Linking Development and Climate Change Agendas

A proposal for a multi-donor regional reinsurance facility

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IIASA

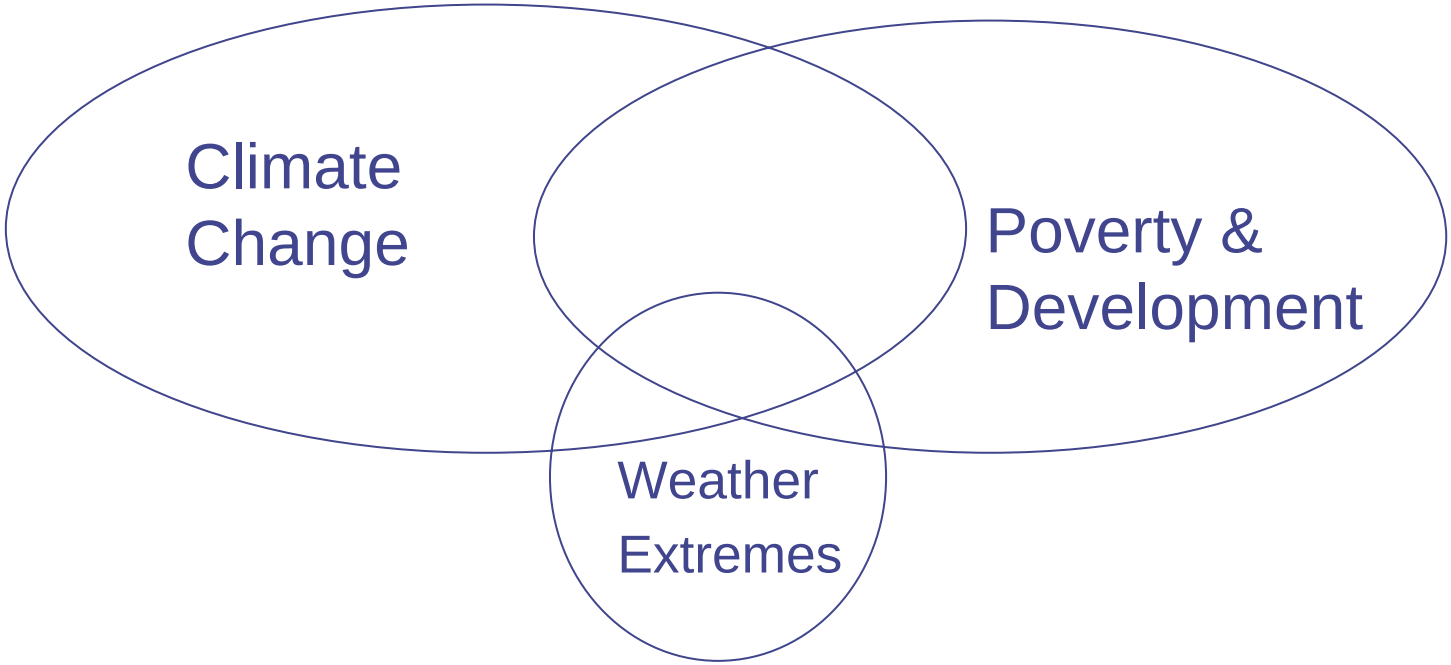
Linking Development and Climate Change Agendas

- Vision
- Policy context
- A proposal for a regional insurance facility
- 3 examples
- Next steps

Vision

Global social insurance

Policy context: 2 wicked problems



Climate change and weather disasters

- ... mounting evidence of a significant climate-change signal in disaster events (Schönwiese et.al, 2003; Emanuel, 2005).

The IPCC (2007) recently reported observations of long-term and widespread changes in wind patterns and aspects of extreme weather including droughts, heavy precipitation, heat waves and the intensity of tropical cyclones.

- Changing discourse on responsibility

Financial costs (stock effects) with moderate climate change

Table 5.2 Summary costs of extreme weather events in developed countries with moderate climate change. Costs at higher temperatures could be substantially higher.

Region	Event Type	Temperature	Costs as % GDP	Notes
Global	All extreme weather events	2°C	0.5 – 1.0% (0.1%)	Based on extrapolating and increasing current 2% rise in costs each year over and above changes in wealth
USA	Hurricane	3°C	1.3% (0.6%)	Assumes a doubling of carbon dioxide leads to a 6% increase in hurricane windspeed
	Coastal Flood	1-m sea level rise	0.01 – 0.03%	Only costs of wetland loss and protection against permanent inundation
UK	Floods	3 – 4°C	0.2 – 0.4% (0.13%)	Infrastructure damage costs assuming no change in flood management to cope with rising risk
Europe	Coastal Flood	1-m sea level rise	0.01 - 0.02%	Only costs of wetland loss and protection against permanent inundation

Notes: Numbers in brackets show the costs in 2005. Temperatures are global relative to pre-industrial levels. The costs are likely to rise sharply as higher temperatures lead to even more intense extreme weather events and the risk of triggering abrupt and large-scale changes. Currently, there is little robust quantitative information for the costs at even higher temperatures (4 or 5°C), which are plausible if emissions continue to grow and feedbacks amplify the original warming effect (such as release of carbon dioxide from warming soils or release of methane from thawing permafrost).

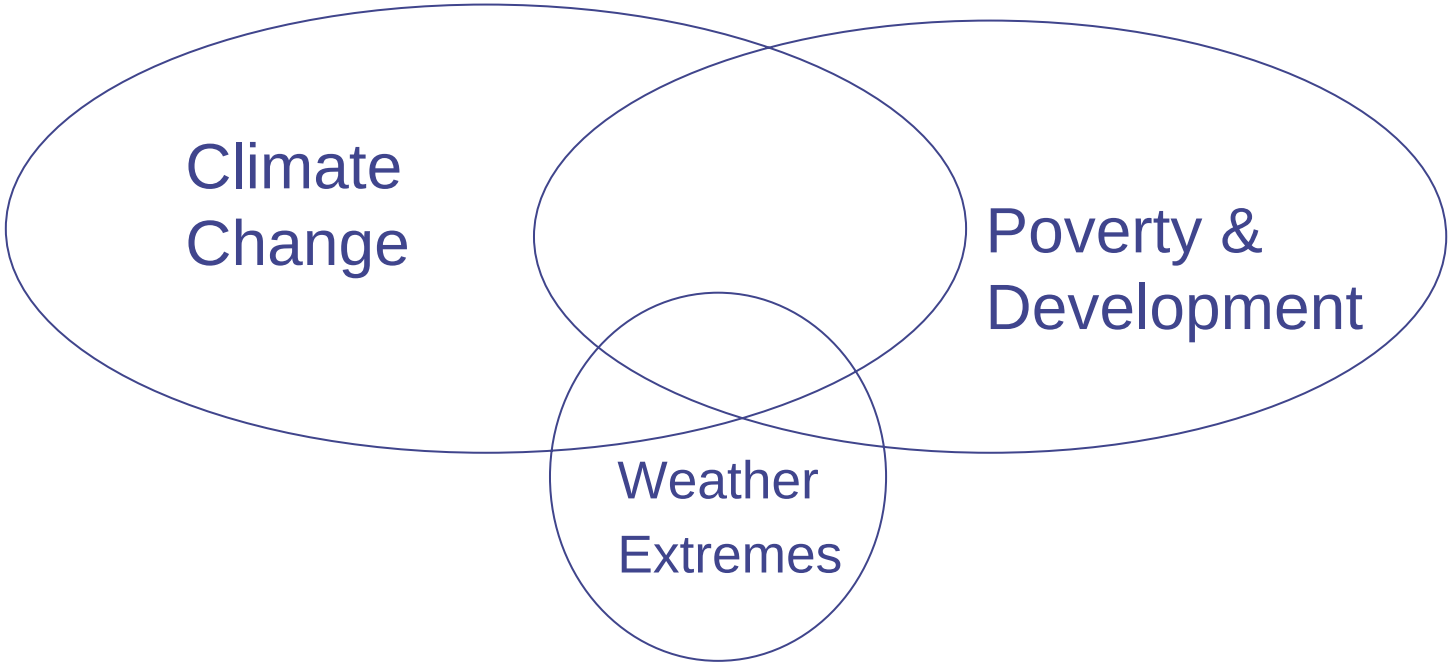
Source: Stern, 2007

Source: Stern Review, 2007

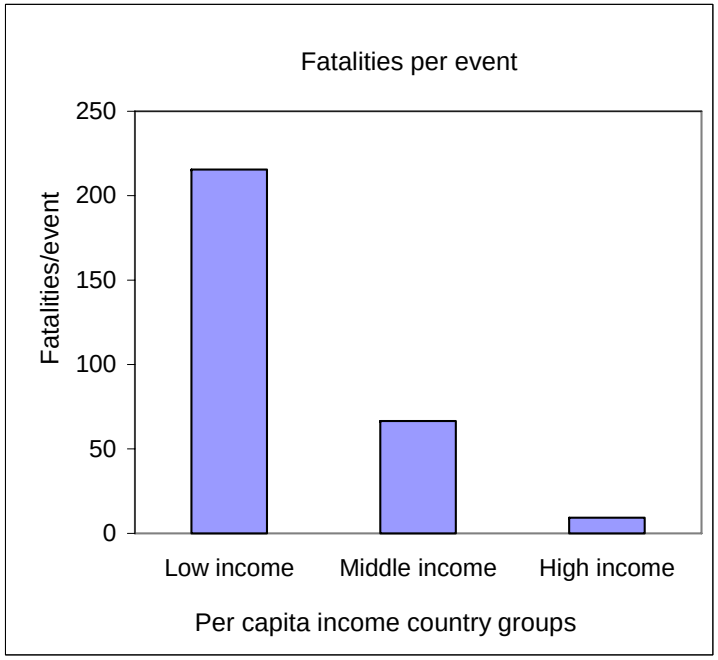
UNFCCC and insurance

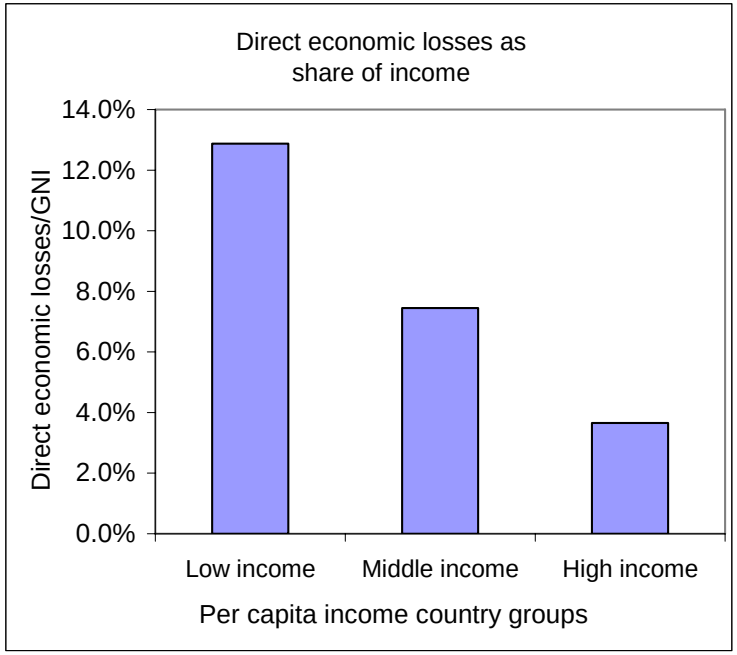
Article 4.8 of the UNFCCC (and Article 3.14 of the Kyoto Protocol) calls upon Parties to consider actions, **including those related to insurance**, to meet the specific needs and concerns of developing countries with respect to the adverse impacts of climate change.

Policy context: 2 wicked problems



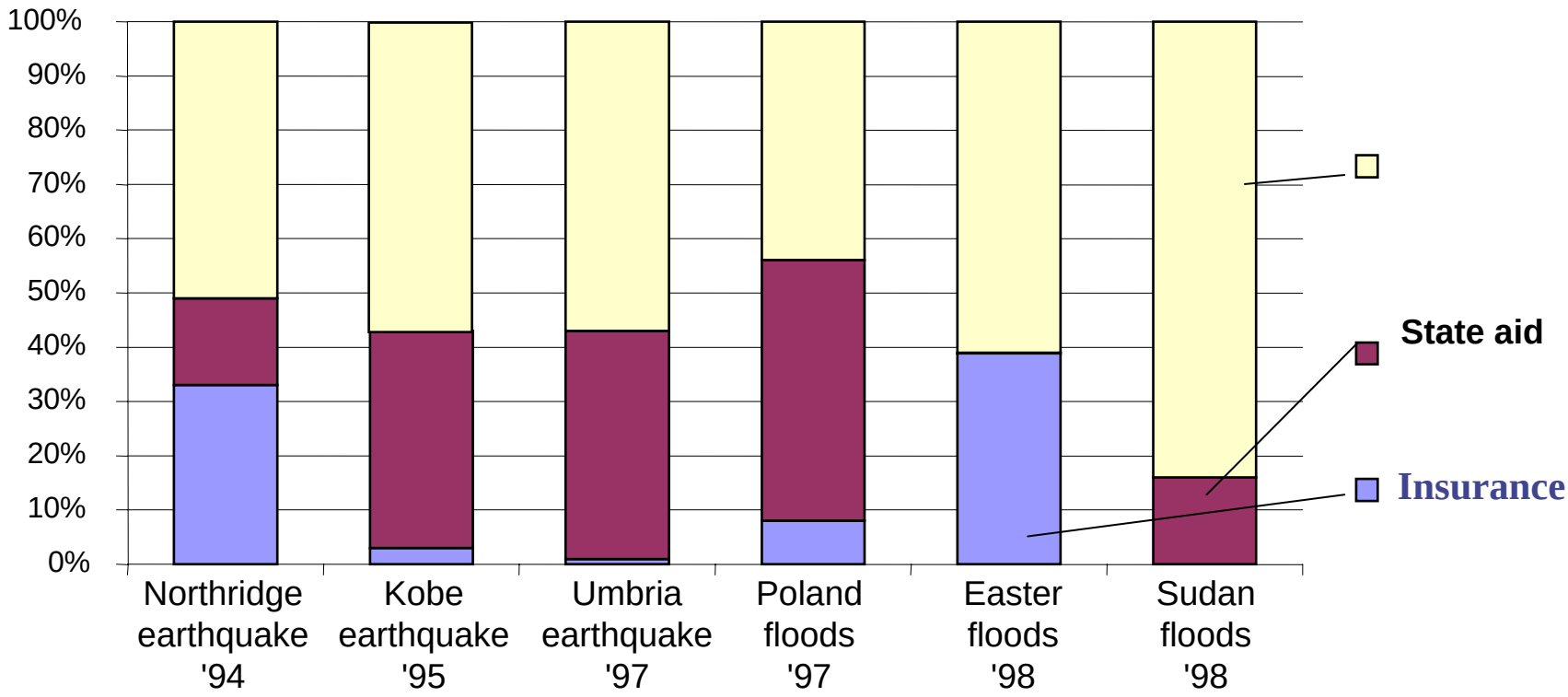
Disasters and Poverty





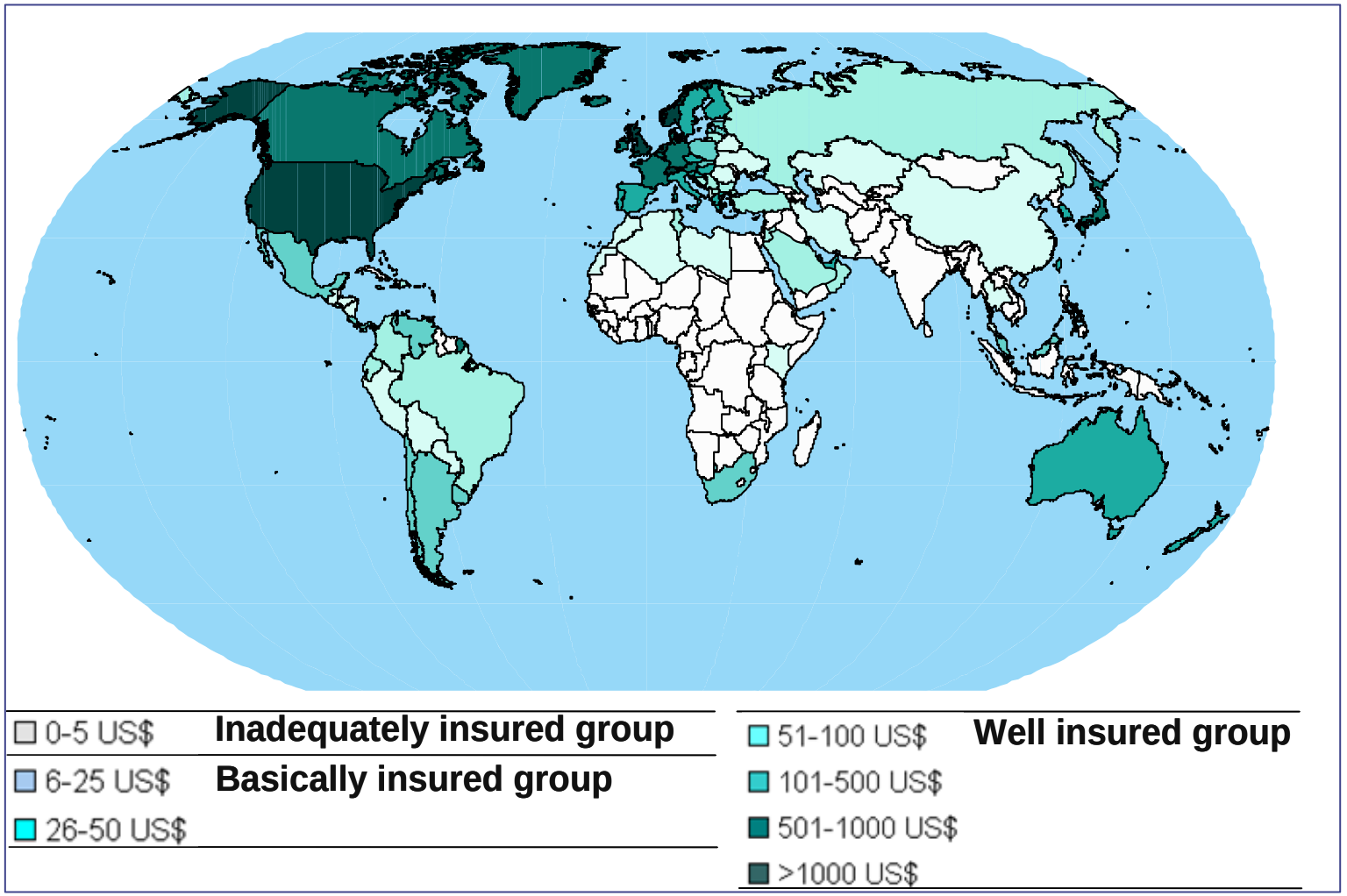
Data source: Munich Re, 2005

Disaster safety nets

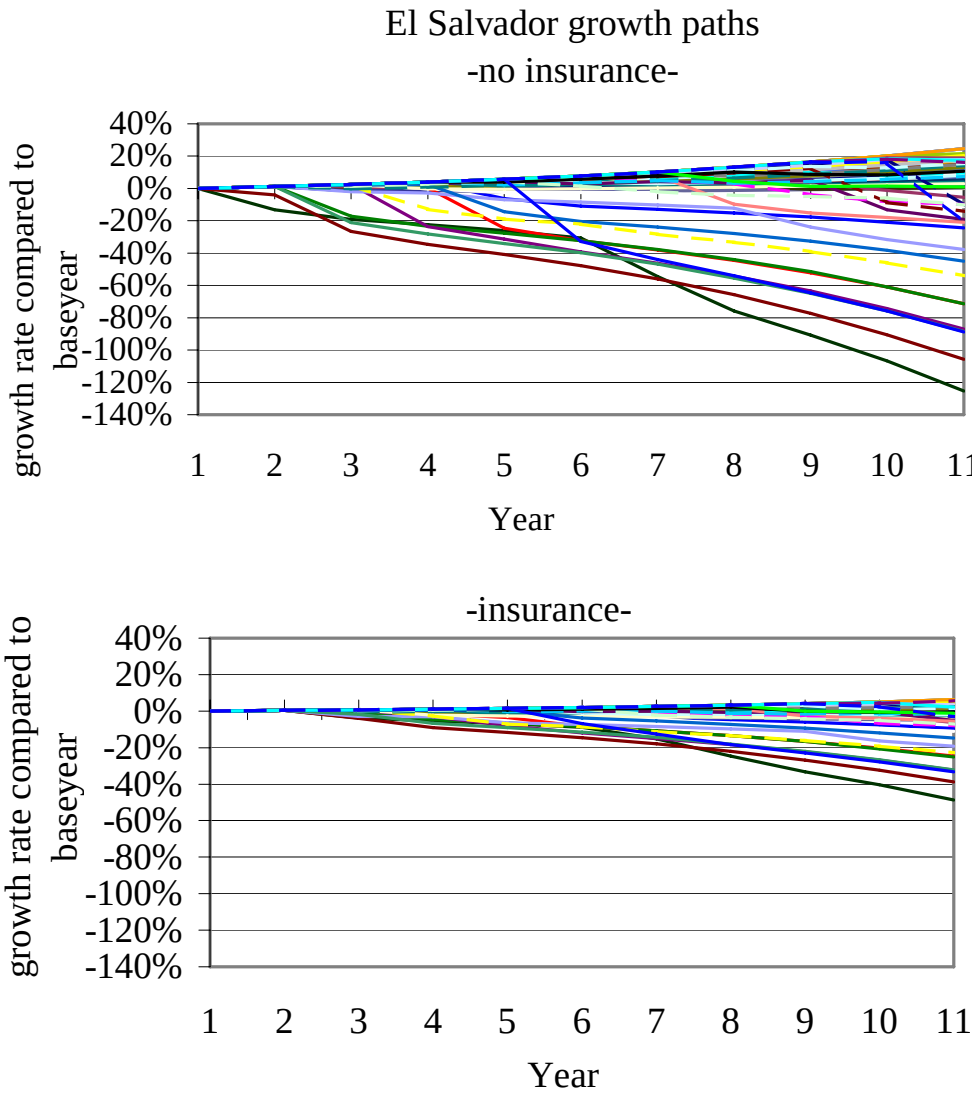


Financial vulnerability: Private sector insurance

Source: Höppe and Gurenko, Munich Re



Should governments insure?



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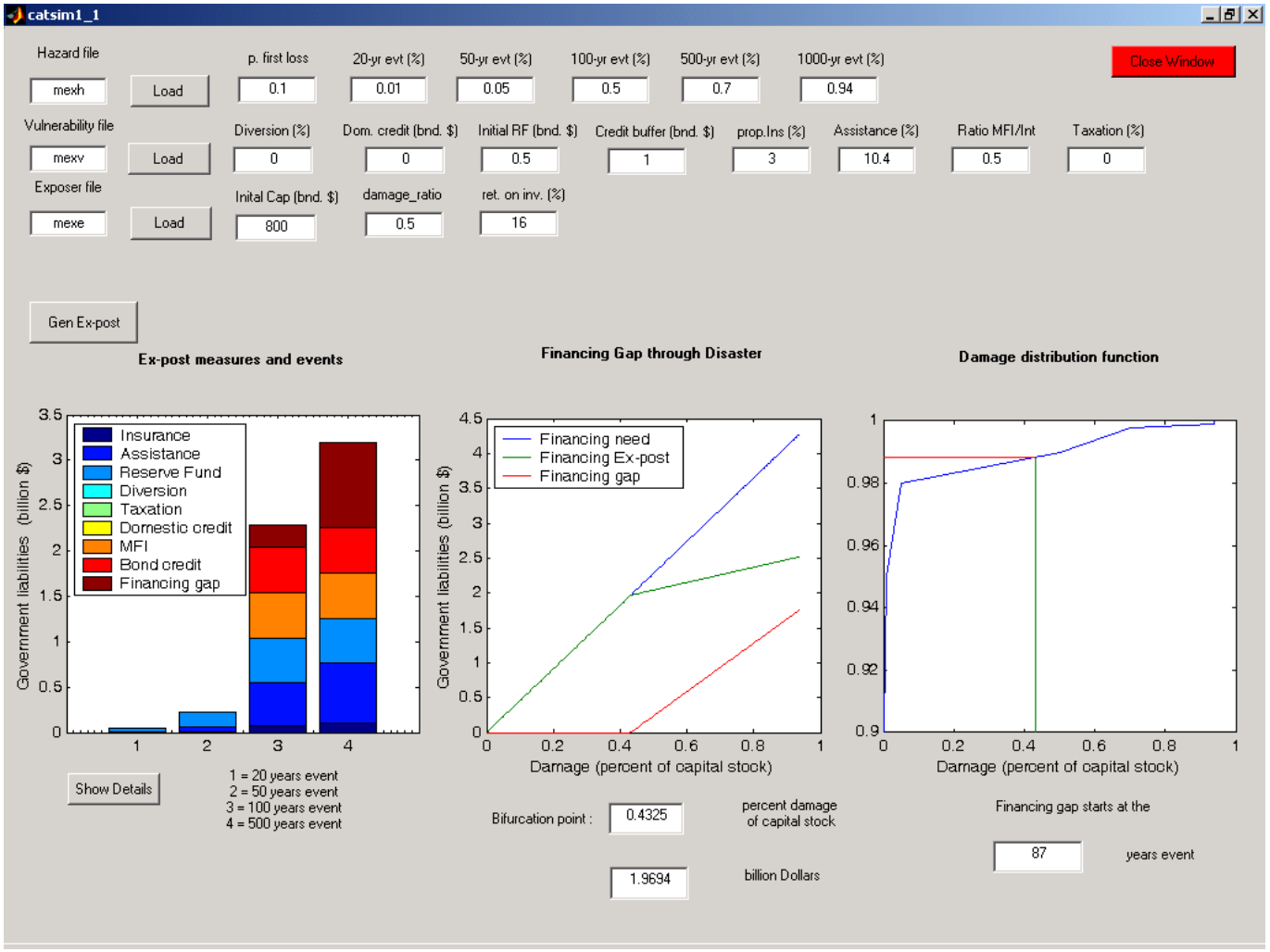


From reactive aid to proactive assistance

Post-disaster government and donor assistance

Risk prevention
Donor-supported risk transfer
Insurance and reinsurance,
Catastrophe bond, Contingent credit

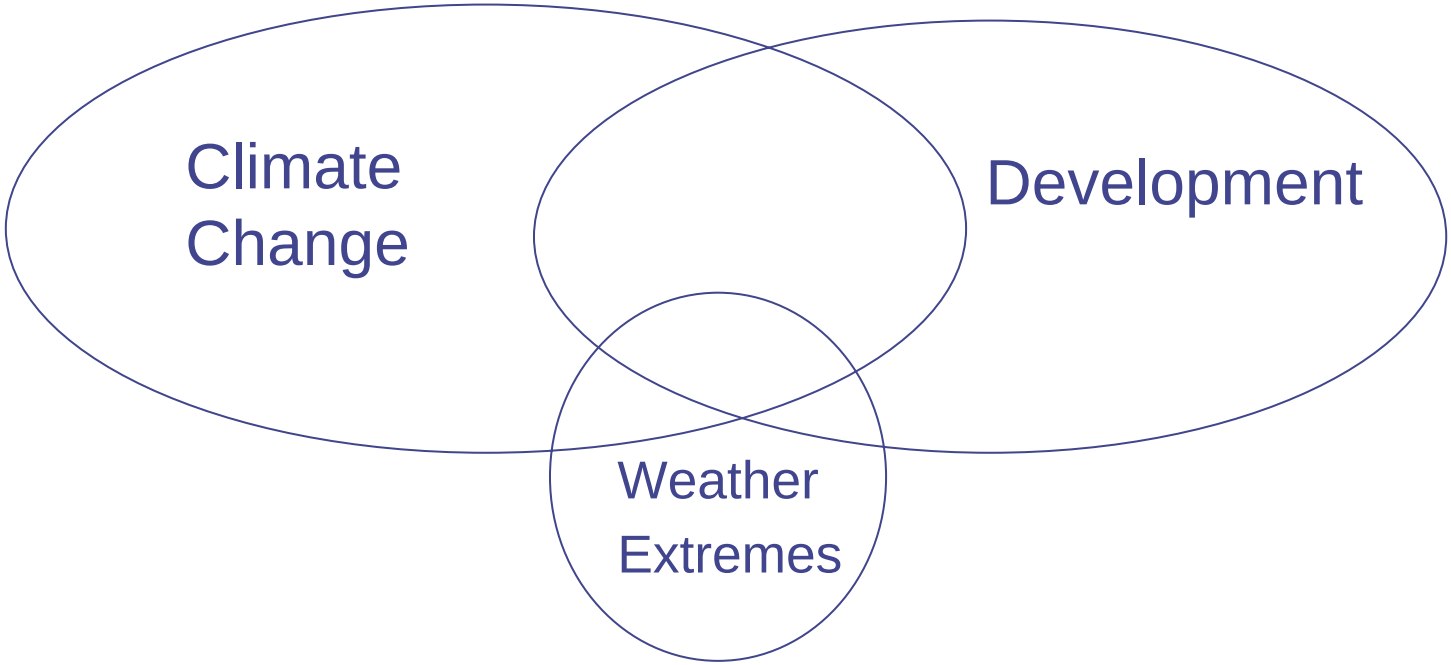
Why?

- Leverages limited aid budgets
- Provides secure planning horizon
- Respects dignity of recipients
- Reduces moral hazard
- Can avoid corrupt practices
- Can link with loss prevention

Still, 98% of funds for ex-post relief and reconstruction,

2% for risk management

Policy context



IIASA Proposal

Climate Insurance Facility

Pillar 1	**Pillar 2**
Support for risk transfer mechanisms (nascent insurance systems)	Compensation for uninsurable risks AOSIS proposal, 1991
Link to risk reduction	

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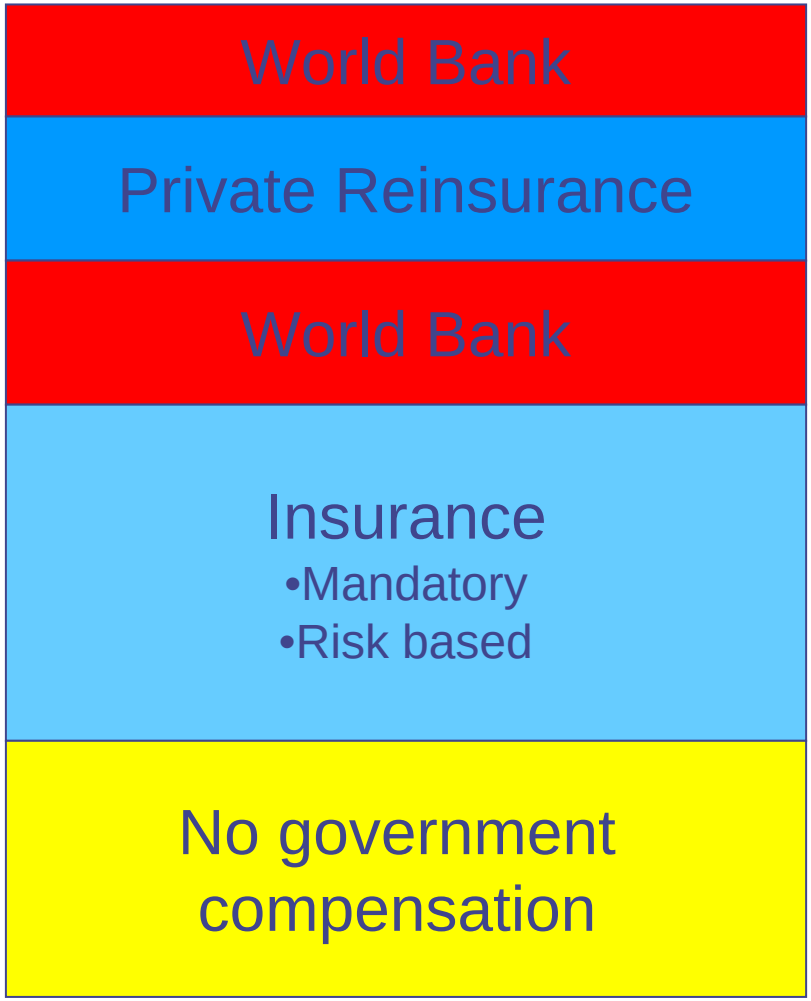
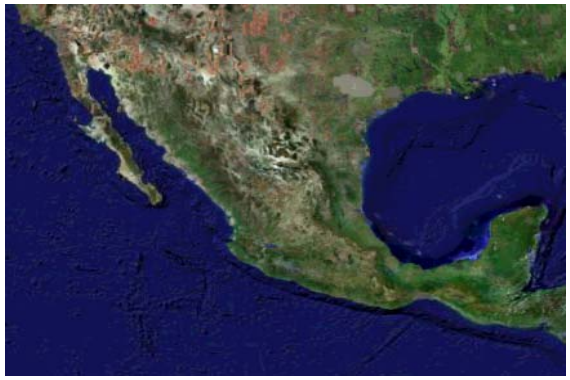
Turkish Catastrophe Insurance Pool



Mexican Government Risk Transfer



Catastrophe bond

- Successfully placed in the market in 2006
- Index based: linked to physical trigger
- Total of 160 million USD protection

Malawi weather insurance

- Greatly increases productivity

- Promoters claim it „moves away the big rocks – systemic drought risks – to development“

- Supported by WFP and WB

Payout if rainfall below pre-described level measured at local weather station (index)

Avoids excessive transaction costs (and corruption) of traditional crop insurance

Enables farmers to access loan for hybrid seed

IIASA Proposal

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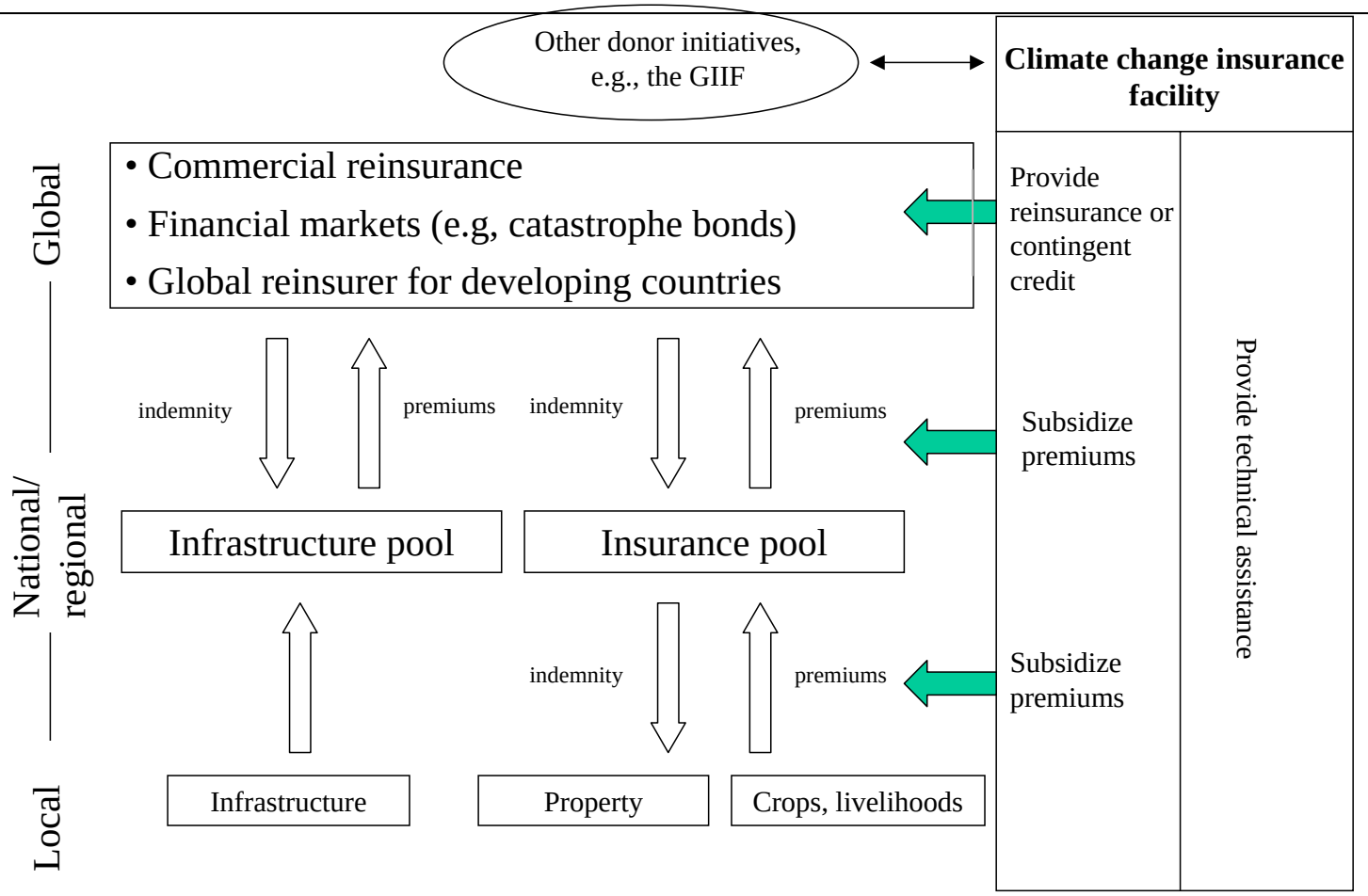
Support

- Provide reinsurance (Turkey)
- Broker reinsurance
- Technical assistance (Malawi, Mexico)
- Subsidize premiums
- Cover basis risk
- Other?

More details



Next steps

- Establish interest on the part of climate negotiators and development organizations
  - IIASA, Munich Re, GTZ and World Bank organizing Sept. meeting (as part of MCII)
- Task Force on developing a multi-donor option for post-Kyoto negotiations
- Meeting planned for 2008 to reach consensus on negotiating options

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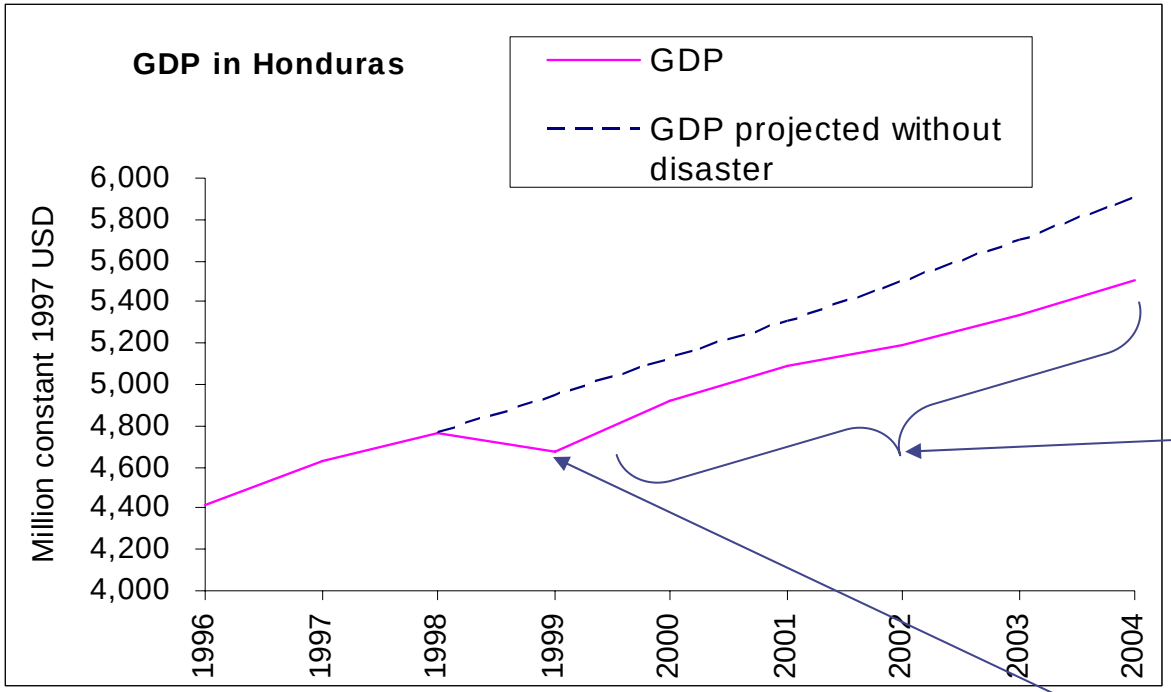
Economic consequences of extreme events



Effect of incomplete recovery and reconstruction

Effect of stock loss