



PROMOTING RISK INSURANCE IN THE ASIA-PACIFIC REGION: BOTTOM-UP LESSONS FOR THE FUTURE CLIMATE REGIME UNDER UNFCCC

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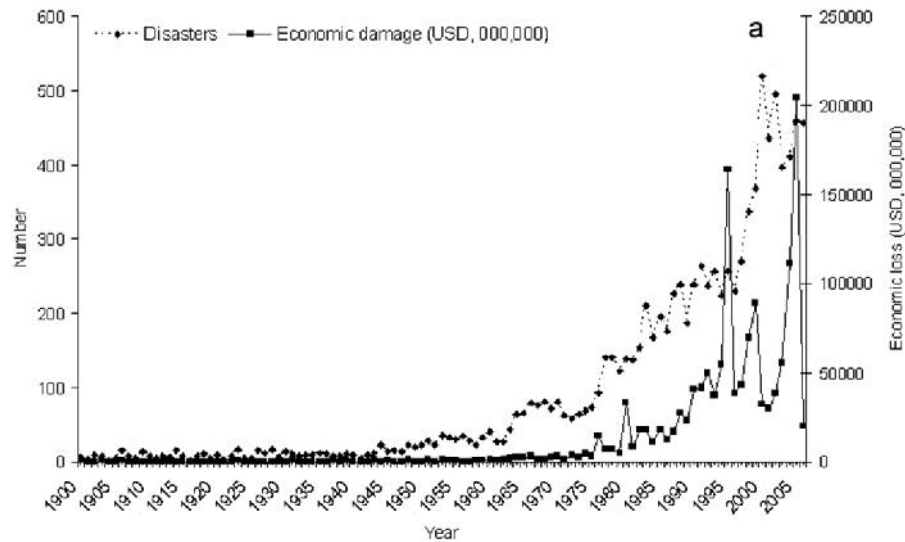
Based on Paper: Prabhakar S.V.R.K. et al., 2013. Promoting Risk
Insurance in the Asia-Pacific Region: Lessons from the Ground for the
Future Climate Regime under NFCCC, In Schimdt and Klein., Climate
Change Adaptation in Practice: From strategy development to
implementation, Wiley Blackwell.

OUTLINE

- Disaster trends
- Development, disasters and climate change adaptation
- Current risk insurance approaches
- Challenges faced by insurance system
- Way forward

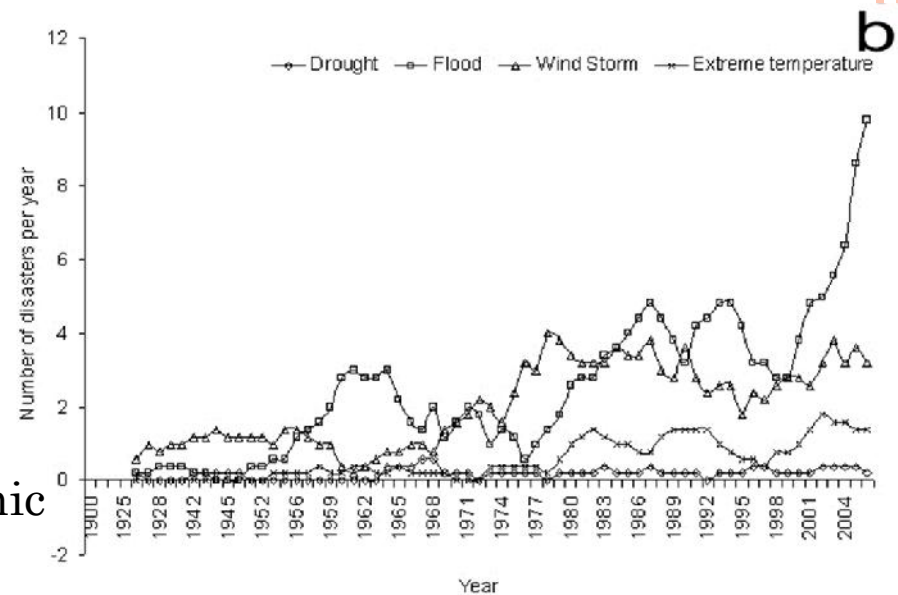


PAST DISASTER TRENDS



Global: Number of disasters and economic damage (Prabhakar et al., 2009)

India: Number of disasters and economic Damage (Prabhakar et al., 2009)



REASONS BEHIND INCREASING TRENDS OF NATURAL DISASTERS

- Increasing population density in vulnerable areas
- Increasing number of natural hazards (climate change?)
Munich Re (2007): The frequency of hydro-meteorological hazards have increased between 1960 and 2005.
- Increased reporting of natural disasters
- A combination of all the above



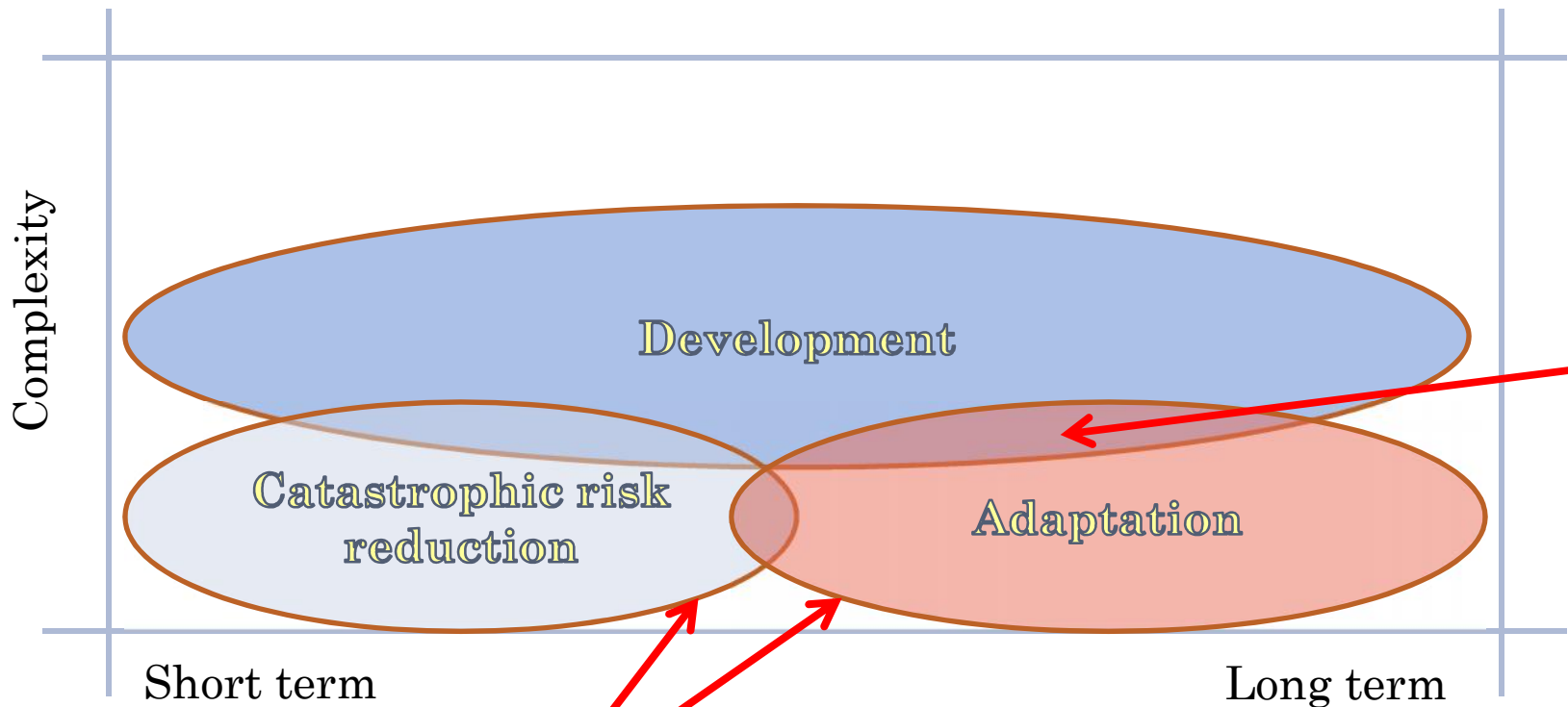
DIFFERENTIAL IMPACTS OF DISASTERS ON DEVELOPED AND DEVELOPING COUNTRIES

| Country | GDP/cap. (USD) | Population (million) | Number of typhoons | Fatalities | Fatalities per event |
|-------------|----------------|----------------------|--------------------|------------|----------------------|
| Japan | 38,160 | 126 | 13 | 352 | 27 |
| Philippines | 1,200 | 74 | 39 | 6,835 | 175 |
| Bangladesh | 360 | 124 | 14 | 151,045 | 10,788 |

Source: Mechler, 2004



DRR AND CLIMATE CHANGE ADAPTATION



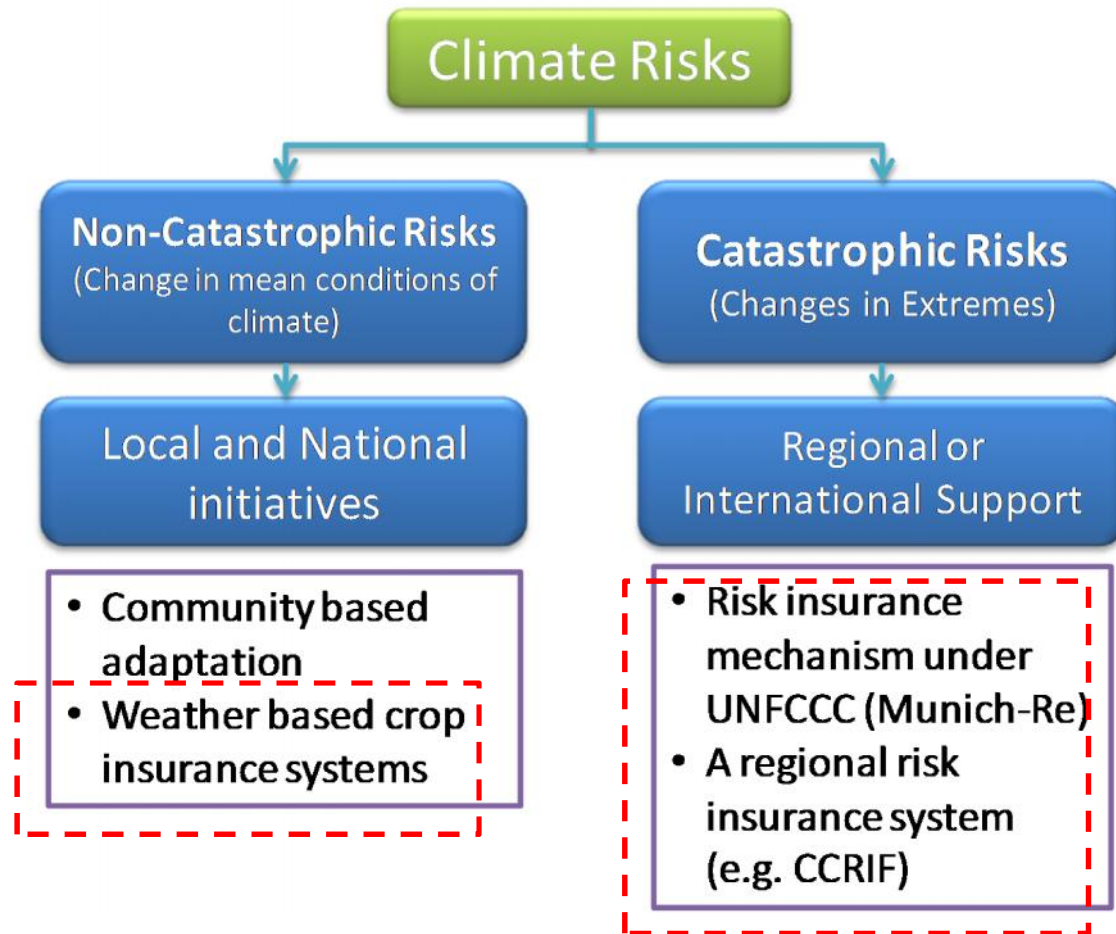
Climate change 'additionality'

How much to mainstream?

Source: Klein, 2002



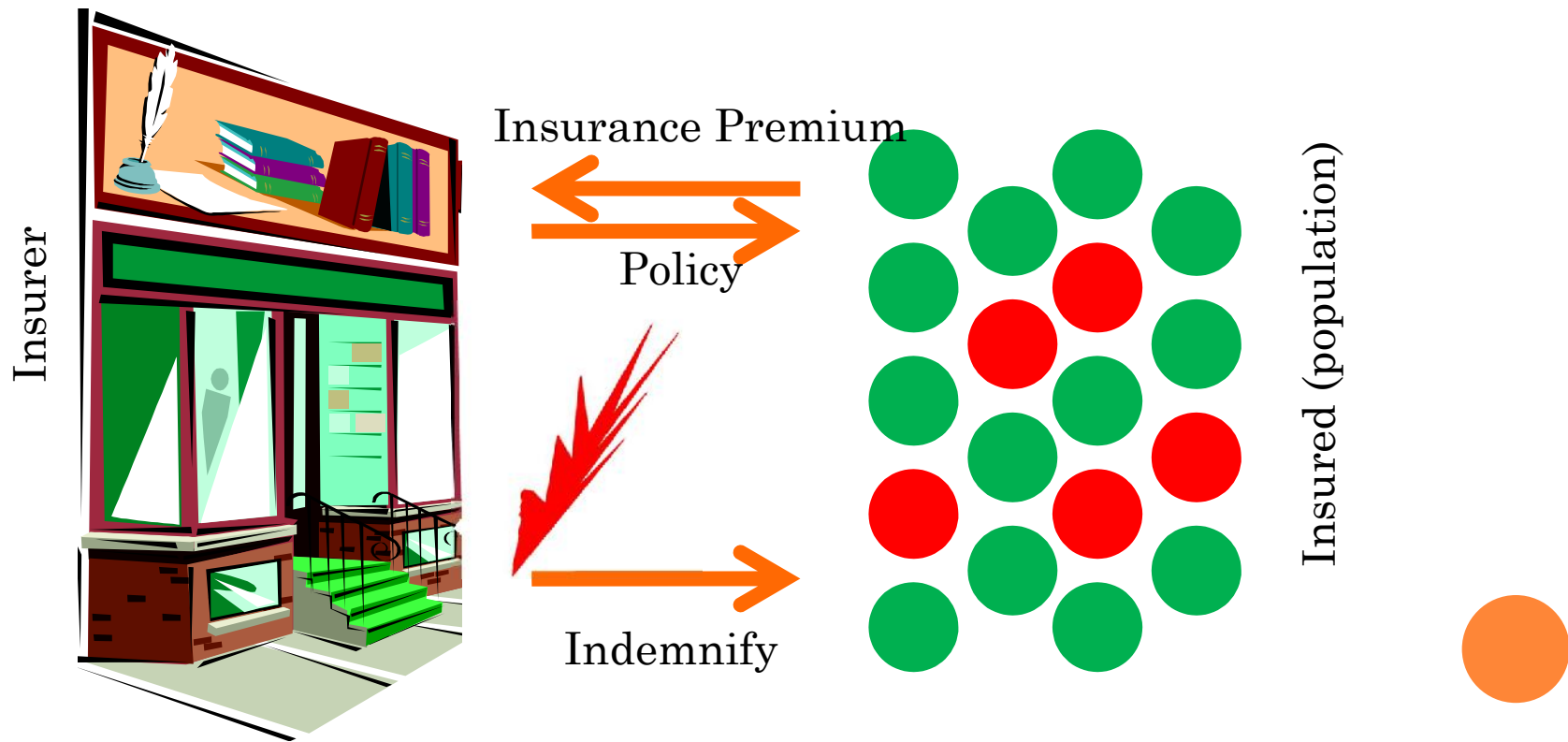
A TWO-PRONGED APPROACH FOR CLIMATE RISK REDUCTION



- a. Non-catastrophic risks: Risks from change of mean state of climate
 - a. Within the capacity of national systems
 - b. Local knowledge is useful
E.g. Community based adaptation, weather based crop insurance schemes etc.
- b. Catastrophic risks: Risks from changes in extremes
 - a. Need external assistance in terms of finances and experiences
 - b. Local knowledge often fall short
 - c. E.g. Global and regional catastrophic risk insurance schemes, adaptation networks

WHAT IS RISK INSURANCE?

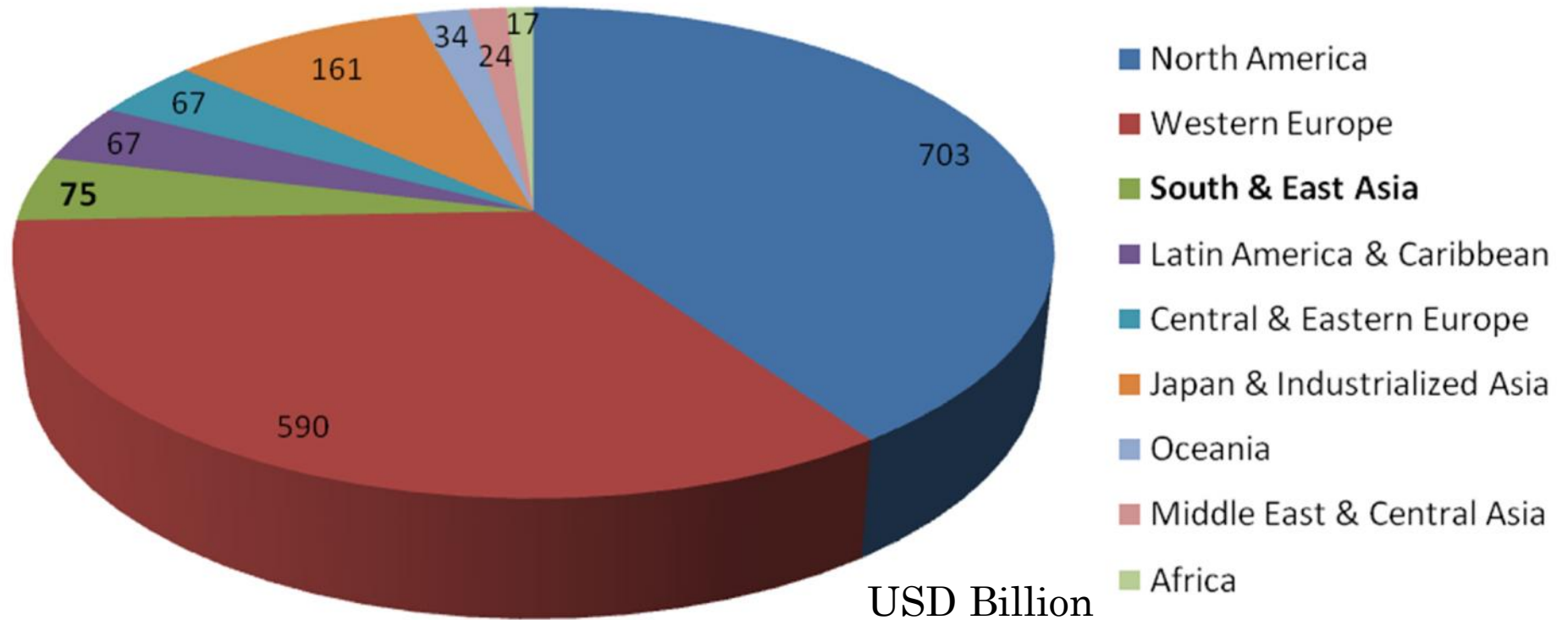
- Transfer the risk for a payment to a company that can hedge the risks



RISK INSURANCE

- Emphasis on risk mitigation compared to response
- Provides a cost-effective way of coping financial impacts
- Covers the residual risks uncovered by the other risk reduction mechanisms.
- Stabilizes rural incomes: reduce the adverse effects on income fluctuation and socio-economic development.
- Provides opportunities for public-private partnerships.
- Reduced burden on government resources for post-disaster relief and reconstruction.
- 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 wide variety of risks emanating from climatic and non-climatic sources.

NON-LIFE INSURANCE PREMIUMS



(SwissRe, 2010)

WHAT DO WE WANT TO KNOW?

- Is the insurance approach working on the ground as expected?
- What national level policy provisions are necessary to scale-up the effective insurance products?
- What are the challenges faced and to what extent solutions are being implemented on the ground?
- In particular, what innovative approaches are being promoted to reduce the cost of insurance?



SPEAKERS FOR TODAY

- Dr Dhruvad Chaudhury, ICIMOD, Nepal: What risk insurance approaches will work in Hindu Kush region?
- Prof Mohd Rassid Hussin, University Utara Malaysia: Place of risk insurance in risk management and experiences designing risk insurance policies in Malaysia
- Dr Corazon PB. Claudio, EARTH Institute Asia, Inc., Philippines: Risk insurance approaches in Philippines: What is working and what is not
- Mr. Takashi Hongo, Mitsui Global Strategic Studies Institute: Approaches to risk insurance and experiences from working in Thailand
- Mr. Arup Chatterjee, Asian Development Bank, Manila: Reducing cost and regulating different forms of crop insurance: Issues and way forward



FEW EXAMPLES OF RISK INSURANCE

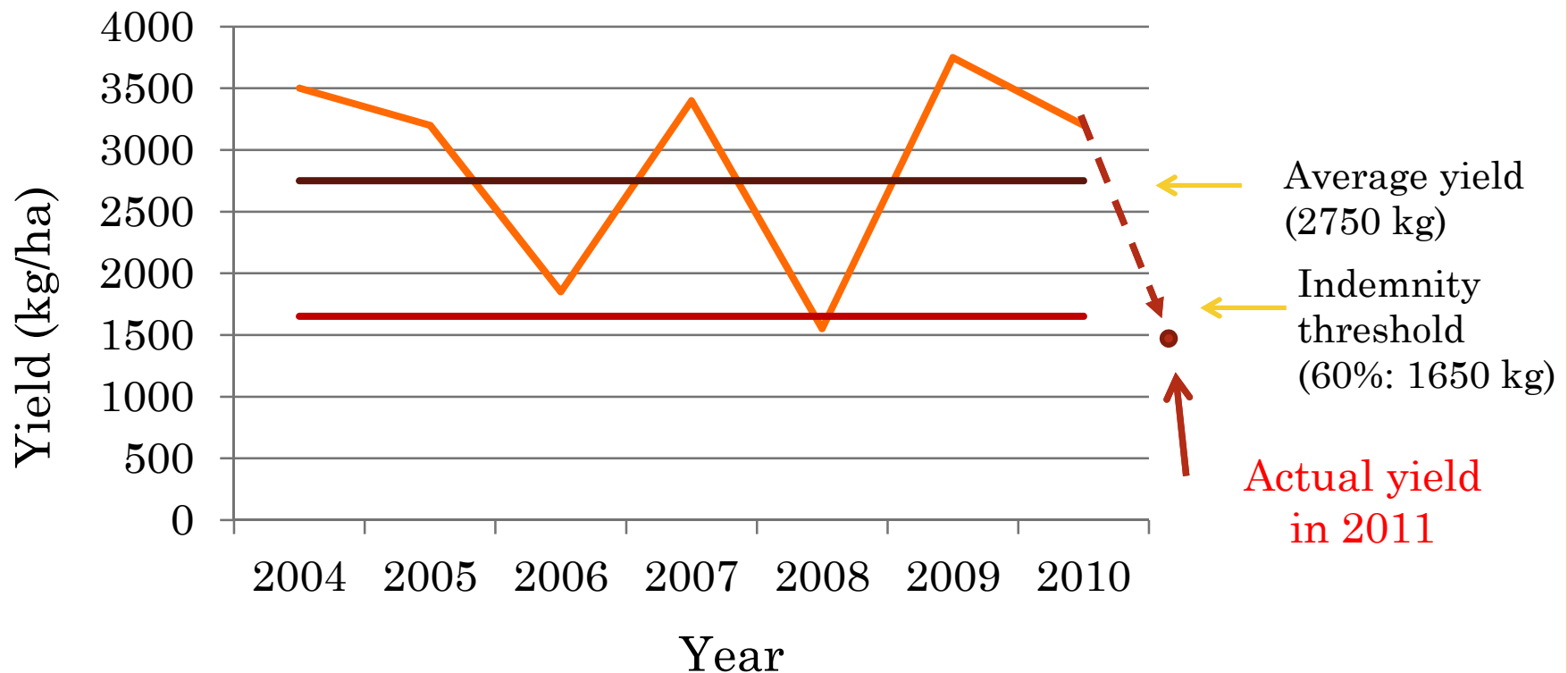
| S No | Case | Geographical coverage | Hazards covered | Direct benefactor | Payment trigger |
|------|-----------------------------------------------|-----------------------|-------------------------------------------|----------------------|-----------------|
| 1 | Caribbean Catastrophe Risk Insurance Facility | Caribbean (Regional) | Hurricane and earthquakes | National governments | Parametric |
| 2 | Mexico Cat Bonds | Mexico | Earthquakes | Individuals | Parametric |
| 3 | Turkish catastrophic insurance pool | Turkey | Multi-peril (Currently earthquake only) | Building owners | Indemnity |
| 4 | BASIX-ICICI Lambard micro insurance | Andhra Pradesh, India | Monsoon failures | Farmers | Index |
| → 5 | Indian National Agricultural Insurance Scheme | All over India | Crop failure due to a range of conditions | Farmers | Indemnity |
| 6 | Agricultural weather index insurance | Thailand | Crop failure (Maize and rice) | Farmers | Index |
| 7 | Crop insurance in Japan | Japan | Crop failure (Rice) | Farmers | Indemnity |

NATIONAL AGRICULTURAL INSURANCE SCHEME

- Initiated in 1979, it is improved over the years (1999) and made national program (1985)
- Yield guarantee scheme
- Compulsory for all borrowers and optional for non-borrowers
- Indemnity based insurance (the level of indemnity can be chosen by the insured)



EXAMPLE TO UNDERSTAND HOW INDEMNITY BASED INSURANCE WORKS



- Sum insured by farmer: 50,000 INR (maximum claim)
- Yield reduction in year 2011: 9.1% from threshold level
- Claim: 9.1% of the 50,000 INR = 4545 INR

Data Source: K.N. Rao, 2011. Presented at IGES-TERI Workshop on Future Climate Regime.

PROBLEMS WITH YIELD GUARANTEE SCHEMES

- Yield reduction may be attributed to many factors that are either in control or not in control of the farmer
- There is no reliable means of assessing the reason behind yield loss leading to false claims by farmers



Weather based insurance




WEATHER BASED RISK INSURANCE

- Mostly applicable to agriculture and other sectors that are directly affected by the weather factors (mostly rainfall)
- Designing the weather based risk insurance need good weather data to capture spatial variability in rainfall and correlation data on yield and rainfall
- Provides greater control to the insurance agency to check unfaithful claims.




EXAMPLE: THIRUPATTUR, VELLORE DISTRICT, TAMILNADU

| Particulars | Last 3 years average | 30 years average |
|--------------------------------------------------------------------|----------------------|------------------|
| Annual rainfall | 880 mm | 1039 mm |
| Percentage of rainfall during crop season to total annual rainfall | 51% | 58% |
| Number of rainy days during cropping season | 20 days | 28 days |
| Dry spell period during the crop season | 24 days | 20 days |



Data Source: Balasubramaniyan. 2011. Presented at IGES-TERI Workshop on Future Climate Regime.

ISSUES WITH CURRENT INSURANCE SYSTEMS

- High insurance costs
 - High residual risks
 - Urban areas: Poorly developed risk mitigation options such as structural standards, land use/urban planning etc.
 - Rural/agriculture: Only 35-40% of Indian agriculture is irrigated.
 - Poorly developed re-insurance industry
 - Poor availability of data to assess risks for designing risk insurance systems (e.g. weather data and data on crop loss)
 - Cultural and perceptual issues with both people at risk and policy makers
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COMPARISON OF VARIOUS PROPOSALS UNDER UNFCCC

| Characteristics | Proposals | | | |
|--------------------------------------------------------|----------------------------------------------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| | AOSIS | MCH | Cook Islands | Switzerland |
| Target group (governments/individuals) | National Govts. of SIDS, LDCs and other devping | Govts. & individuals | National Govts. of SIDS | Regional govts. and individuals |
| Geographical coverage (national/local/regional) | Regional/National | National | National | Regional and sub-regional (insurance pillar); National (prevention pillar) |
| Source of funding | Adaptation Fund KP Adaptation Fund (existing) Other bilateral and multilateral sources | Convention funds channeled through CIP, CIAF, and CRMF | Internationally-sourced pool of funds (subsidy in establishing establishing/maintaining fund) | Global Carbon Tax Insurance pillar funded through MAF |
| Promotion of re-insurance | Yes, through conventional risk sharing and transfer instruments | Yes, through CIP | No reference to re-insurance | Yes, through public-private partnership |
| Targets premium prices | No indication for premium prices | No indication for premium prices | No indication for premium prices | Provides funding for premiums |
| Inclusion of risk mitigation component | Yes, through technical and financial support for risk reduction efforts | Yes, through the prevention pillar | Yes, mechanism funds risk reduction initiatives | Yes, through the prevention pillar |
| Reference to guidelines for implementation | No reference to guideline | Yes, under the authority and guidance of COP | No reference to guideline | Yes, defines eligible extreme events and insured damage |
| Reference to awareness | No reference to awareness | No reference to awareness | No reference to awareness | Yes, awareness generation is financed by NCCF |
| Addressing the risk data gaps | Yes, though improved risk management tools, collection and analysis of data | No reference to addressing data gaps | No reference to addressing data gaps | Yes, through small budget under the insurance pillar |
| Sustainability issues if any | No reference to sustainability | No reference to sustainability | No reference to sustainability | No reference to sustainability |

DOES THESE PROPOSALS HELP PROMOTE RISK INSURANCE?

- Limitation 1: No evidence for overcoming the issue of limited weather data and associated crop losses
- Limitation II: No evidence for promoting re-insurance in the region



DOES ASIA NEEDS A REGIONAL RISK INSURANCE FACILITY?

Africa

- Total GDP: 1.184 t USD
- GDP quartiles:
 - 1st quartile: 1.85 b USD
 - 2nd quartile: 6.37
 - 3rd quartile: 12.8
- Climatic disaster losses since 1900: 6.1 b USD
- Total affected: 338 m
- Total deaths: 0.8 m

Asia

- Total GDP: 18.52 t USD
- GDP quartiles:
 - 1st quartile: 16.6 b USD
 - 2nd quartile: 52
 - 3rd quartile: 219
- Climatic disaster losses since 1900: 63.37 b USD
- Total affected: 1.7 b
- Total deaths: 9.7 m



- Conclusions:
 - Nature of climatic disasters are different: Asia with typhoons and cyclones and Africa with droughts
 - By economic and lives losses: African region fares better
 - By economic strength of countries: Asian region fares better
- What this comparison doesn't tell us
 - How fast the individual countries could able to respond to disasters
 - How soon the affected were rehabilitated and brought to normality

Does Asia needs a regional risk insurance facility?



CONCLUSIONS

- There is a need for proposal that address the bottom-up issues.
- Each country case is different: Greater responsibility and accountability of national systems in how the risk insurance is promoted nationally
- Burden sharing at regional or sub-regional enabling mechanism: may favour some countries at the cost of others





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THANK YOU!