DIRECTORATE FOR FINANCIAL AND ENTERPRISE AFFAIRS

CONFERENCE ON CATASTROPHIC RISKS AND INSURANCE

22-23 November 2004

Financing catastrophe risk in emerging and developing countries: Challenges and Perspectives

Reinhard Mechler (IIASA)

Powerpoint presentation

This document is circulated for Session 2 of the Conference on Catastrophic Risks and Insurance, to be held on 22-23 November 2004 at the OECD Headquarters, 2 rue André Pascal, 75016 Paris, starting at 9:00 a.m.

For further information on this conference, please contact Cécile Vignial, Financial Markets Division (Cecile.Vignial@oecd.org), or Yosuke Kawakami or Morven Alexander, Outreach Unit for Financial Sector Reform (Yosuke.Kawakami@oecd.org or Morven.Alexander@oecd.org)

Financing catastrophe risk in emerging and developing countries: Challenges and Perspectives

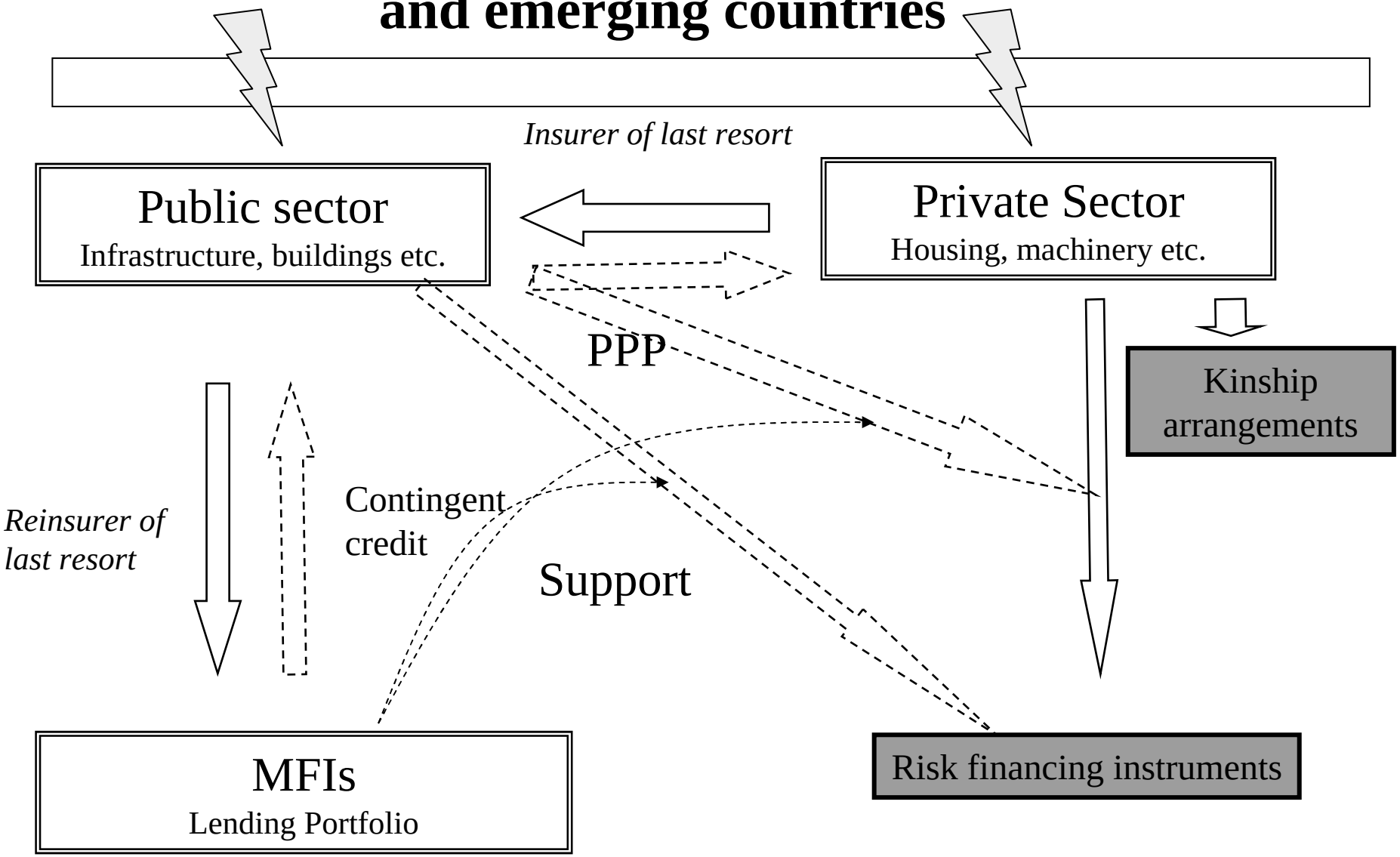
Reinhard Mechler
IIASA

OECD Conference on Catastrophic Risks and Insurance
Paris, 22-23 November 2004

Loss sharing and risk financing

Approaches	**Examples of Instruments**
Non-market risk transfer (*collective loss sharing*)	Government assistance, Kinship arrangements, Some mutual insurance arrangements, Donor assistance
Market risk transfer (*ex ante risk financing)*	Insurance and reinsurance, **Catastrophe bonds, weather derivatives**
Intertemporal risk spreading (*ex ante risk financing)*	**Contingent credit**, Reserve fund

Loss and risk financing in developing and emerging countries



Some criteria for evaluation

- Costs
  - Transaction costs
  - „Premium“
- Speed of payouts
- Basis risk
- Incentives

Private sector:
Weather derivatives in India

- Existing public crop insurance program for drought and flooding highly deficitary: premium income 1/6 of payouts:
- Substantial time lags associated with indemnity payments
- Index-based weather derivatives introduced
- Low transaction costs: rural credit channels used

Private sector:
Weather derivatives in India

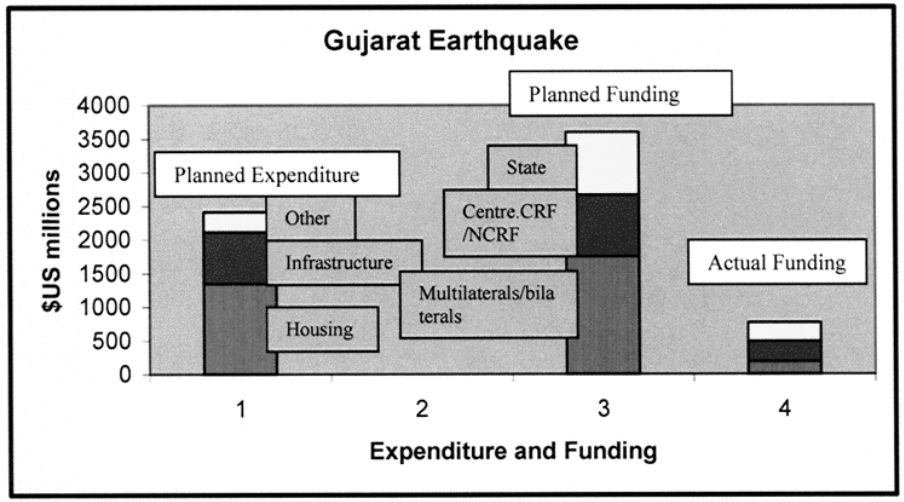
- Farmers aware of associated basis risk
- Rate on-line around 15 percent
- But: farmers appreciate quick payout of rainfall policies:
  2 weeks after trigger
- Incentives for mitigation provided

Public infrastructure losses

- Can be a significant proportion of losses
- Without timely reconstruction can cause long-term reductions in economic growth
- Need improved financial planning for assuring post-event funds

Source: EQE 2000

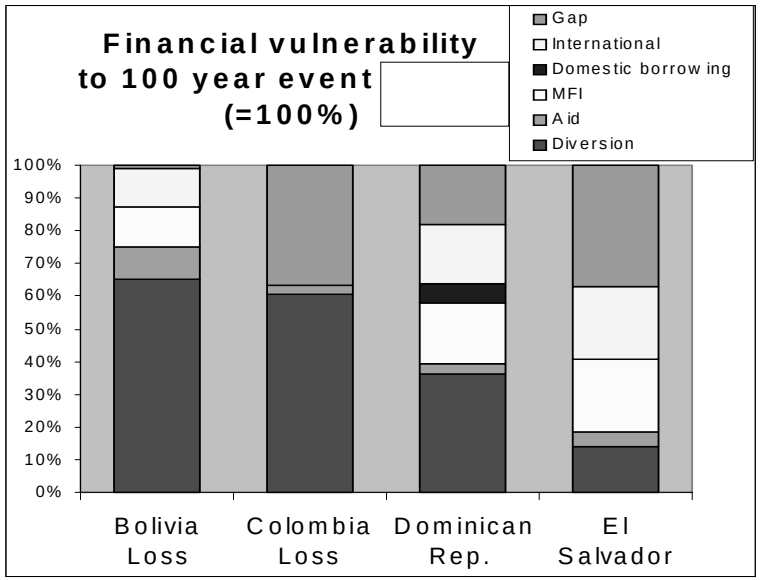
Public sector financing issues



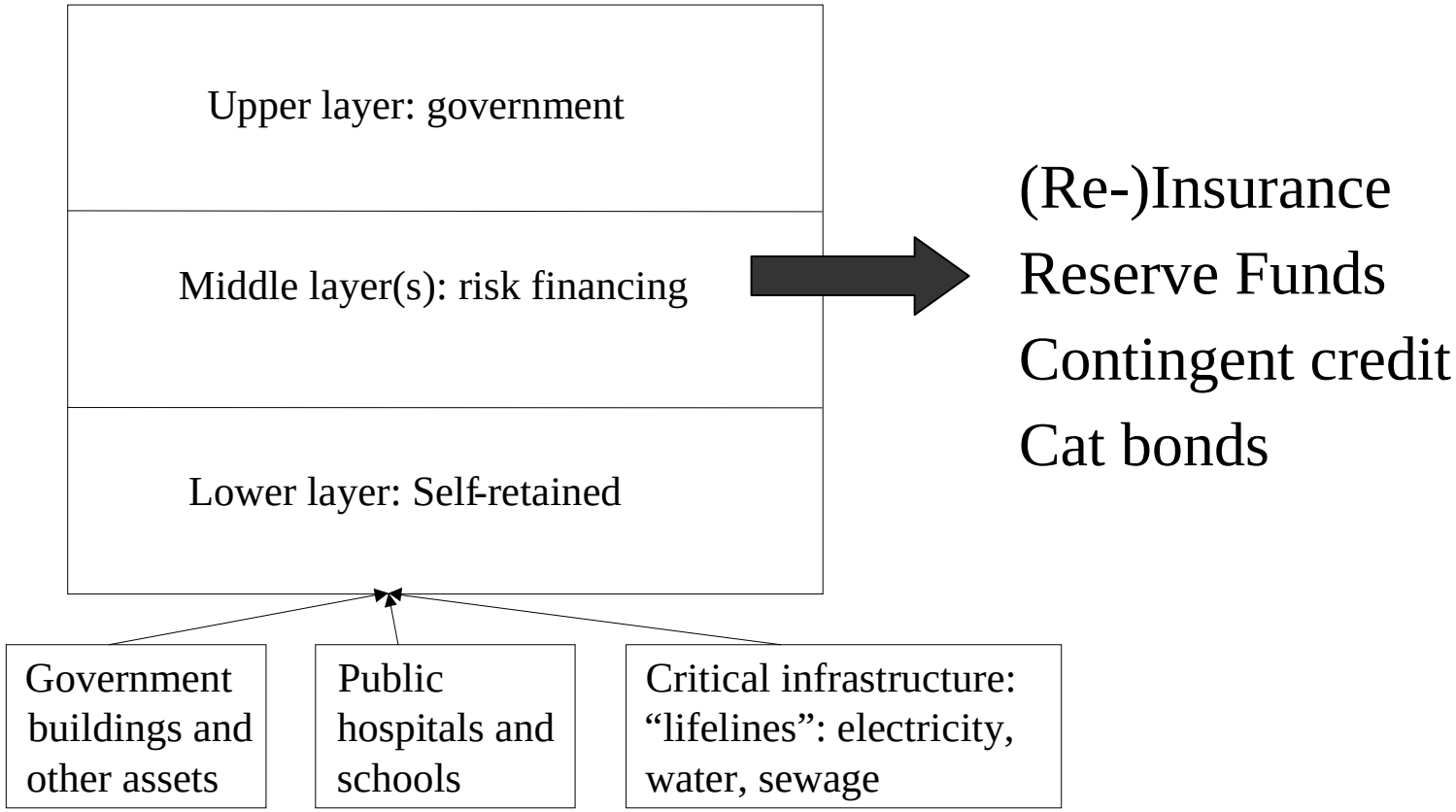
Source: World Bank 2003

Financing gaps after Gujarat earthquake

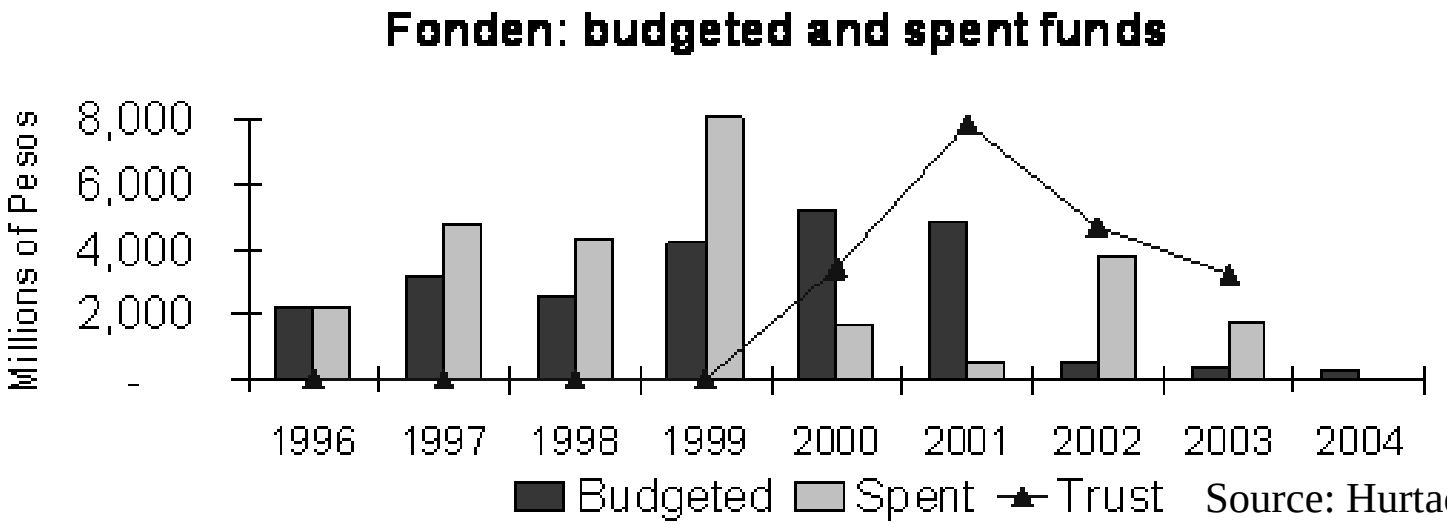
Financing gaps post-disaster to be expected in some Latin American countries



Public sector risk financing



Cat bond: Mexico

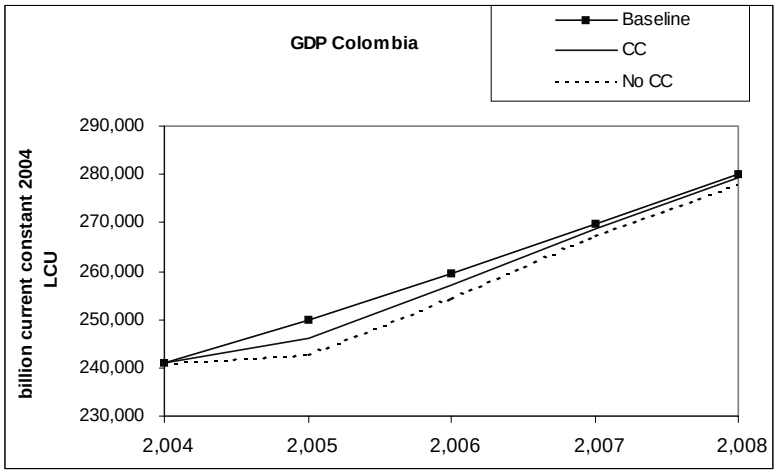


Source: Hurtado Lopez 2004

- Resources proposed for funding tend to be stripped in Congress
- Fonden resources have been reduced since 2001, spending for natural disasters is highly unpredictable
- Cat bond would provide financial security
- Avoidance of reinsurance cycle
- Model for other countries in Latin America?

Contingent credit: Colombia

- Difficult situation regarding the public financing of disaster losses: in past losses of up to 3 billion USD
- At the same time, fiscal policy heavily constrained by high external debt levels and debt service payments.
- Currently discussed: Contingent credit facility of a total amount of 150 million USD by MFI
- Benefit: quick availability of funds, but debt has to be paid back
- To be offered by financial market?



Scenario: 100 year earthquake event in 2005

Conclusions

- A number of efforts underway related to natural disaster risk financing in developing and emerging economies
- Financial market instruments can be helpful for providing quick and low-cost financing post-event
- Instruments can be used by private and public sector
- Basis risk one issue
- Incentives for mitigation can be built in