



# INSURANCE AND RISK TRANSFER SESSION

Monday, August 14

Chair: Ferhan Özay

**Arzu Taylan**

*The Problems of the Current Financial System and the Possible Solutions to Protect Business and Industry against Disasters and to Mitigate the Risk*

**Toshio Fujimi**

*Ambiguity, Risk and Earthquake Insurance Premiums: An Empirical Analysis*

**Reinhard Mechler**

*Financial preparations in the Caribbean for the hurricane season: An application of IIASA's CATSIM model*

**Joanne Linnerooth-Bayer (organizer)**

*Microinsurance as a Safety Net for the Poor?*

**N Hari Krishna**

*Insurance & Disaster Risk Management: Oxfam Case Study from India*



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*The need to explore the potential for innovative financing to help manage and reduce disaster risk is emphasized.*

*Traditional post-disaster financing may not be sufficient for low-income households, businesses and governments that face high catastrophe risks.*

*The lack of sufficient and timely financing can result in serious long term socio-economic impacts.*

*One of the greatest challenges is to make insurance and other risk-transfer instruments affordable and to couple financial planning with preventive measures.*

### *Disaster Insurance*

- *Reduces the time gap between disaster event and recovery investment.*
- *Guarantees financial support in the aftermath of a disaster*
- *Shares disaster losses horizontally and vertically to reduce suffering.*
- *Compensation is a right rather than a charity.*

*Throughout the session examples of disaster risk transfer efforts from several countries of the world, their applicability and the problems faced were presented.*



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**Arzu Taylan (Middle East Technical University)**

***The Problems of the Current Financial System and the Possible Solutions to Protect Business and Industry against Disasters and to Mitigate the Risk***

***Before the 1999 earthquakes the disaster management process in Turkey involved only the post-disaster process. However, following the 1999 earthquakes there has been a shift towards risk management and the obligatory earthquake insurance is the main indicator.***

***The obligatory earthquake insurance:***

Lessens the financial burden of the State; Accumulates funds for future disasters; Shares the risk within the country; Transfers risk to international capital markets; Provides affordable Insurance Policy for private homeowners in the urban residential areas

***The Problems Faced in OEI:***

The renewal rate is low; Penetration depends on the happening earthquakes; OEI is in fact not obligatory due to uncompleted legislation process

***Problems of the industry***

The commercial and office units at residential buildings, are obliged to buy earthquake insurance. Small industries are only offered to buy earthquake insurance in the market.

Some small industries produce or use hazardous materials, e.g. LPG stations, which can lead to secondary disasters in housing areas after an earthquake.

Small enterprises can be at illegal buildings, which are not covered by the compulsory earthquake insurance system.

Big industries mostly buy earthquake insurance in the market. However, there is not any inspection and recording about their insurance rates, which can be easily provided with the legal regulations.

A classification should be made for the infrastructure and production materials to assess and reduce risks, to determine a tariff system (the insurance premiums according to the risk ratio) and to set some liabilities and obligations.



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## ***Toshio Fujimi (Kyoto University)***

### ***Ambiguity, Risk and Earthquake Insurance Premiums: An Empirical Analysis***

*Low purchase rate of Earthquake insurance (18.5%)*

*Ambiguity of insurance appraisal*

*By missing information of insurance appraisal, people doubt that insurance claim will be paid as they expect.*

*Insurance appraisal:*

*The insurance company's judgment on the extent of damage due to disaster  
Based on this, the amount of insurance payment is decided.*

*The author investigates the influence of the ambiguity on the decision to buy a hypothetical earthquake insurance and the relationship with individual characteristics based on an econometric model using questionnaire data.*

*Conclusions:*

*Appraisal risk probably exists because many people don't trust insurance company's appraisal.*

*Small appraisal risk can considerably reduce the value of earthquake insurance.*

*Only 1% mean appraisal risk diminishes more than half of the insurance value.*

*Males who actually purchase the earthquake insurance and trust insurance company's appraisal perceive less ambiguity than the correspondents.*



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### **Reinhard Mechler (IIASA)**

#### **Financial preparations in the Caribbean for the hurricane season: An application of IIASA's CATSIM model**

*Recent methodological advances on the*

*The IIASA CATSIM which is an interactive stochastic simulation, optimization and training model for studying financial vulnerability to natural hazards and the pros and cons of using predisaster risk transfer instruments within a public finance context.*

*CDB/IDB workshop on “Management of Disaster Risk through Fiscal and Budget Planning”*

*Objectives:*

*discuss mainstreaming disaster risk management into fiscal and development planning  
explore feasibility of using physical and financial disaster risk management options.*

*The model is discussed by way of an application in Jamaica, namely the analysis of the impact of a hurricane. The insurance decision problem is analyzed and several steps of the program are demonstrated, such as the assessment of vulnerability, the assessment of the macro risk and the stochastic fiscal impacts and the assessment of the costs and benefits of risk financing options, i.e. the analysis of probability of financing gap.*



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**Joanne Linnerooth-Bayer (IIASA)**  
***Microinsurance as a Safety Net for the Poor?***

*The potential of catastrophe microinsurance to protect the poor against the consequences of natural disaster shocks, and the significant challenges in making this protection viable were examined.*

*Two examples from Malawi and India*

*Criteria for evaluation (scaling up)*

*Affordability*

*Financial robustness*

*Governance*

*Contribution to risk reduction*

*TRUST that claims will be paid, insurers will remain solvent, government will assure adequate regulation, reliable legal basis is crucial for governance*

*Early success of Afat Vimo (India) was attributed to the role of active civil society structures acting as intermediary*

*Success of Malawi project was largely due to one trusted person within NASFAM*

*Conclusion: Need for extended partnerships for scaling up..*



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#### *Oxfam's Experience in South India*

*Insurance companies were not interested because it involved a lot of man days and paper work to provide insurance for hundreds of families for a premium which was not high.*

*Oxfam Trained the task force members (volunteers) in doing the job of an insurance agent.*

#### *Oxfam Approach*

*Provided initial funding to the Micro Finance Group. The group extended the premium amount as a loan, which communities repaid on monthly instalments.*

*In a few villages communities preferred to use disaster contingency fund to pay insurance premium*

*Disaster Contingency funds could serve as a shield for the savings of micro finance institutions from the threat of post disaster financial dependency on them by the members.*

*Repayment remains with local disaster Contingency fund managed by the community.*

*Volunteers have also been assisting the communities in the claims process.*

#### *Lessons Learnt*

*Awareness building at the community level should match with the awareness building of the insurance agencies on the potential of insuring vulnerable communities.*

*It is not very difficult to design policies suiting to the target groups.*

*Crucial is the integration of insurance linked disaster preparedness perspective in all the development planning and activities of the local governments.*