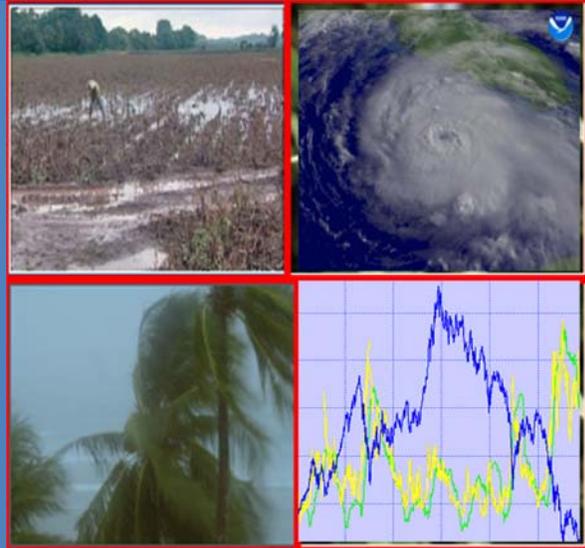




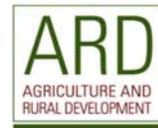
## Weather Index Insurance for Agriculture: Lessons Learned

Risk Management in African Agriculture:  
Taking Stock of What Has and Hasn't Worked

Lilongwe, Malawi  
September 6- 10, 2010 June 16 -19, 2010



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Agricultural and Rural Development Department  
The World Bank



**Is it possible to design and implement an optimal insurance scheme that can encompass the desirable characteristics?**

- Cost-effective (accessible to the producers)
- Easy to administrate and operate
- Not subject to moral hazard: takes into account incentives and strategic responses from the producers
- Coverage of a wide range of risks
- Fast, efficient and transparent benefit payments
- Financially sustainable (access to international financial markets)

## The World Bank has attempted to find solutions to weather risks using WII

- Reduced adverse selection
- Reduced moral hazard
- Field loss assessment is eliminated
- Information requirements for farmers is simplified
- lower administrative costs
- Facilitation of reinsurance
- Transparency

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## The experience: Testing Concepts into Realities . . .

- R&D and pilots on Weather Index Insurance**
  - Mainly drought (some excess rainfall)
  - Micro level for individual farmers
  - Meso level for outgrower schemes
  - Macro level (derivatives) for food security issues
- Applied Research:**
  - Feasibility for Indexed flood insurance (1 country)
  - Grid weather data for agricultural insurance (1 Feasibility Study, 3 data grids)
  - Credit risk assessment in agricultural finance (5 countries, 15 institutions)
- Development of Training Materials for Weather Risk Management**
  - Formally transferring capacity in 3 institutions –CIRM, CATIE, EAFA

## The Efforts so far ....

### ❑ Risk Transfer

- ❑ Weather Risk Management  
(India, Malawi, Bangladesh, Indonesia, Burkina Faso, Kenya, Ethiopia, Thailand, Honduras, Morocco, Nicaragua, Bolivia, Peru, Guatemala, Jamaica)

### ❑ Clients

- ❑ Government, Financial Institutions, Traders, Agribusinesses, Producer Organisations

### ❑ Services Offered

- ❑ Research, Policy Advice, Technical Assistance, Training and Piloting of Market Based Approaches to Risk Management

## Lessons Learned

- ❑ Weather risks are not ALL risks
- ❑ Complex modeling and steep Learning Curve
- ❑ Capacity building Vs. Transactions Approach
- ❑ Customization Vs. Scalability Challenge
- ❑ Reaching Small Farmers at aggregate level Vs. Individual level
- ❑ Integration rather Stand Alone Measures
- ❑ Need to introduce Mix of: Mitigation – Transfer - Coping

## Challenging Scenario for applying WII at farmer level in Africa

- Crop modeling is more tested for droughts but challenging for excess rain events
- No operational flood models as yet
- Widespread basis risk
- Modeling small farmers' losses
- Resolution of data at farmer level
- Not much development in modeling permanent crops
- Farmers have weak access to financial markets
- Justifying WII as a valuable proposition to farmers

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## Applicability of WII in African Agriculture ?

Most likely risk transfer mechanism  
to reach small farmers?

→ Need of an AGGREGATOR

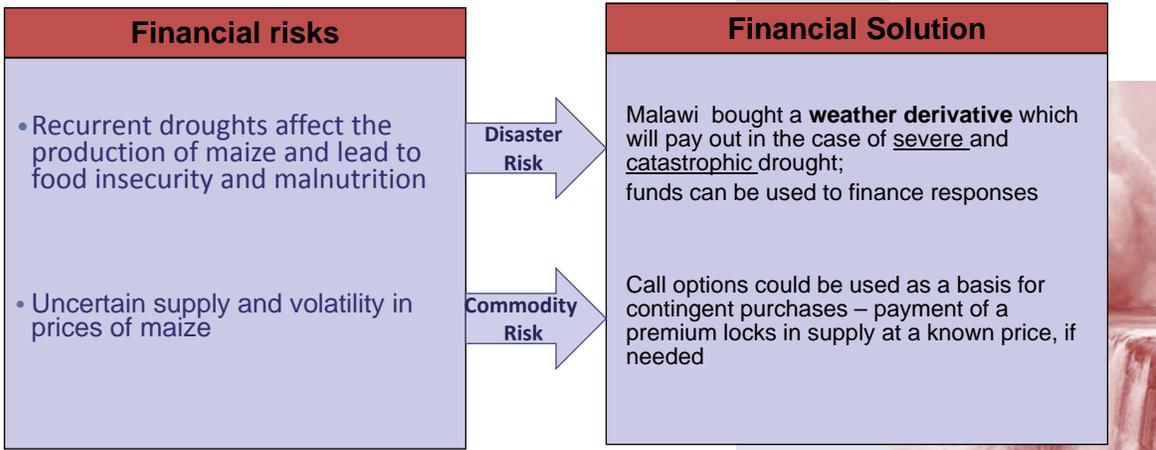
- Aggregate level with Commodity Boards/ Managing portfolio risks for Banks (Meso) → commercial insurance FOR FARMERS THAT ARE ASSOCIATED
- Aggregate at Government CAT level / Central gov/ Provincial/ (macro) → social protection FOR INDEPENDENT SMALL FARMERS
- Aggregate level at Regional Level (Caribbean ?)

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# Malawi: Illustration of a Sovereign Weather Derivative

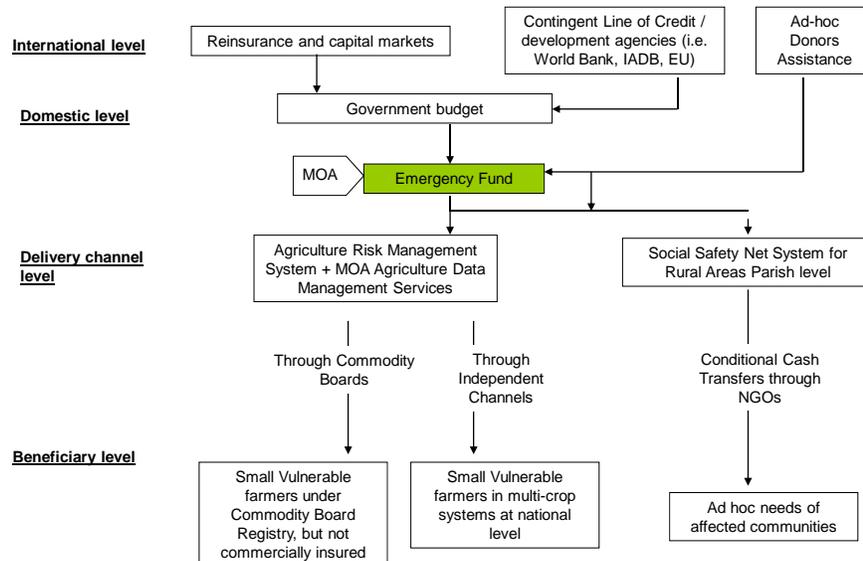


# Illustration of an Integrated Risk Management Framework



\*Integration of more than one tool is key

## Jamaica: Illustration of Proposed Catastrophe Risk Financing & Improving Delivery Channel to Small Vulnerable Farmers



## Conclusions

- ❑ WII is still half way between research and Development. It is still work in progress
- ❑ WII is more suitable as of today for aggregate applications (i.e. meso and macro)
- ❑ Designing any WII application is country specific and it is complex
- ❑ Need to differentiate WII for agriculture from needs for social protection.
- ❑ Need of strong technical and financial support for designing any WII product

**Thanks !**

[www.worldbank.org/agrm](http://www.worldbank.org/agrm)