

# SCALING UP INSURANCE

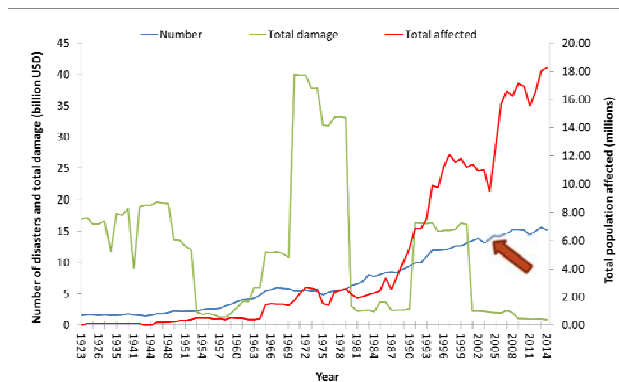
SVRK Prabhakar

## Today's Thought Plan

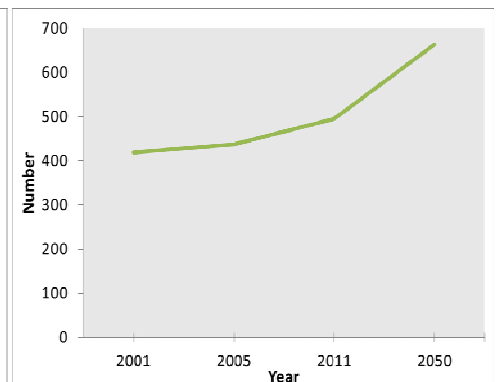
- Agricultural production risks are growing and buffering of resultant financial shocks is important
- Risk insurance can be promising but is facing important limitations in scaling up
- There are examples addressing these limitations that could leapfrog adoption of insurance
- Scaling up is possible if underlying risk governance issues are addressed

# Increasing Natural Disasters and Impacts

- Increasing number of natural hazards (climate change?)
- Increased reporting of natural disasters
- More people are moving into hazard prone regions (e.g. river flood plains, Fig on the right)
- A combination of all the above

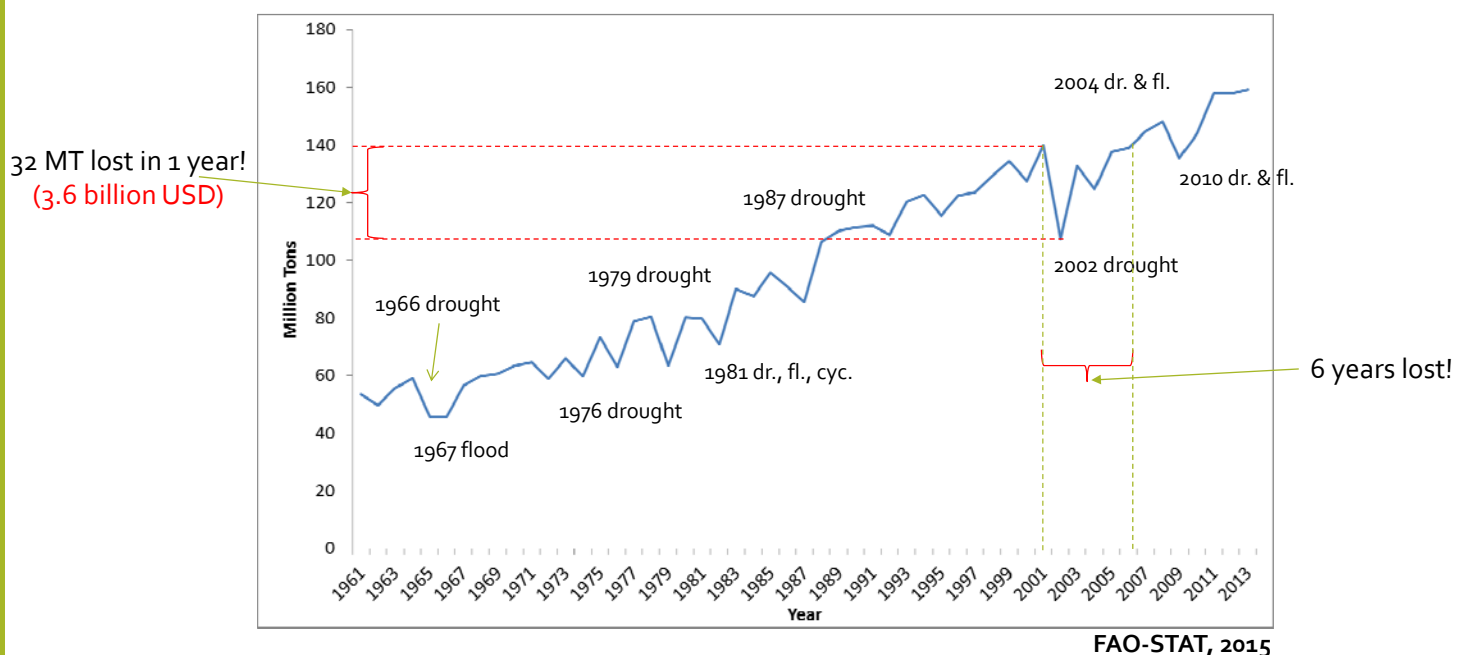


Asia: Trend in the number of reported storms (EM-DAT, 2015)



India: Population (million) in the flood plains of the Ganges basin (2050 figures are projections)

## Climate Impacts Crop Production: Paddy in India



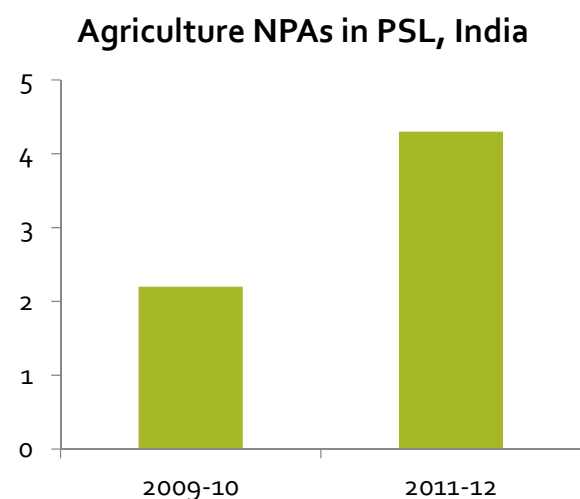
Agriculture being primary input provider, such a shock will have rippling effects on the entire economy!

# Long Lasting Effects of a Single Disaster Event



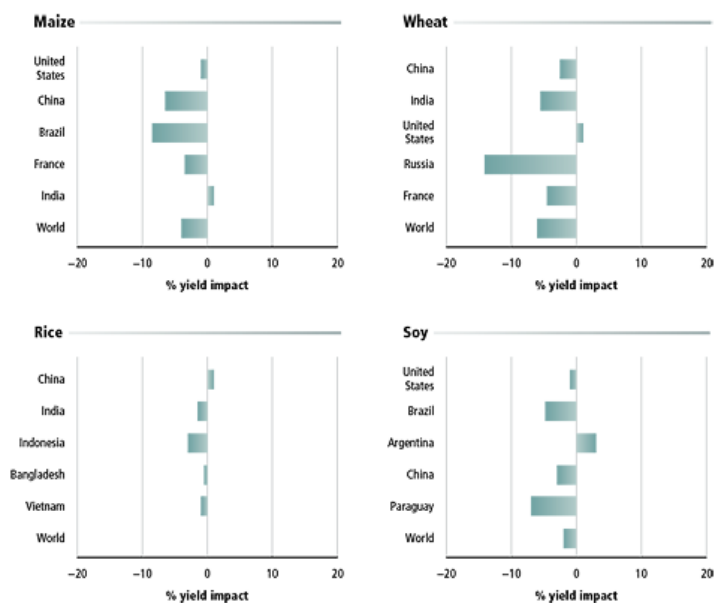
## Impact on Farm Income: Impact of 2010 Drought on NPL of Banks in India

- Increase in farm loan defaults (figure on the right).
- Increased burden on government: farm loan waivers to the tune of **14.4 billion US\$ in 2008** by GOI, in comparison GOI spent only **~163 million USD on insurance in 2008**.



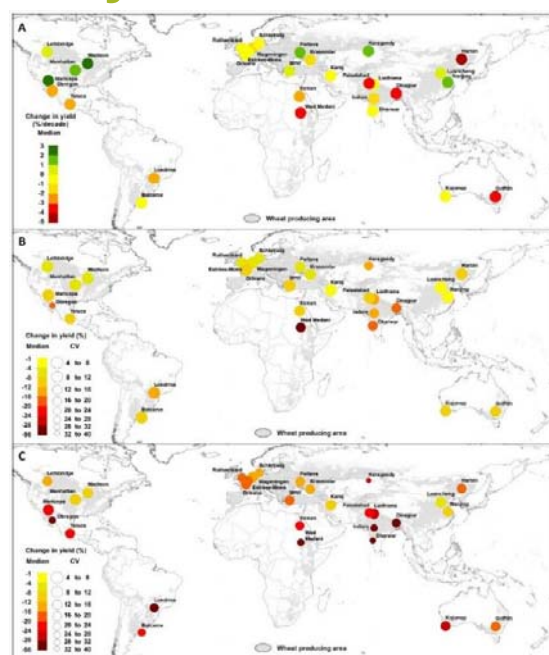
Source: RBI, 2014

## Estimated net impact of climate trends for 1980–2008



Source: Lobell et al., 2011

## Projected trends!



Source: Asseng et al., 2015

## Means of Buffering Impacts and Issues

Means	Issues
Better crop varieties	Often costly, spurious seeds, IPR and need to buy every year
Loan waivers	Costly on national budget, political influence, no-proper scrutiny of loss differentiation, mostly rich gets benefited and corruption
Expand irrigation facilities	High investment costs, declining rainfall and increasing rainfall variation may not buffer especially for the tail-end farmers
Livelihood diversification	Poor rural economy with low demand especially during drought and flood times; may promote migration
Input subsidies	Often rich gets benefited; high cost to the government; not useful when conditions are not congenial for cropping

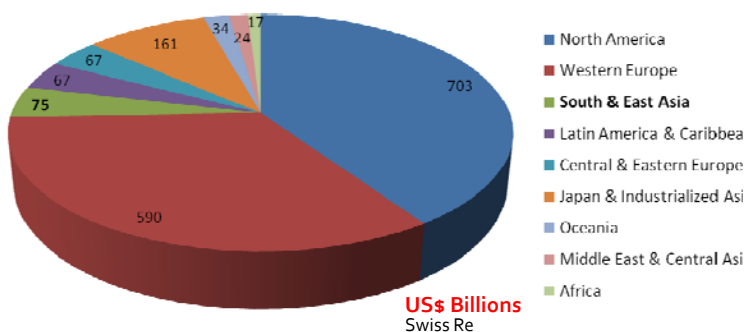
# Risk Insurance

- In agriculture sector, primarily introduced as a means of buffering economic shocks from natural hazards
- If designed well, insurance can provide several benefits
  - Emphasis on **risk mitigation** compared to response
  - Provides a **cost-effective** way of coping financial impacts
  - Covers the **residual risks** uncovered by other risk mitigation mechanisms.
  - Provides opportunities for **public-private partnerships**.
  - Helps communities and individuals to **quickly renew and restore the livelihood** activity.
- Depending on the way the insurance is designed, the insurance mechanism can **address a variety of risks** of climatic and non-climatic nature.
- **Reduced burden on government**

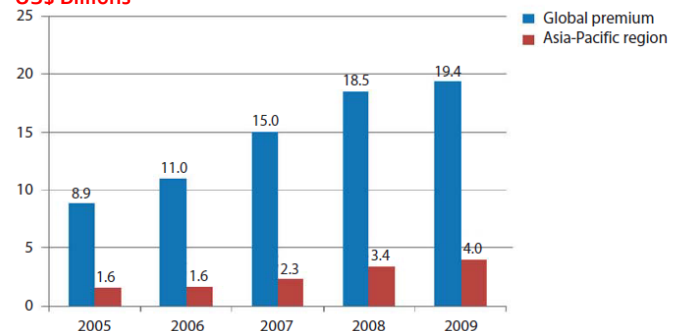
Arnold, 2008; Siamwalla and Valdes, 1986; Swiss Re, 2010

## Current Insurance Coverage

Non-life Insurance Premiums



US\$ Billions



Source: Global Premiums Iturrioz, 2010

- In contrast, Asia and Africa have one of the highest agricultural populations in the world
- The rural areas in these regions are reported to have highest poverty and seasonal unemployment where buffering income fluctuations will have significant socio-economic impacts

# Why Insurance has not Scaled Up?

- **High residual risks in agriculture:** Only 35-40% of agriculture is irrigated in Asia; low expansion of drought and flood-tolerant varieties; poor extension facilities
- Inefficiencies attributable to **adverse selection** and **moral hazard**
- **Poor availability of data** to assess risks for designing effective risk insurance systems (e.g. weather data and data on crop loss)
- **Willingness to pay:** Economic, cultural and perceptual issues with both people at risk and policy makers
- Lack of **trust** among the insured on insurance providers
- Poorly developed re-insurance industry
- And so on...
- **High insurance costs:** Costs to whom and compared to what alternative risk management strategy?

## How to overcome these limitations?

# Addressing High Insurance Costs

## Subsidy on Premium

Country	% Premium Subsidy
China	60%
Japan	49%
India	30%
Pakistan	70%
Philippines	100%*
ROK	50%

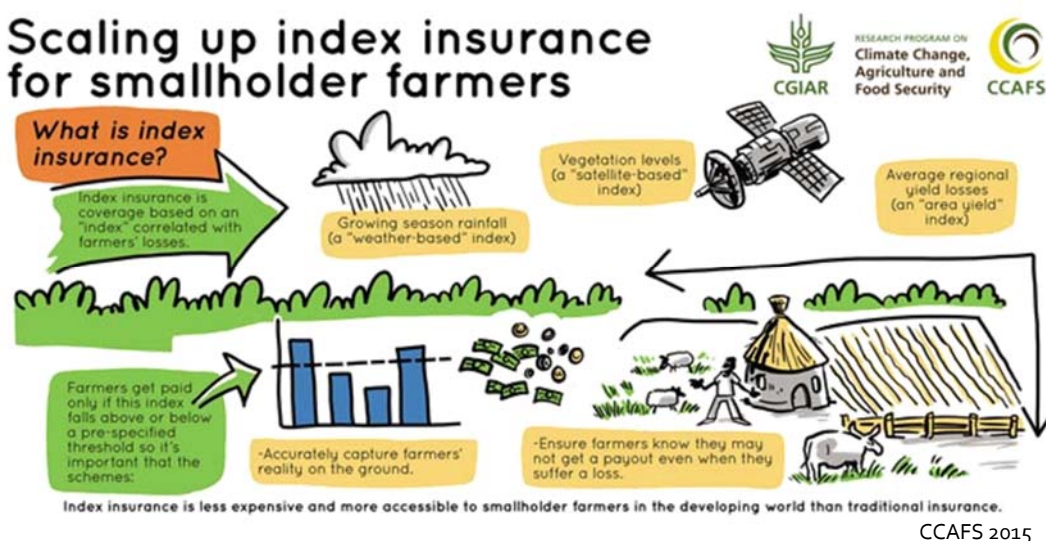
\*for subsistence farmers only  
FAO 2011

- Most governments address the insurance costs through subsidy on premium. Premium subsidies **rose 250 percent** over 2007 subsidy levels in the Asia Pacific region.
- Advantages
  - Easy to implement
  - High political impact
- Disadvantages
  - The real cost of risk is not conveyed to farmer
  - Possibility of high risk seeking behaviour
  - Disproportionately benefits rich farmers
  - Overall insurance costs remain same or even higher

# Addressing High Insurance Costs

## Technology: Index insurance

### Scaling up index insurance for smallholder farmers



- Reduction in transaction costs
- Greater reach to all size of farms (greater coverage)
- Reduces moral hazard and adverse selection problems
- Reduces distress sales due to quick insurance payouts

## Willingness to Pay

### Savings-Linked Insurance (Unit Linked Insurance Plan)



- Cheaper premium
- Poor households can have quick access to finances (overdraft with withdrawal on premium) and hence will not feel deprived of money for long periods of time
- Interest earned on savings can provide additional advantage: Promotes savings
- Help build assets in the long-term while protection against catastrophic risks
- Innovations in savings-linked insurance include designing insurance products based on interest earned on savings could substantially reduce the premium burden on insurance holders

# Innovative Solutions

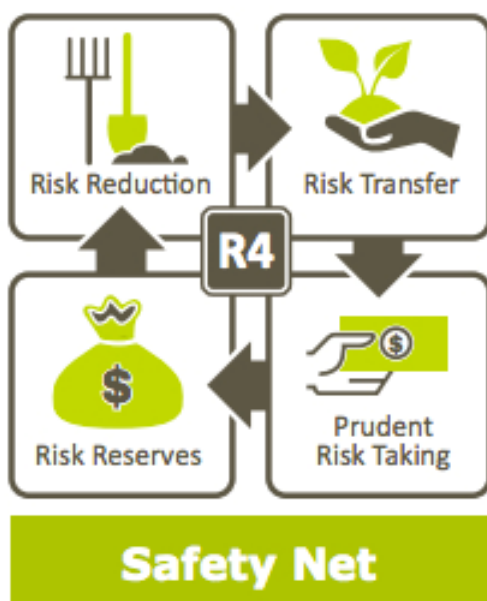
- **Combining Insurance with Payment of Ecosystem Services**

- Payment of ecosystem services and carbon capture and sequestration proceeds could be linked to insurance premiums and or investments made on risk mitigation options that can generate substantial PES proceeds.
- E.g. certain types of intensive row-cropping systems and ecological farm scapes can promote ecosystem services such as a clean and well-regulated water supply, biodiversity, natural habitats for conservation and recreation, climate stabilization, and aesthetic and cultural amenities such as vibrant farm scapes etc. (Robertson et al. 2014).

- **Combining insurance with social security programs**

- 40% of global population is not protected and 75% are inadequately protected
- Combining social security and insurance can help extend social protection to under-served populations and can reduce the overall costs of insurance for the vulnerable sections of the population while extending financial inclusion benefits

## Bundling Approaches



WFP 2016

- Bundling of risk management options can have synergistic impact on the overall insurance costs
- R4 Rural Resilience Initiative of Oxfam, WFP
  - Risk reduction through water harvesting and other activities through which farmers can earn vouchers to pay for their insurance
  - Risk transfer through insurance: Partly subsidized and partly paid by the participating farmers
  - Provide avenues for livelihood diversification for prudent risk taking
  - Promote savings which act as risk reserves



## Scaling up: Issues to be addressed

- There is a need to promote site-specific solutions rather than one-fits all strategy in a top-down manner as is done in most government administered insurance programs
- Building Capacity [and provide enabling environment]
  - of the insurance supply chain to deliver diverse insurance products
  - of government to work with private agencies and
  - of private agencies to work with governments
- Building the trust among the communities and insurance delivery agencies is at most importance and this is where formulation of insurance regulation plays a major role. Mutual insurance model?
- Broad vs narrow definition of risk
- Data gaps need to be addressed. Investment in remote sensing applications for developing better proxy index insurance in areas where rainfall data is not available
- Investment in risk mitigation including providing efficient dependable irrigation facilities, better crop varieties, building the capacity of farmers and extension agencies etc.

# THANK YOU!

---

Prabhakar@iges.or.jp