

Global Networks for Insuring Catastrophic Risks

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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

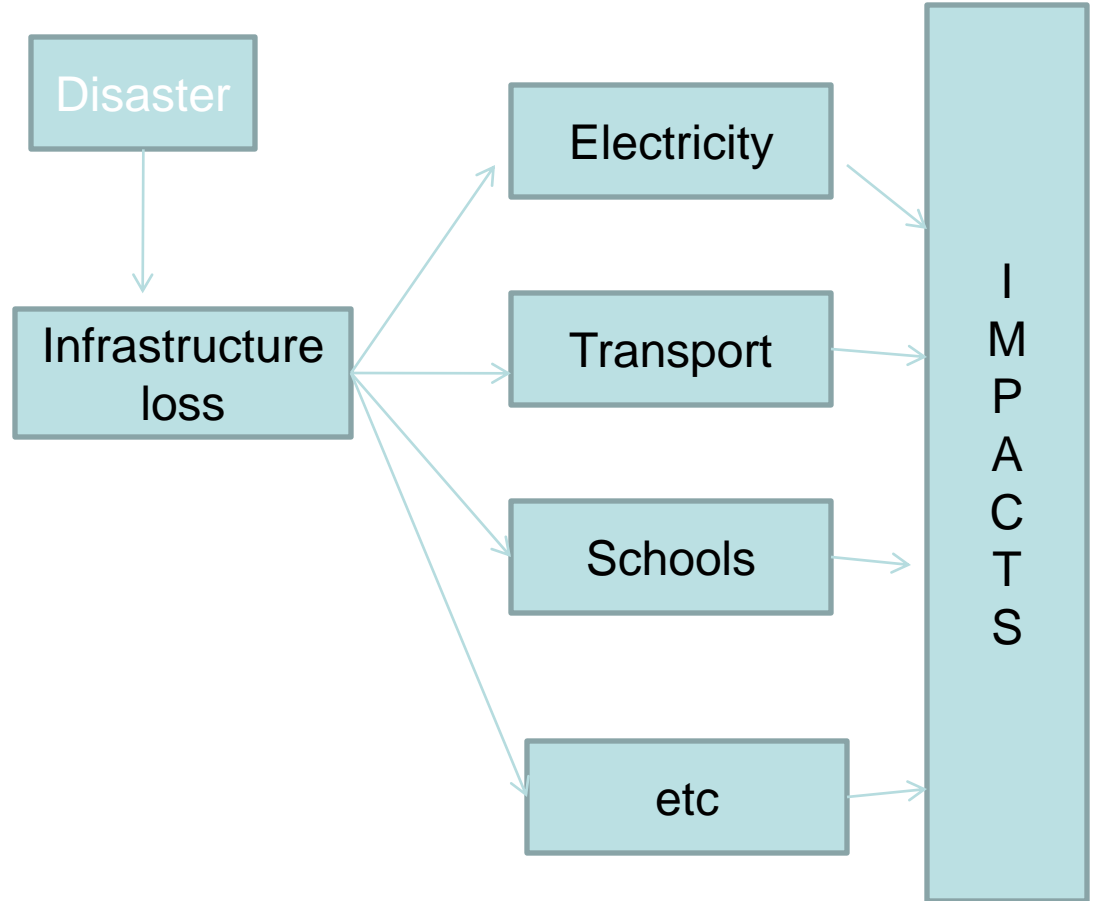
Outline

- Are risk transfer instruments, eg cat bonds or insurance, advisable?
- Do they increase resilience?
- What kinds of networks are necessary? especially for developing countries?

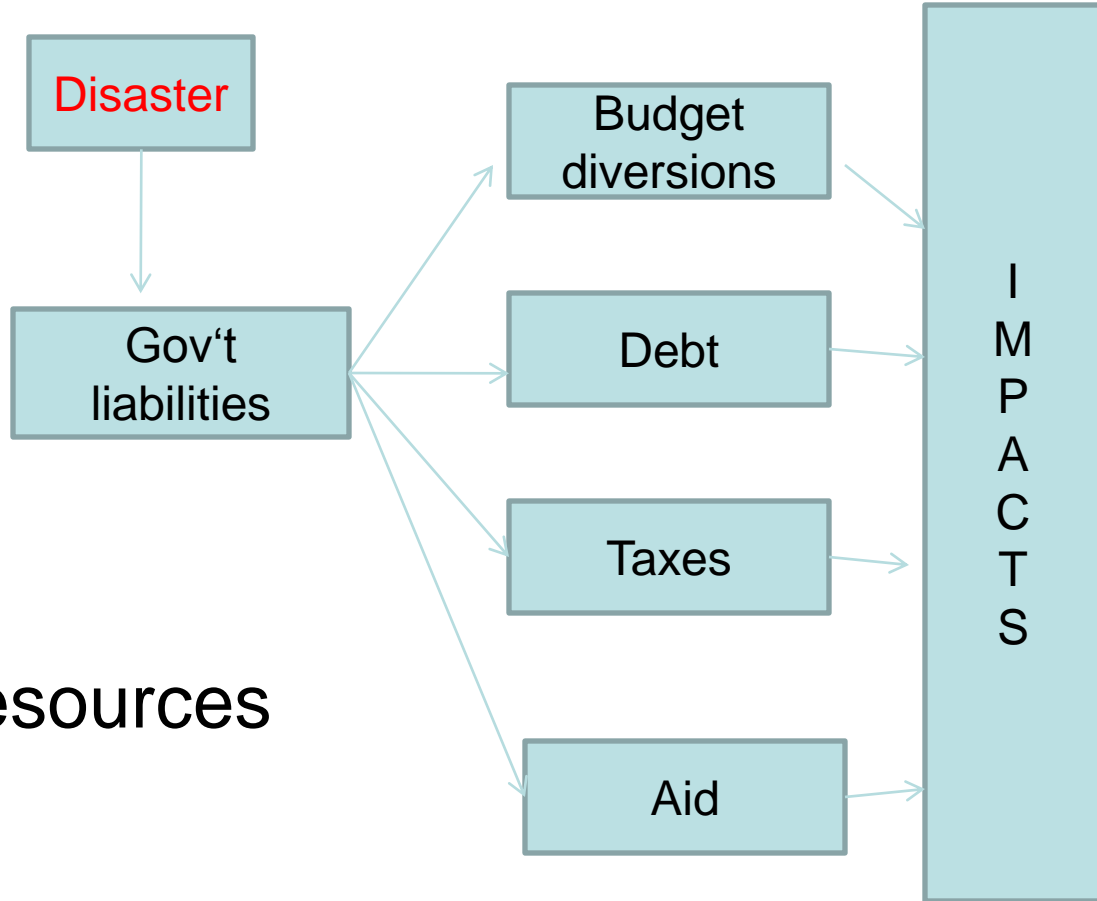
Public and private sectors

Cascading effects of disasters

Public infrastructure

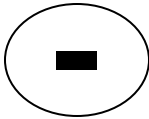


Post-disaster financing

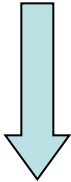


Losses – financial resources
= GAP

Loss

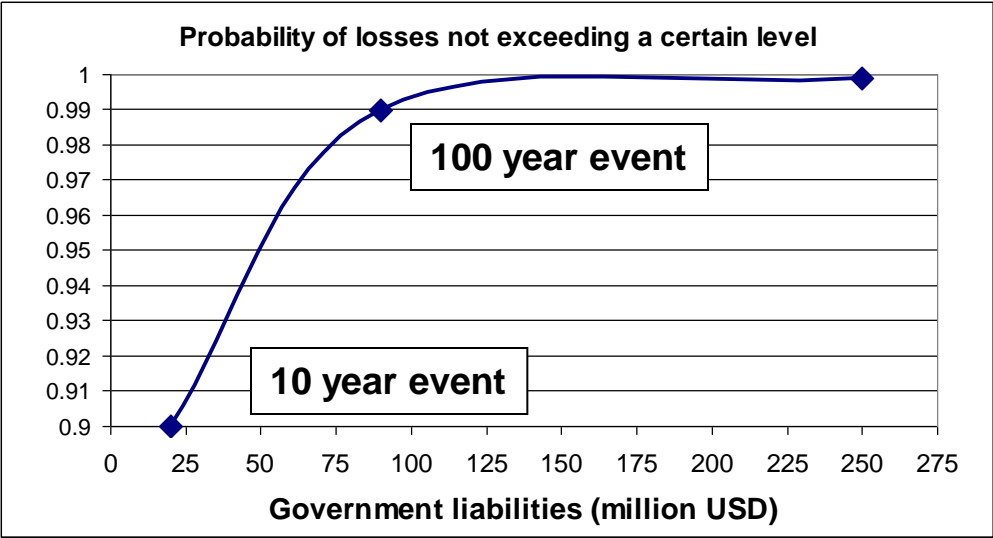
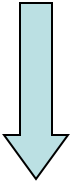


Ability to cope

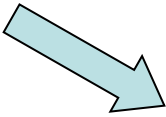
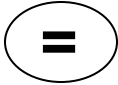


Loss distribution

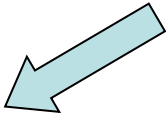
Financing Sources



Diversion from budget
Taxation
Central Bank credit
Foreign reserves
Domestic bonds and credit
Multilateral borrowing
International borrowing
Aid

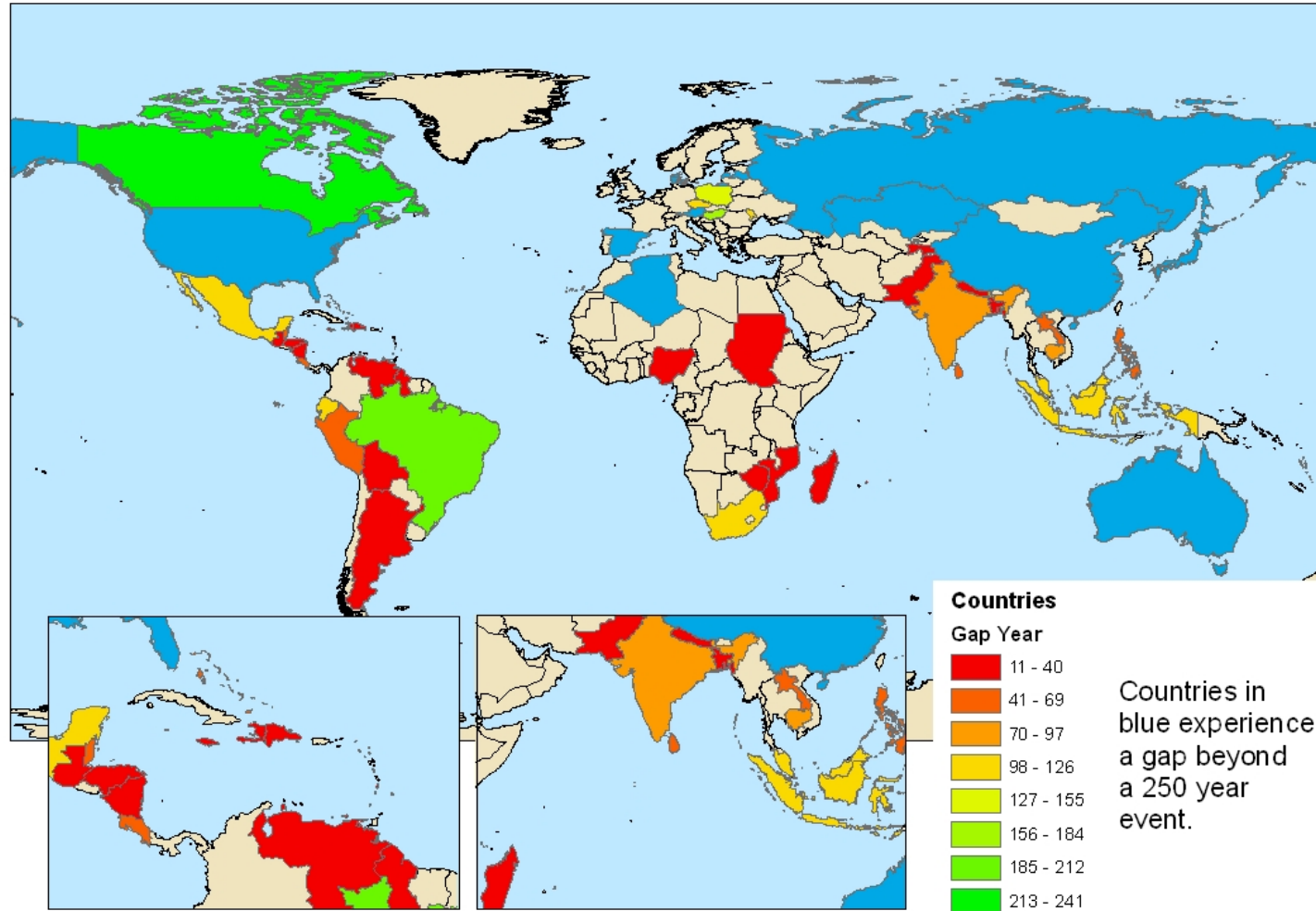


Gap Resilience?



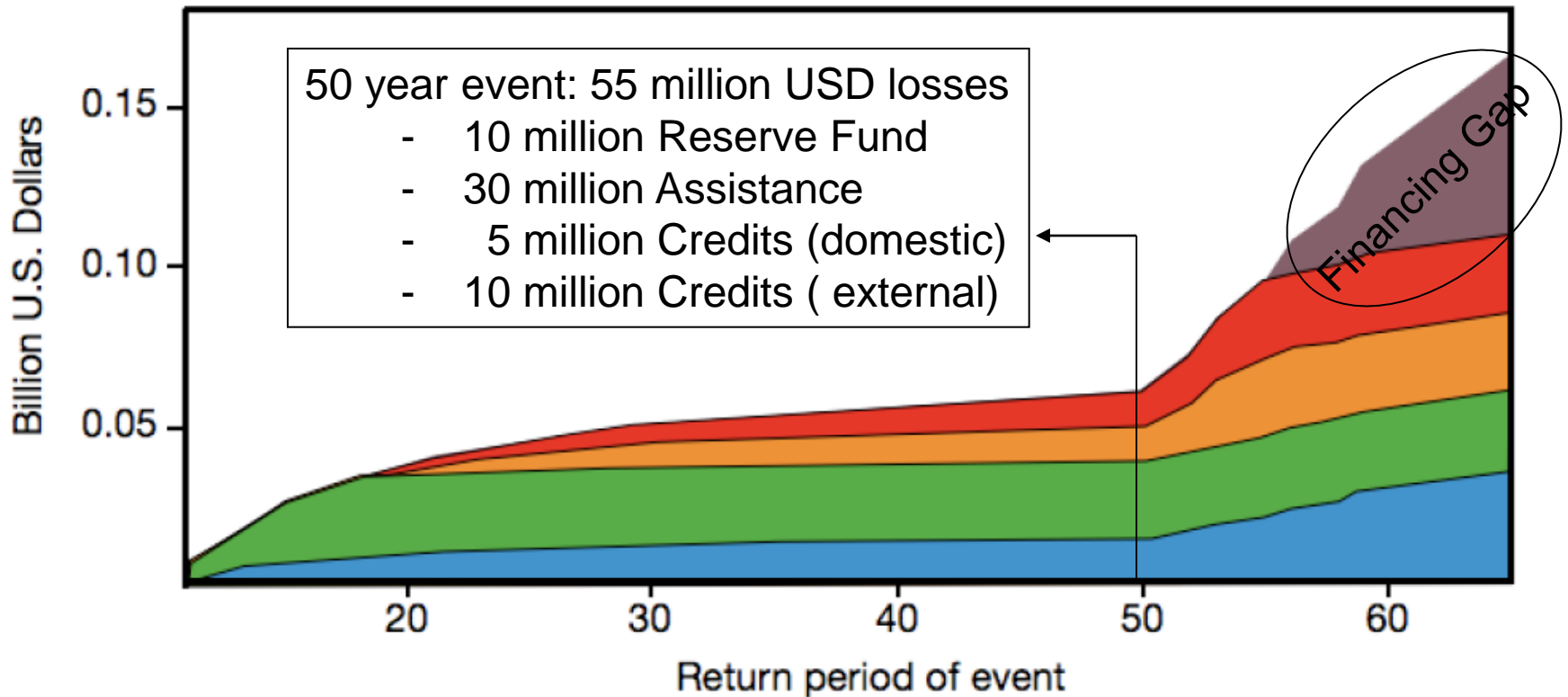
Resource Gap estimation on the Global Scale: Only sudden onset events

Resource Gap Estimation



Example: Madagascar

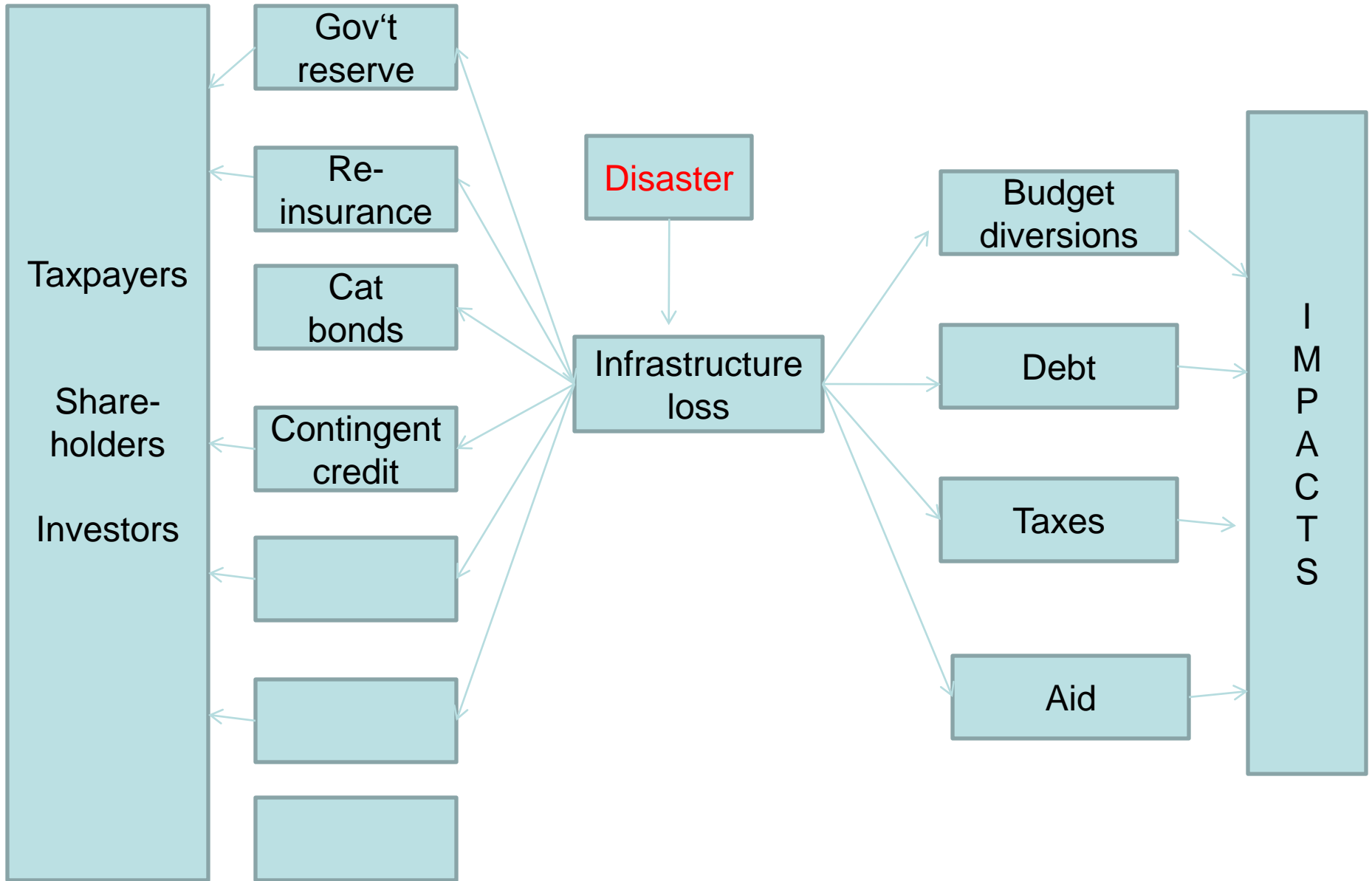
Results of a CATSIM simulation, for the country of Madagascar.
Each of the lower shaded areas shows a different source of financing.



The top-most shaded area, in violet, shows the financing gap

Pre-disaster arrangements

Post-disaster impacts



Malawi weather insurance



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

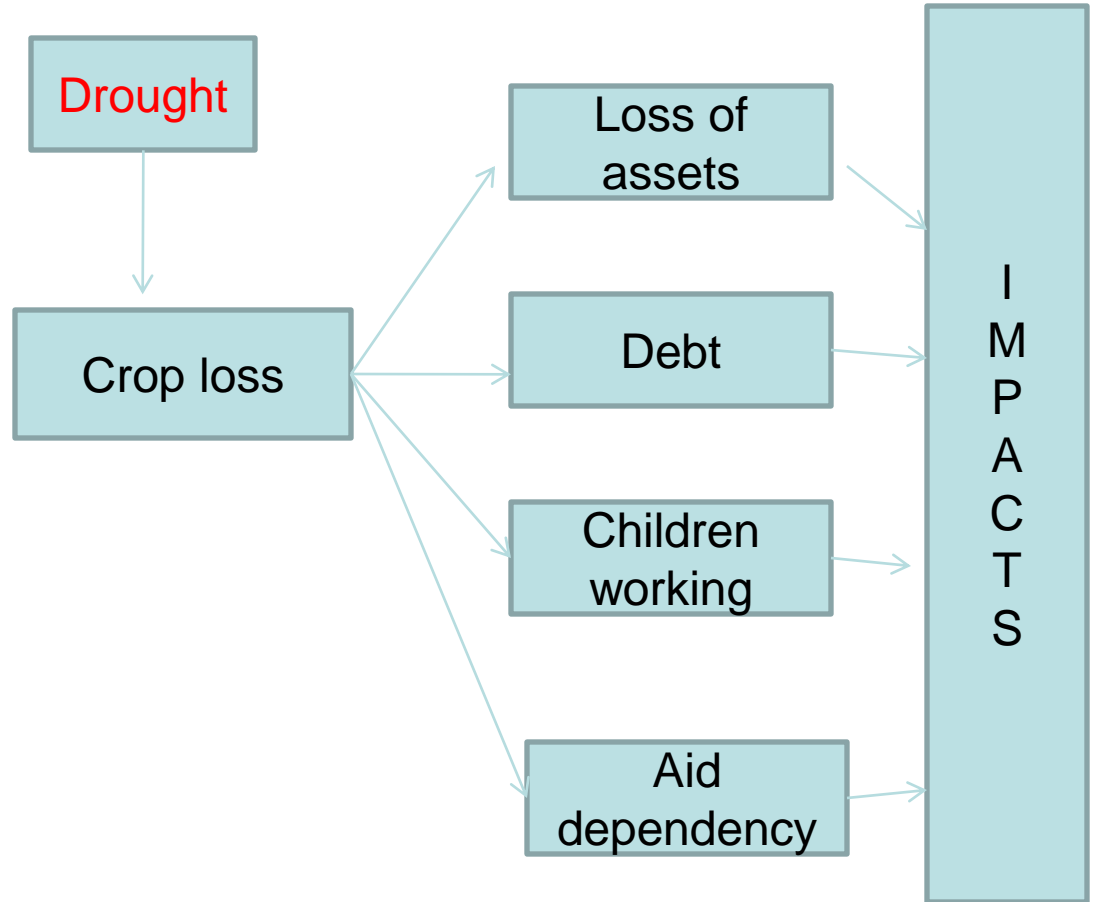
Avoids excessive transaction costs (and corruption) of traditional crop insurance

Enables farmers to access loan for hybrid seed

- ◆ Greatly increases productivity
- ◆ Promoters claim it „moves away the big rocks – systemic drought risks – to development“
- ◆ Supported by WFP and WB

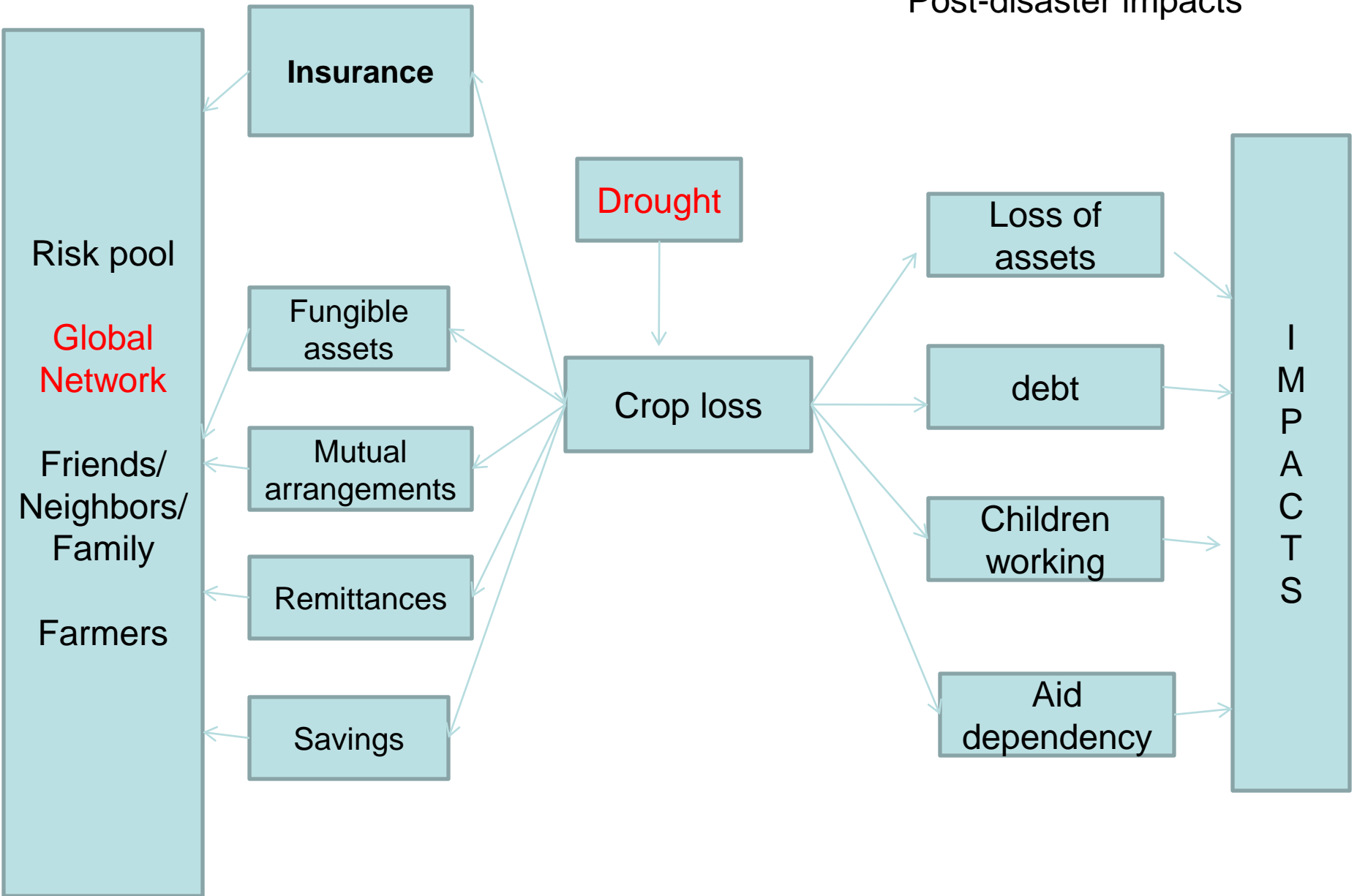


Post-disaster financing



Pre-disaster arrangements

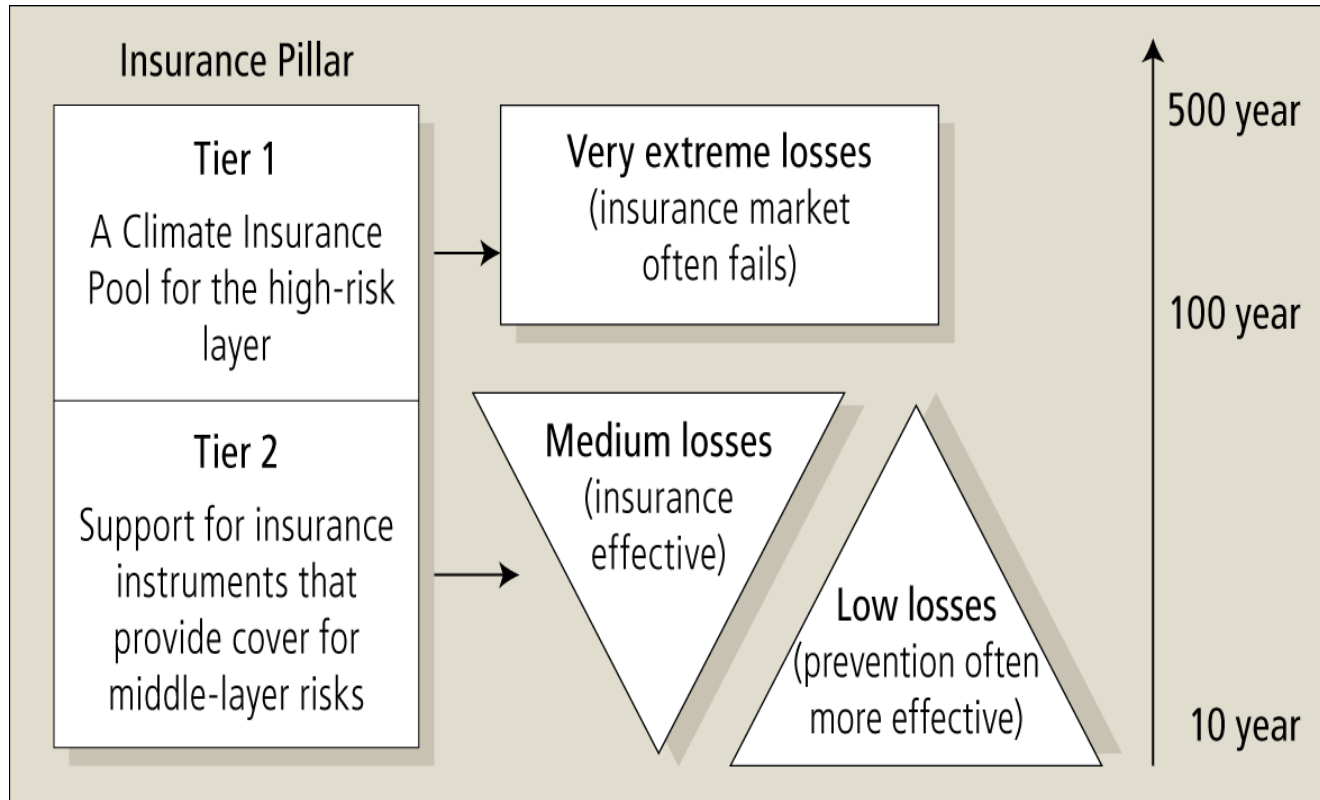
Post-disaster impacts



Global safety net (network)

- International NGOs
- Reinsurance
- Alternative risk transfer, eg cat bonds
- International financial institutes
- Climate change community?

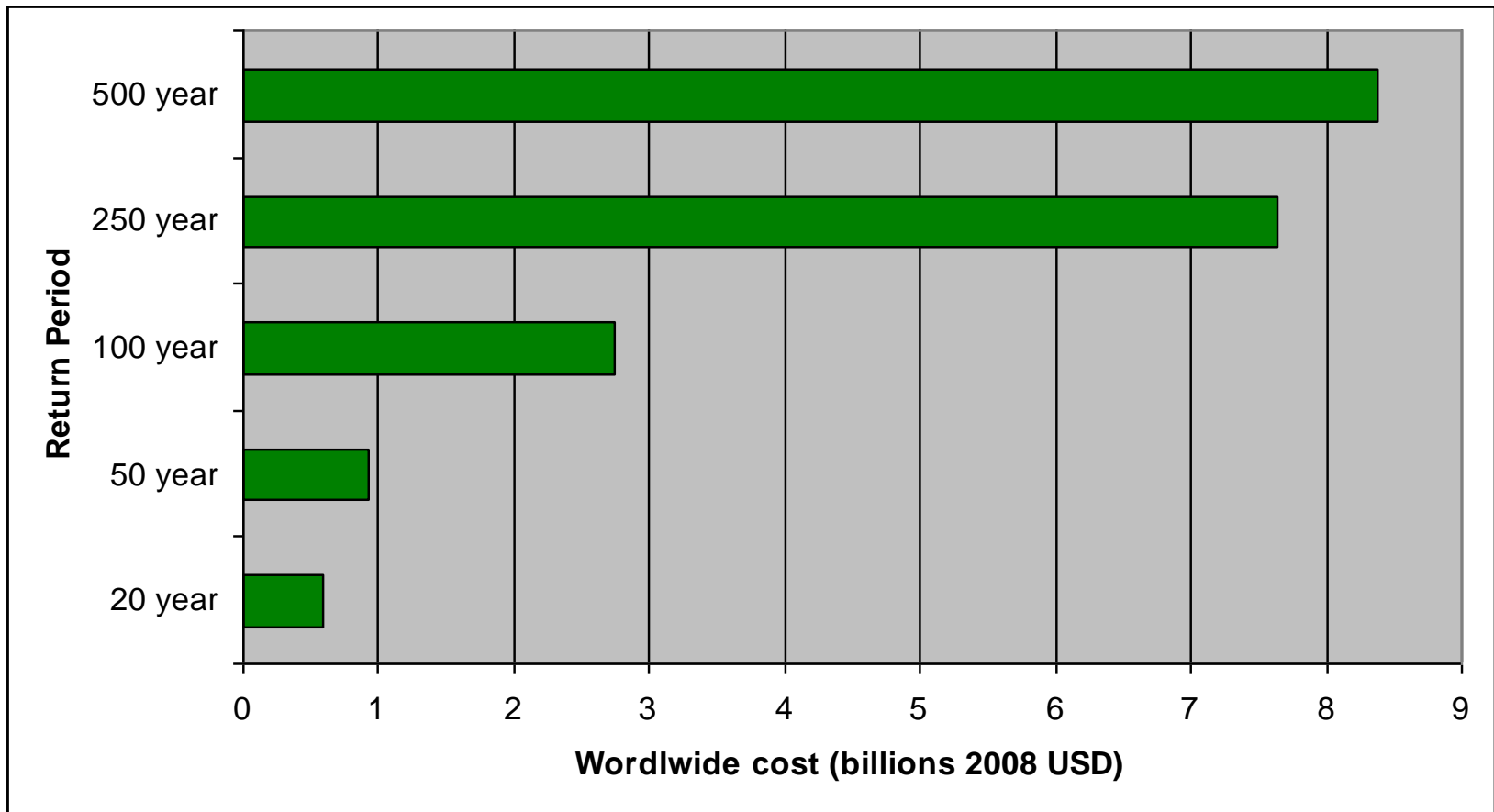
MCI proposal



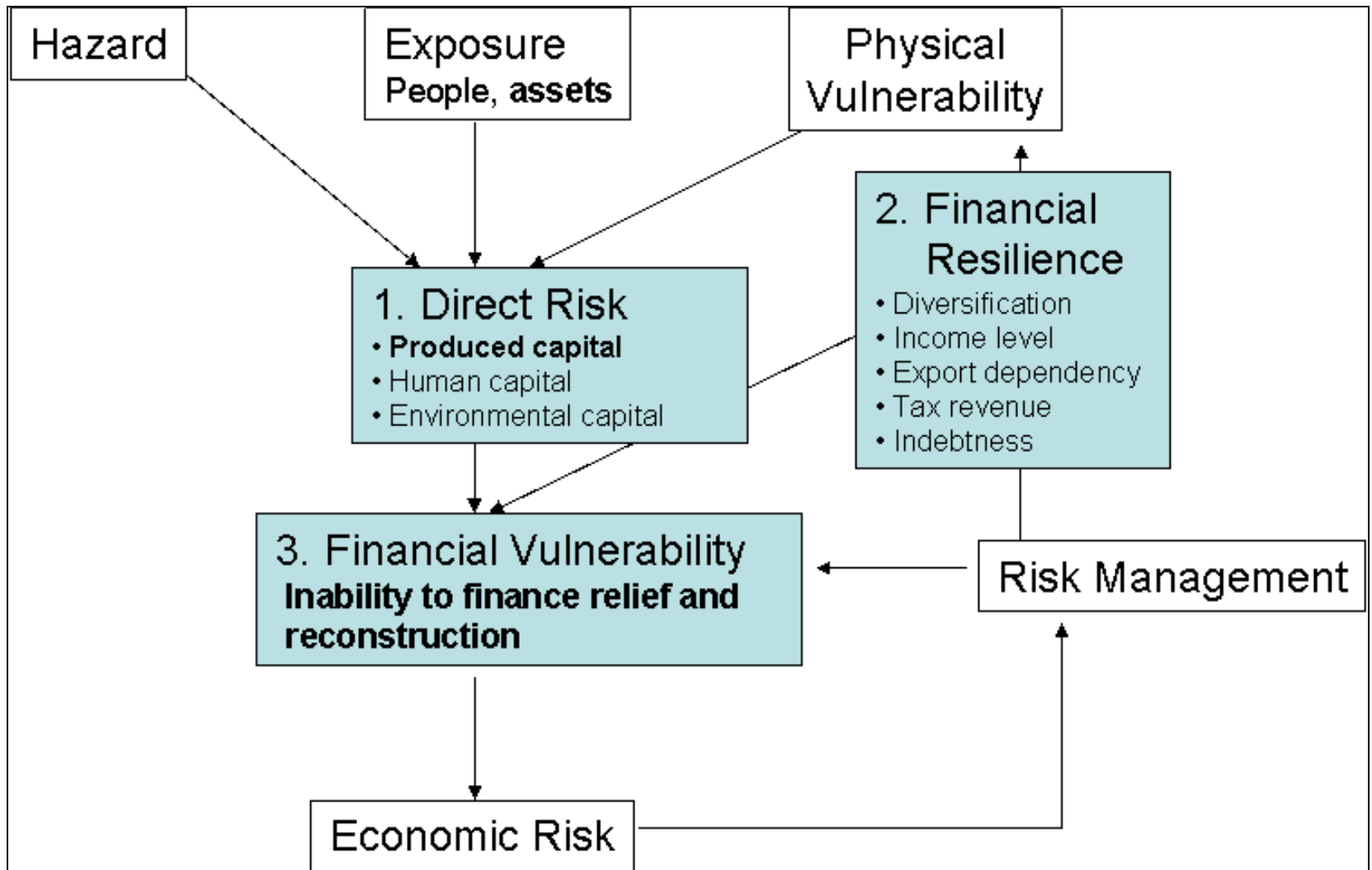


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Worldwide average annual costs for funding losses till a given threshold level:
Annual costs for financing losses up to a 500 year event
would be 8.3 billion USD.

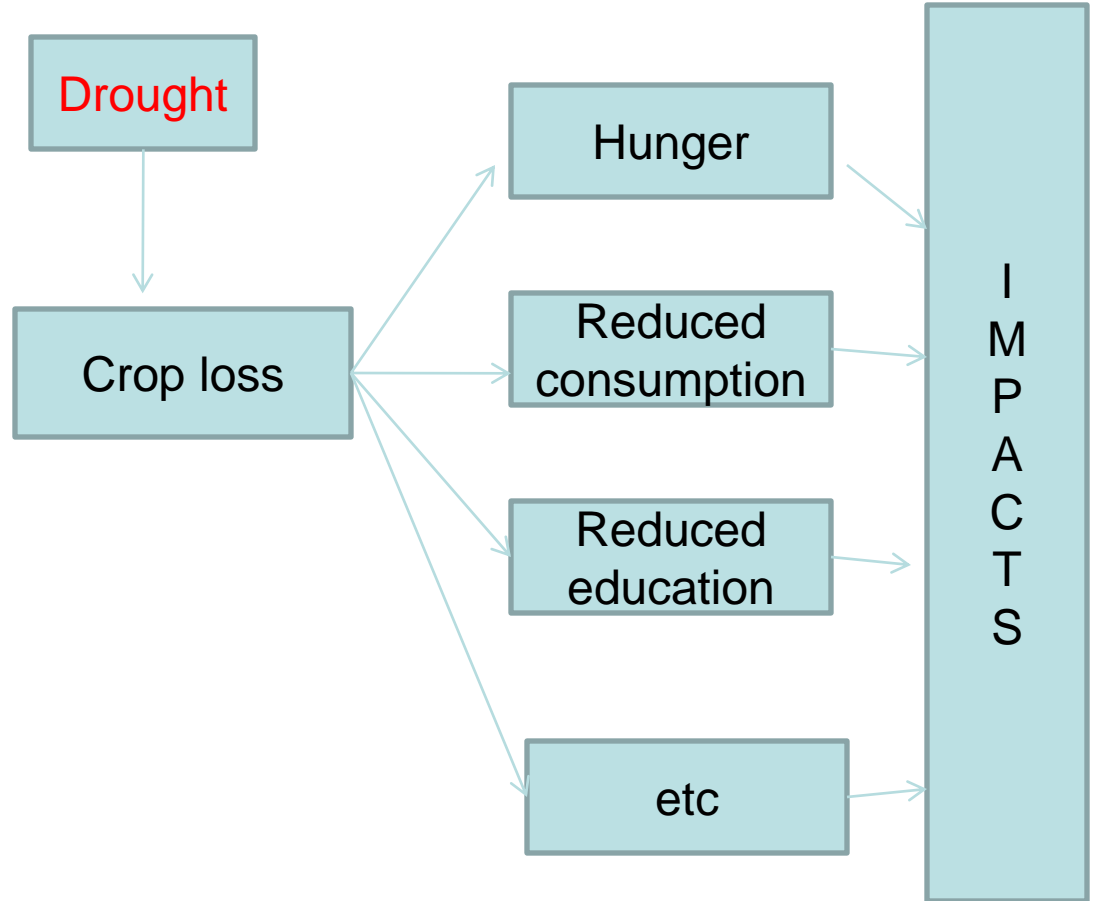


CATSIM Approach

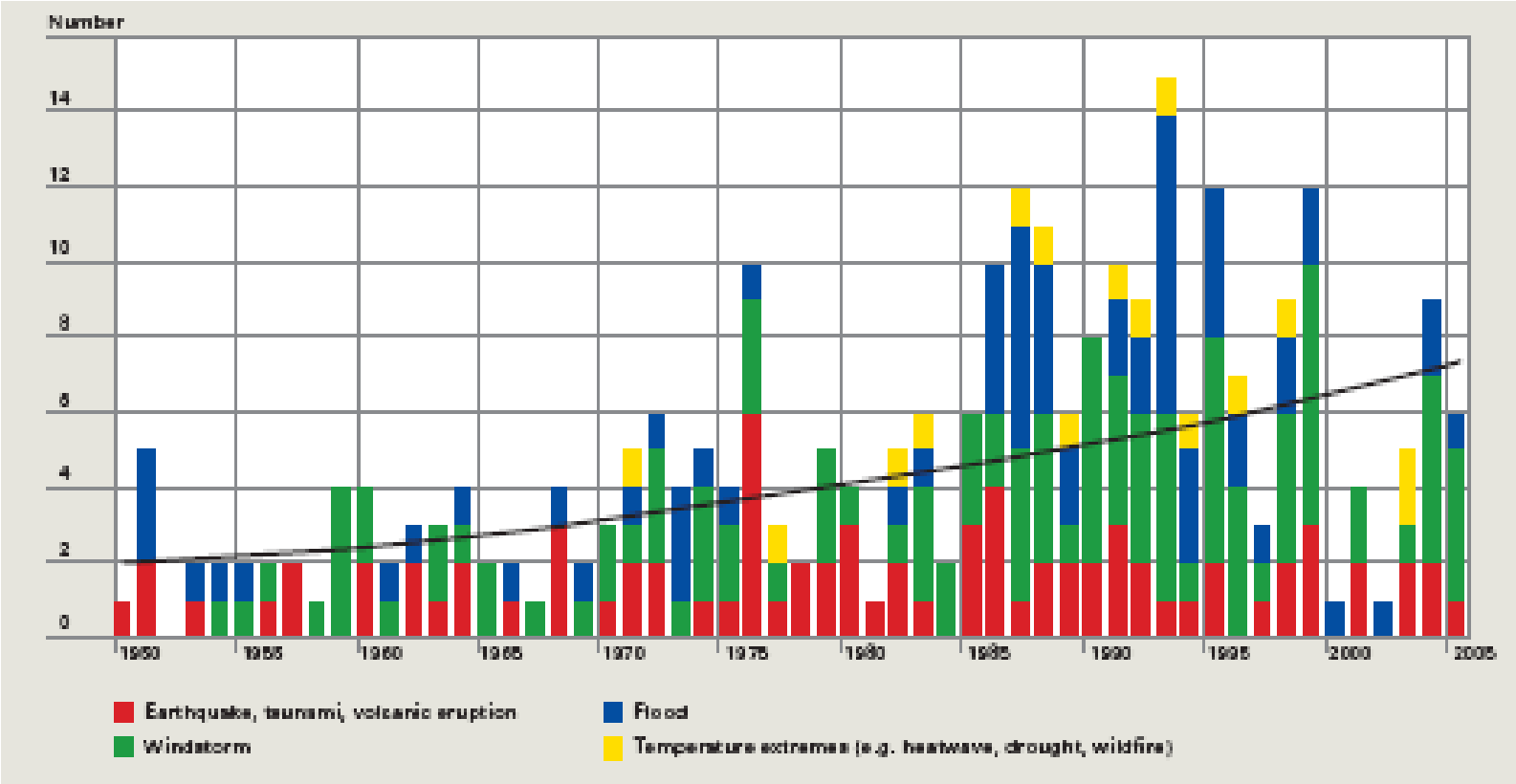


Cascading effects of disasters

Private sector



Natural disasters: Global annual direct damages



1950-2005: 1,700 bn US\$
(340 bn insured)

Data sources: Munich Re, 2005

Resiliency

- Savings
- Household assets
- Remittances
- Creditworthiness
- Family
- Government
- International aid