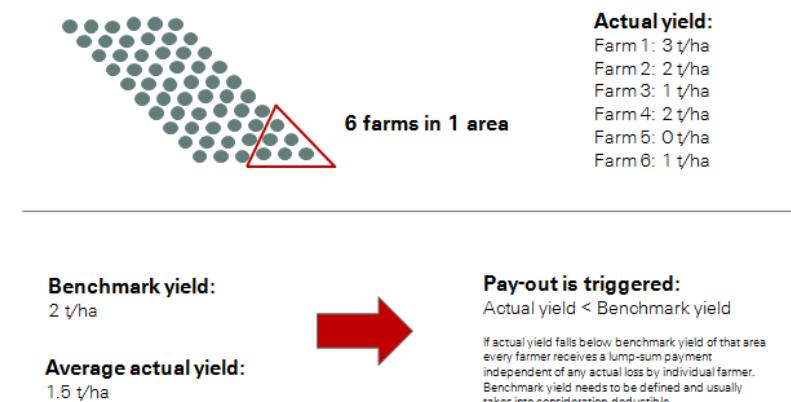
- mobile platform for policy administration and payments

# Effective claims adjustment

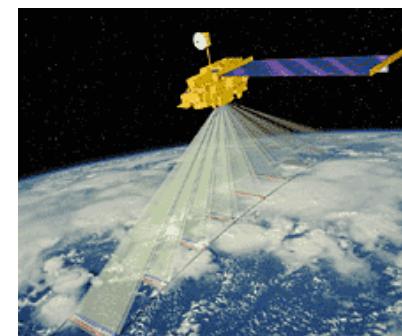
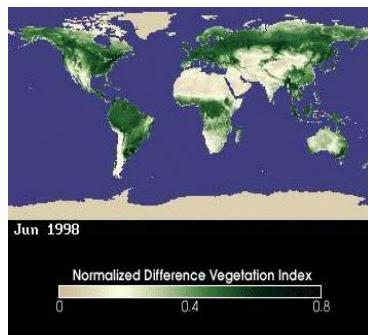
## Index-based solutions and remote sensing



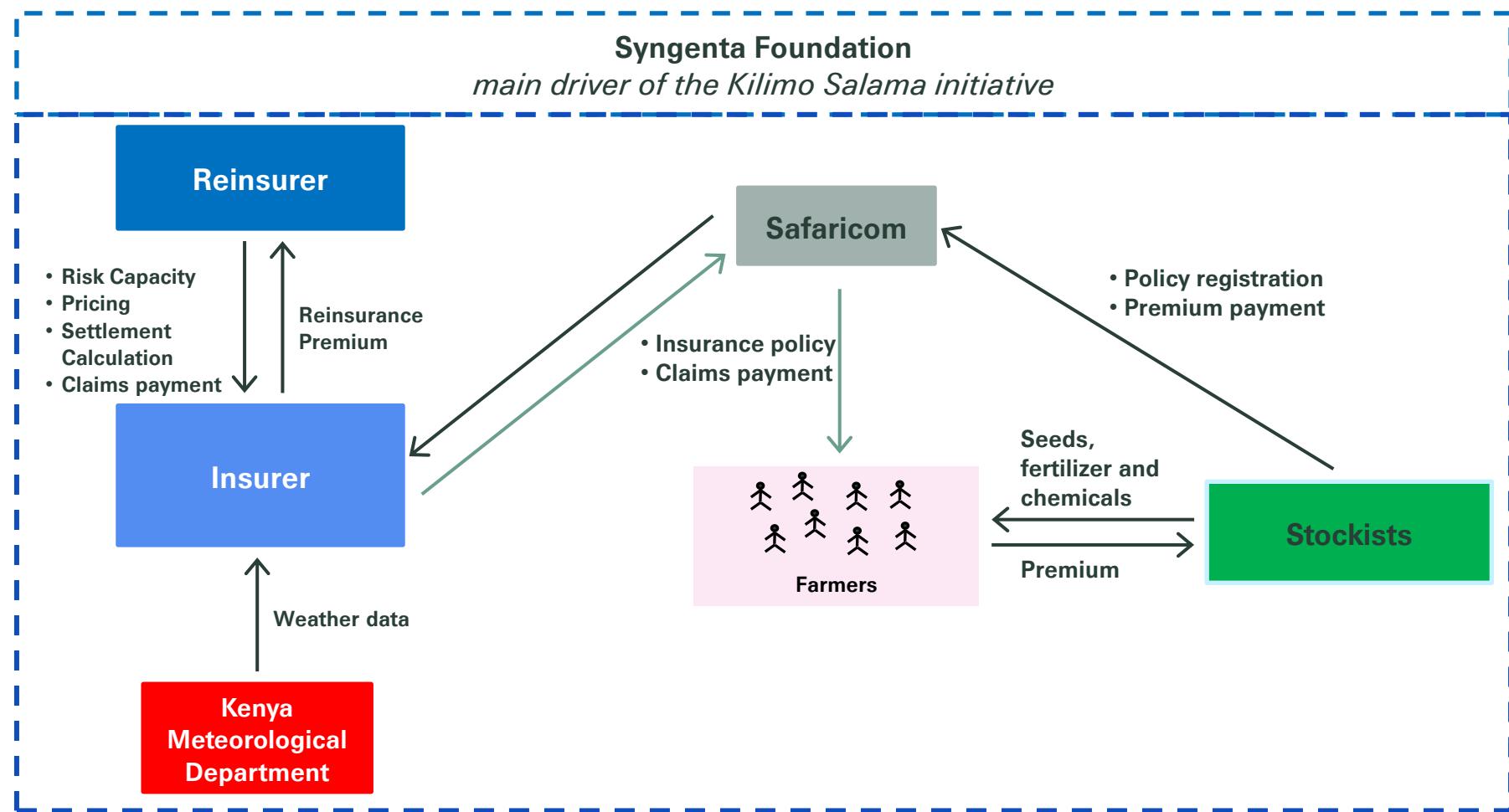
Area-yield index insurance



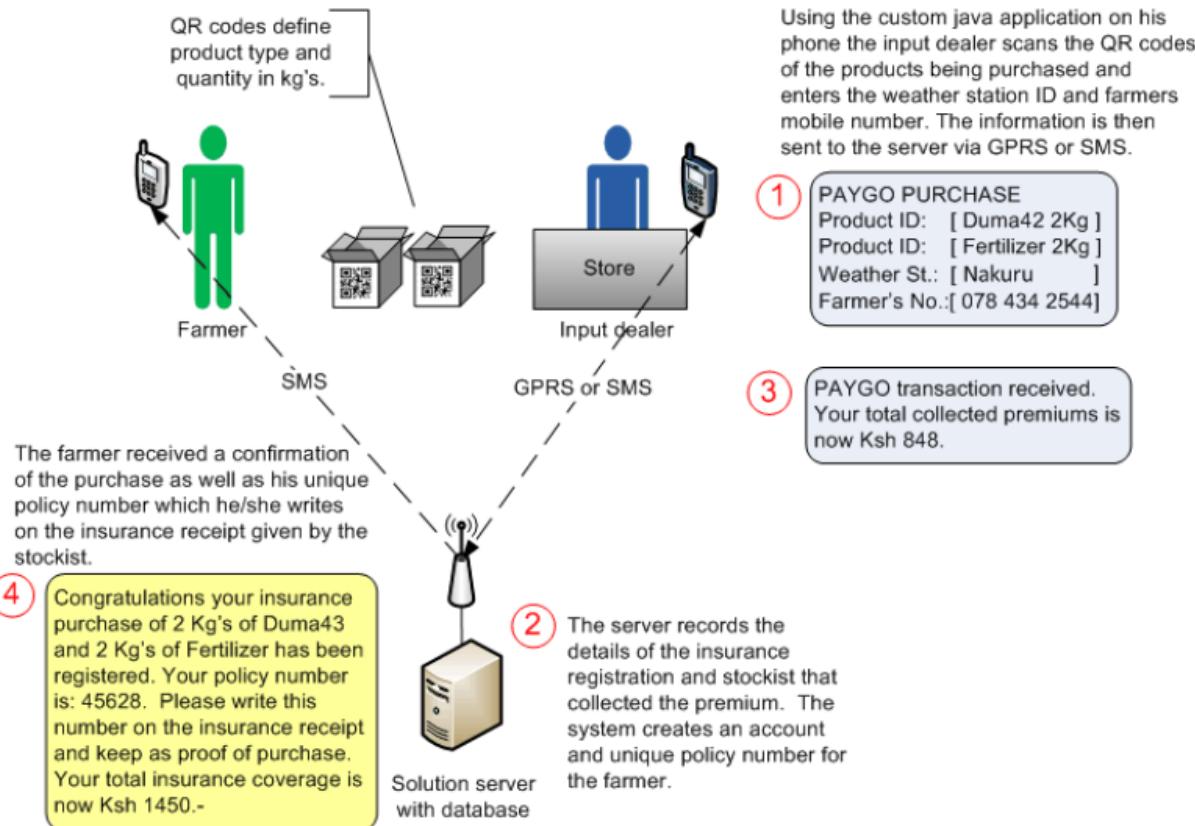
Use of remote sensing technology



# Case Study Kenya: Kilimo Salama ("Safe Agriculture")



# Case Study Kenya: Kilimo Salama purchase process



Technology used

SMS

Custom Java application

M-Pesa

# Case study Vietnam: National Rice Insurance Scheme Pilot

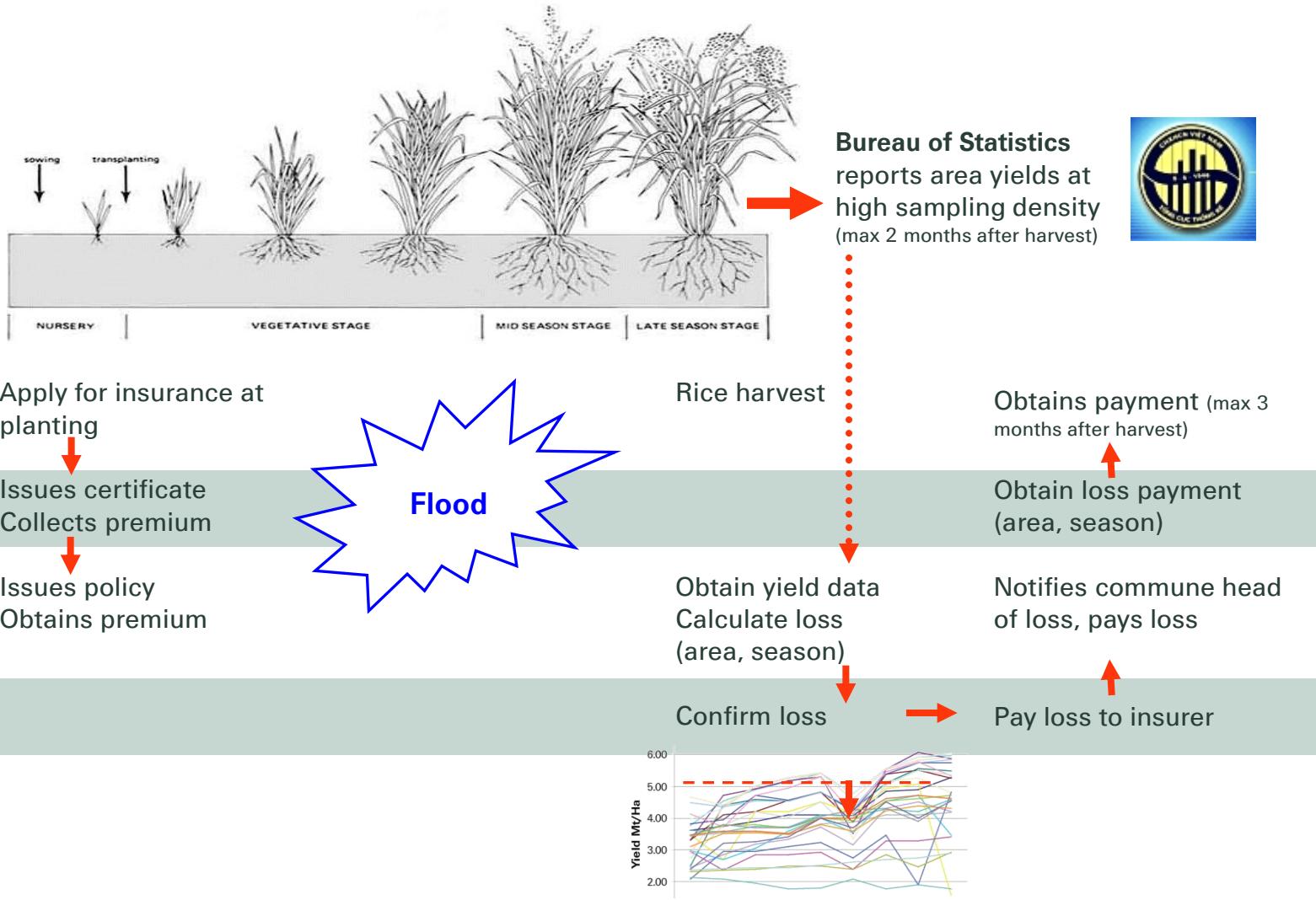


## Solution features

- Insured perils: storm, flood, drought, cold spells, frost, tsunami, yellow dwarfs, leaf curl, brown plant hoppers and rice black-streaked dwarf virus
- Targets small farmers with an average farm size of 1 hectare that cultivate up to four rice crops per year
- Trigger: Set at 80% of the average yield over the last 5 seasons (based on official commune yield data)
- Shortfall in yield is multiplied by the pre-agreed price per ton of rice and the area planted
- Time horizon: 2011– 2013 pilot in 7 provinces

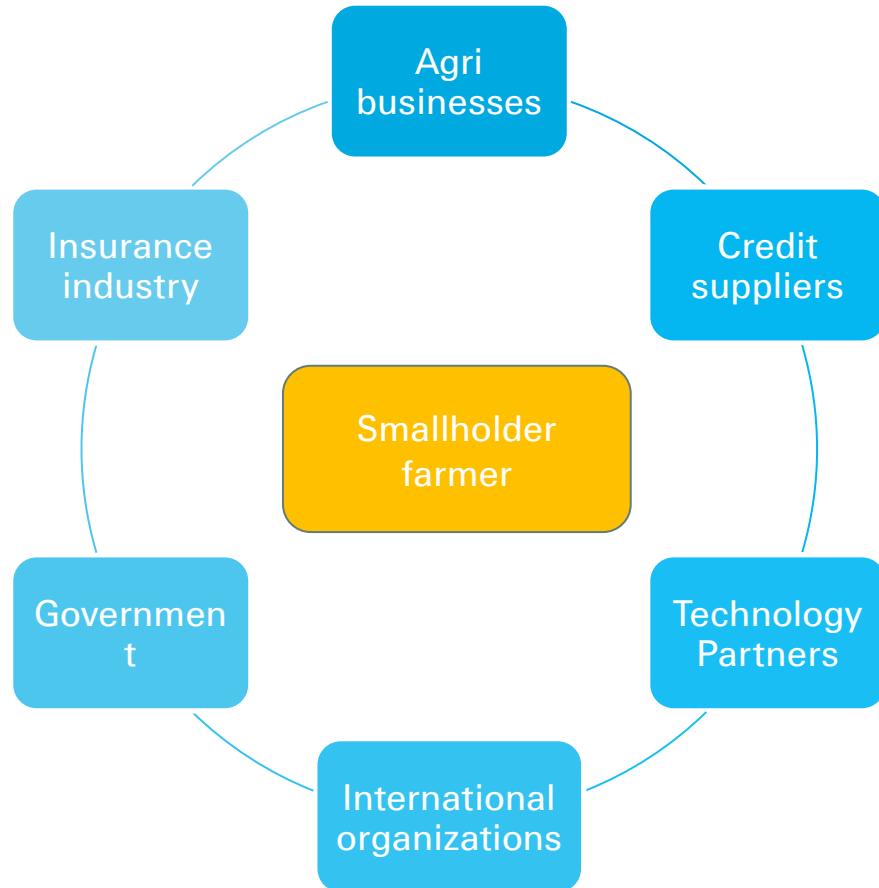
# Case study Vietnam

## Area yield index



# Conclusion

## Multi-stakeholder effort required



### AGRI BUSINESSES

distribution, awareness building and potentially partial financing (loyalty scheme)

### CREDIT SUPPLIERS

national/ rural banks, MFI's to extend credit and potentially distribution/ administration support

### TECHNOLOGY PARTNERS

cost efficient administration such as automated policy registration, premium and claims payments as well as bulk claims adjustment via remote sensing

### INTERNATIONAL ORGANIZATIONS

Pilot scalable programmes, enabling technology & necessary resources such as weather stations

### GOVERNMENT

enabling environment, financial and logistics support

### INSURANCE INDUSTRY

cost-effective solutions based on twin objectives of scalability and sustainability



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