Overview

1. Outlook for climatic risks
2. Are climatic risks insurable?
3. Motivation for risk transfer mechanisms
4. Proposed mechanisms
5. Role of the private sector
Risk of exceeding temperature levels, for a given GHG concentration level

<table>
<thead>
<tr>
<th>Concentration (CO₂ equiv ppmv)</th>
<th>Probability of staying below indicated warming relative to preindustrial temperature</th>
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</thead>
<tbody>
<tr>
<td>350</td>
<td>350-370</td>
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<tr>
<td>400</td>
<td>400-430</td>
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<td>450</td>
<td>450-480</td>
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<td>500</td>
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<td>600-630</td>
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<td>650</td>
<td>&gt; 650</td>
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Water: Less water mid-latitude and semi-arid tropics
Hundreds of millions in water stress

Ecosystems: Up to 30% of species at risk > 40% of species extinct

Food: Subsistence communities adversely affected
Tropical cereals yields progressively decline

Coast: More floods and storms
Significant land loss

Health: Increasing disease and illness
Health services stretched

Climate Change Impacts (Source: IPCC)

Temperature rise °C wrt global average 1980-99

Food: Subsistence communities adversely affected
Tropical cereals yields progressively decline

Coast: More floods and storms
Significant land loss

Health: Increasing disease and illness
Health services stretched

Trend in actual return period for different level of hot months in Central England (CII (2009))
Are climatic risks insurable?

1. Uncertain but peaky loss distribution
2. Massive scale-up (< 20% losses covered)
3. New customers: poor, vulnerable
4. New assets insured: eco-systems and livelihoods
5. Inadequate distribution system
6. New risks: sea-level rise, exotic species
7. New time frame: long term rather than annual

Three examples

1. Loss of natural assets
e.g., carbon stored in forests

2. Inevitable loss
e.g., submergence of low land

3. Surprises!
e.g., disease, heat stress, vulcanism, infertility etc.

Forestry Insurance

1. Non-monetised values
   Cost of damage control
   Cost of replacement

2. Monetised values incl carbon
   Investment - loss of asset covered with cat bonds
   Forestry products - loss of income with micro weather derivatives

Preconditions
   - damage control system
   - low political risk
   - env due diligence
All risk parametric insurance

Tightly defined products will exclude losses e.g. cat bonds
Losses may be indirect or gradual e.g. loss of pollinators or coral

Solution
- define a ‘trigger’ e.g. SLR, associated with progressive C.C.
- take expert opinion on the possible losses as trigger rises
- calculate contributions
- establish a fund to collect and pay out
- more akin to life/pensions than a fire/motor policy

Proposed mechanisms

- Successor to Kyoto Protocol
- Negotiated in December 2009 by approximately 150 countries
- “Insurance” to be part of the treaty
- Two main proposals tabled
  - AOSIS
  - MCII

MCII Proposal
AOSIS Proposal

MULTI-WINDOW MECHANISM TO ADDRESS LOSS AND DAMAGE FROM CLIMATE CHANGE IMPACTS

1. Insurance Component
   - To address climate-related extreme weather events such as hurricanes, typhoons, drought, floods, and thunderstorms, which result in loss and damage to assets, properties, and human lives.
   - Individuals, households, and communities, especially in vulnerable areas, will be able to access affordable insurance products.

2. Rehabilitation / Compensatory Component
   - To address the consequences of climate change, such as loss of assets, income, and livelihoods.
   - Projects will focus on restoring ecosystems, rebuilding homes, and supporting local economies.

3. Risk Management Component
   - To develop and implement risk management strategies and tools to help communities prepare for and adapt to climate change.
   - This includes early warning systems, risk assessment, and disaster preparedness.

A. TECHNICAL ADVISORY FACILITY

With respect to Insurance Component
   - Provides advice and guidance to countries on the development and implementation of insurance mechanisms.
   - Facilitates the establishment of local insurance mechanisms tailored to the needs of the community.

With respect to Rehabilitation / Compensatory Component
   - Assists countries in developing strategies to address the long-term consequences of climate change.
   - Provides technical support and resources to communities to implement recovery projects.

With respect to Risk Management Component
   - Offers technical advice and support on risk management strategies and tools.
   - Facilitates the implementation of risk management plans and early warning systems.

B. TECHNICAL VULNERABILITY

With respect to Insurance Component
   - Provides technical assistance and capacity building to enhance the resilience of national insurance systems.
   - Supports the development of risk assessment frameworks.

With respect to Rehabilitation / Compensatory Component
   - Assists in the identification of rehabilitation and compensatory projects.
   - Provides technical support in project design and implementation.

With respect to Risk Management Component
   - Offers technical advice on risk management strategies and tools.
   - Facilitates the implementation of early warning systems.

C. ADMINISTRATION / SECRECY SECRETARIAT