

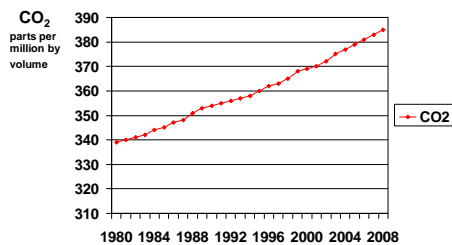
The Insurability of The Impacts of Climate Change

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

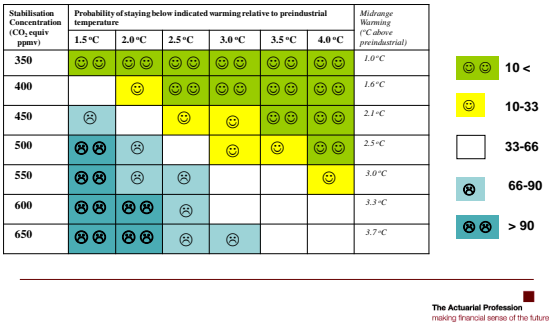
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Atmospheric carbon dioxide: global levels 1980-2008

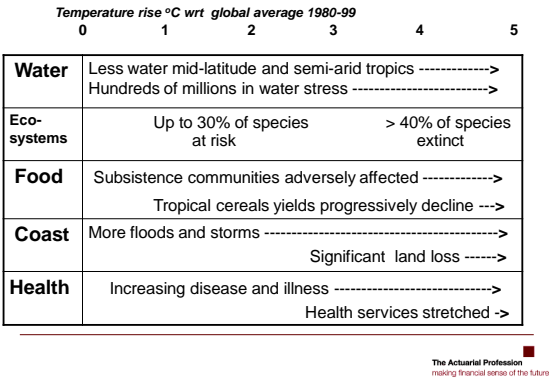


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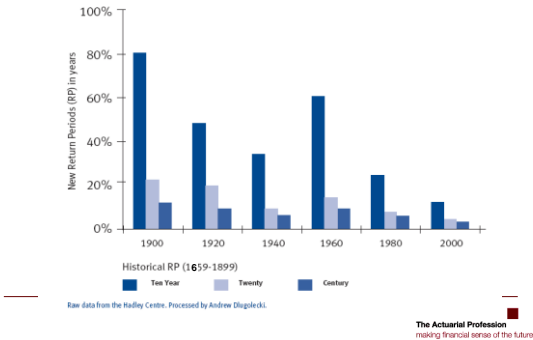
Risk of exceeding temperature levels ,
for a given GHG concentration level



Climate Change Impacts (Source IPCC)



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

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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



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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^l due diligence



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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

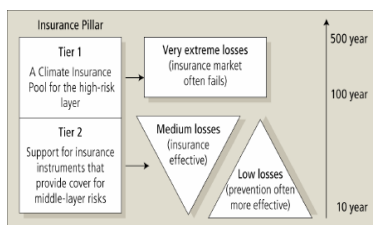
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Proposed mechanisms

- 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

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MCII Proposal



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AOSIS Proposal

MULTI-WINDOW MECHANISM TO ADDRESS LOSS AND DAMAGE FROM CLIMATE CHANGE IMPACTS		
MULTI-WINDOW MECHANISM BOARD		
1. Insurance Component	2. Rehabilitation / Compensatory Component	3. Risk Management Component
To address climate-related extreme weather events such as hurricanes, tropical storms, floods and droughts, which result in loss and damage	To address progressing negative impacts, such as sea level rise, increasing sea and land temperatures and ocean acidification, that result in loss and damage (e.g., land loss, coral bleaching, impacts on potable water availability, reduction in fisheries, desertification, etc.)	To promote risk assessment and risk management tools and strategies at all levels; to facilitate the implementation of risk reduction and risk management measures
Triggers – e.g., might include precipitation, wind speed, storm surge	Parameters ² – might include sea level rise, temperature increases, loss of land, damage to coral reefs, loss of fisheries, salinisation of aquifers, or use an all-risk parameter	

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AOSIS Proposal

A. TECHNICAL ADVISORY FACILITY		
With respect to Insurance Component:	With respect to Rehabilitation/Compensation Component:	With respect to Risk Management Component:
<ul style="list-style-type: none"> - Provides advice and guidance to countries on types of available instruments - Advises on best practices and innovative approaches for identified needs - Provides technical support for the establishment of appropriate risk sharing and risk transfer schemes as requested (e.g., risk pooling arrangements; indexed insurance mechanisms such as catastrophe bonds, weather derivatives; reinsurance schemes; public private partnerships etc.) 	<ul style="list-style-type: none"> - Works with countries to establish baseline parameters in local context - Verifies when parameter thresholds exceeded - Considers means to graduate parameters to reduce basis risk 	<ul style="list-style-type: none"> - Provides advice to countries on risk management techniques in the context of climate change - Facilitates collection of weather data and analysis (e.g., that can support development of insurance tools) - Identifies hazards and provides support to risk assessments - Recommends appropriate investments in risk reduction - Assists in building capacity for managing risk and reducing risk exposure

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AOSIS Proposal

B. FINANCIAL VEHICLE/FACILITY		
With respect to Insurance Component	With respect to Rehabilitation/Compensation Component	With respect to Risk Management Component
<ul style="list-style-type: none"> - Enables/administers/supports risk sharing/risk transfer schemes as required/requested through start up financing, subsidization - Manages and invests reserves accumulated from assessed Annex I Party contributions, premiums/contributions from covered private and public sector institutions and from other donor sources 	<ul style="list-style-type: none"> - Accumulates funds from: <ul style="list-style-type: none"> - assessed Annex I Party contributions, preferably through the proposed Convention Adaptation Fund based on GHG emissions (responsibility) and GDP (capacity) - other donor sources - Pays out when parametric threshold crossed 	<ul style="list-style-type: none"> - Fund measures to support risk reduction and risk management measures - e.g., data collection, hazard mapping, risk assessments
C. ADMINISTRATION - UNFCCC SECRETARIAT		

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