

A favorable climate for insurance?

Recent experience and way forward for weather and disaster insurance

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Climate Risk Insurance

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International Institute for Applied Systems Analysis
"Science for Global Insight"

Point of departure

- Disasters continue to impose significant and disproportionate human and economic losses on the developing world.
- Evidence mounts that human-induced climate change is contributing to increased weather variability and extremes
- Risk-financing instruments such as micro-insurance, weather derivatives, catastrophe bonds and others are providing security against natural disaster losses to individuals, farmers, and governments in the developing world.
- Alternative to post-disaster aid, donor-supported insurance instruments offer a more reliable safety net for the poor and a chance for donors to leverage limited disaster assistance budgets.



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4 big questions raised at recent Laxenburg workshop on “climate insurance”

1. What can we learn from recent experience wrt the conditions necessary for the long-term viability of public-private insurance systems that genuinely serve the poor?
2. How does insurance contribute to adaptation?
3. What role can and should donors, international financial institutions, NGOs and others in developed countries play in assuring these conditions and
4. What is the role of insurance in the post-Kyoto adaptation regime?

Question 1: Recent experience

- For the most part, current programs at all scales serve low-income and low-asset households, farms, and governments; however, many are in the pilot stage
- Without exception, they receive support (technical assistance, product delivery, premium subsidy, reinsurance) from governments, donors, NGOs and financial institutions;
- Private insurers with important role –often in partnership with NGOs - in underwriting risks, delivering the product and/or providing reinsurance;
- Index-based systems appear most promising because of their low transaction costs and absence of moral hazard;
- Even if affordable, it is not clear if many current systems can operate, and scale up, without outside involvement. This is due mainly to weak institutions, low insurance culture and limited ability to transfer and diversify risk;
- Despite limitations, pilot programs are demonstrating their potential for protecting individuals and governments against weather shocks in many different contexts.

Malawi index-based crop microinsurance

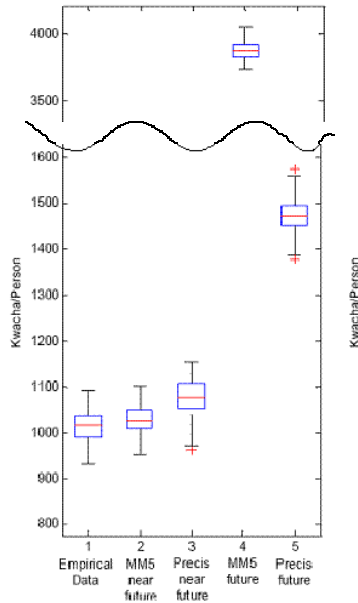
- Food insecurity is chronic and greatly worsened by drought
- In 2005 nearly 1000 smallholder farmers in Malawi participated in a pilot weather insurance project that allowed them to access an input loan package for better groundnut seed.



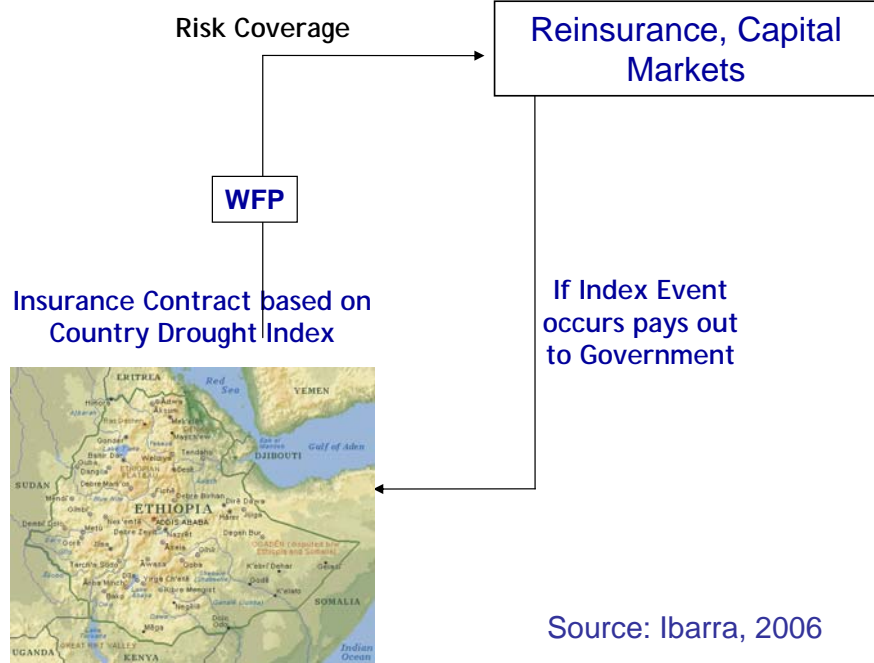
Malawi index-based crop microinsurance

- Packaged loan and microinsurance product offered by int. PPP involving donors, smallholder association, int. insurance broker, NGO and rural development bank
- Insurance with mostly benefits to bank, yet farmers get access to highly-productive seeds
- **Outlook:**
coverage increasing, yet small and not put to test by severe drought, insurance concept not well understood by insured

Estimating backup capital with and without climate change



Ethiopia and index-based drought relief insurance



Source: Ibarra, 2006

Ethiopia and index-based drought relief insurance

- **Outlook:**
reinsurance obtained from commercial reinsurer in 2006
- Redesigned to better align with donor programs for chronic food shortage and nomads
- Integration with risk management in Ethiopia and ownership by government key challenges
- WFP questioning its role

Question 2: Insurance and adaptation

- Insurance may promote adaptation, but also mal-adaptation.
- Compensating losses in exchange for a premium payment *after an event*
- Insurance leads to reduced vulnerability *ex-ante*
- From downside/bad to upside/good risks: In Malawi insurance has enabled farmers to plant riskier but higher yield crop varieties
- Price signal built into insurance premia may provide incentives for better adaptation to climate variability and change

Question 3: Role of non-at-risk?

Against outside assistance:

- Direct and indirect subsidies, will lower premiums and therefore lessen incentives for reducing vulnerability (adaptation) (see US crop insurance program)
- Crowding out private capital necessary for fledgling insurance markets.
- Exit strategy for donor institutions problematic
- **Donors should restrict their assistance to correcting market failures, e.g., information deficits and the provision of public goods.**

Pro outside assistance:

- Market cannot be expected to provide insurance to those vulnerable individuals and governments unable to pay the (full) price, and direct cash transfers sufficient to build an insurance market for these risks are unlikely.
- Disaster insurance market failure is prevalent in the more developed world with government involvement being the norm rather than the exception.
- Equity, in this argument, trumps efficiency (see social insurance in Europe) and case is stronger given the North-South divide in climate change
- **Donor-supported insurance systems are a legitimate route for addressing poverty, especially if they keep market distortions as low as feasible.**

Middle way forward

There can be a positive “middle role” for international community:

- Providing improved information (e.g., assistance in conducting risk assessments), market institutions (e.g., insurance regulations) and market infrastructure (e.g., weather stations);
- Assisting in the delivery and administration of insurance contracts;
- Reducing the price of high layers of risk (the low-probability, very high impact events) but maintaining the “pure risk price” on lower levels (e.g., by providing low-cost reinsurance or directly absorbing these risks);
- Brokering reinsurance deals, e.g., the case of the Caribbean pool;
- Pooling insurance programs that have uncorrelated or negatively correlated risks, e.g., the spatially differential effects of El Nino events in Africa;

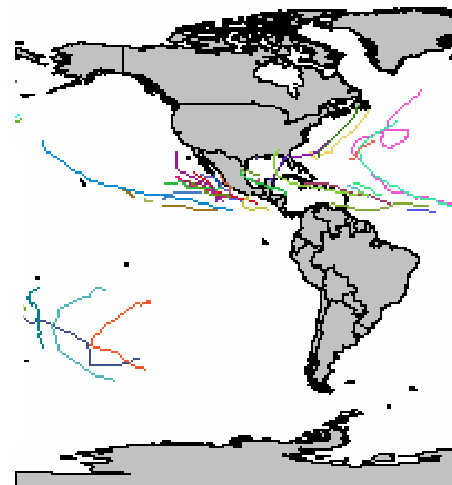
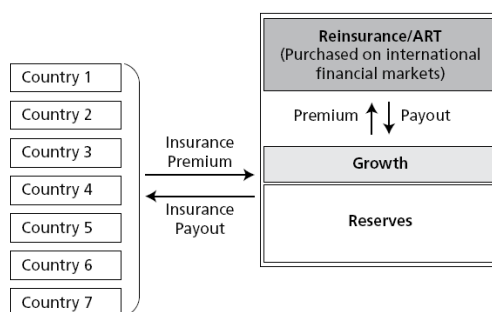
Question 4: Role of insurance in the post-Kyoto adaptation regime

Building on the “middle way” forward, can we link adaptation and development regimes to support insurance for adaptation?


One idea: Regional climate insurance facilities that would support fledgling insurance schemes, e.g., with:

- Technical assistance
- Minimum distorting financial assistance
- Risk pooling
- Reinsurance

Example: Caribbean catastrophe insurance facility



Further information on Laxenburg workshop on climate insurance:
http://www.iiasa.ac.at/Research/RAV/past_mtgs.html



SUMMARY
Expert Workshop on
Insurance instruments for Adaptation to Climate Risks
Linking Policy Agendas
Sept. 24-25, 2007, Laxenburg, Austria

An expert workshop on *Insurance Instruments for Adaptation to Climate Risks*, organized jointly by the International Institute for Applied Systems Analysis (IIASA), Munich Re, the German Agency for Technical Cooperation (GTZ) and the World Bank, took place at IIASA in Laxenburg, Austria, on Sept. 24-25, 2007.¹ The workshop provided a forum for participants from the climate-change, development and donor communities, NGOs, academics and insurers to share experiences and ideas on supporting insurance-related instruments as a strategy for adapting to climate variability and change. This exploratory meeting identified opportunities and constraints for supporting risk pooling and transfer in the developing world both within and outside the post-Kyoto process.

Background

As evidence mounts that human-induced climate change is contributing to increased weather variability and extremes in the form of droughts, floods, windstorms and other hazards, developing countries are seeking support for climate risk reduction, including insurance and other risk-pooling and transfer instruments. To date, however, there is little understanding or agreement within and outside the climate community on the role that insurance can play in supporting adaptation to climate risks.

Risk-financing instruments, for example in the forms of micro-insurance, weather derivatives and catastrophe bonds, can provide security against natural disaster losses to households, farms and governments in the developing world. As an alternative to post-disaster aid, donor-supported financing instruments (subsequently referred to as insurance) offer a more reliable safety net for the poor and a chance for donors to leverage limited disaster assistance budgets. By focusing attention on hazards before disasters strike, well-designed insurance programs can also provide important information on risks and incentives for adaptation.

¹ The workshop was organized as part of the activities of the Munich Climate Insurance Initiative (MCII) and is also supported by the EU integrated project on Adaptation and Mitigation (ADAM).