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# **Climate change and the role of finance and insurance: With a focus on adaptation**

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## Part 1

# About the United Nations Environment Programme's Finance Initiative

# What is UNEP FI?

## United Nations Environment Programme Finance Initiative

**UNEP FI** is a unique public-private partnership between **UNEP** and 177 **financial institutions** worldwide.

**Mission: To identify, promote and realise the adoption of best environmental and sustainable practices at all levels of financial institution operations.**

UNEP



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✓ Principles for Responsible Investment



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# UNEP FI and the UNFCCC Negotiations

- COP 8, New Delhi, 2002: Climate Risk to Global Economy**
- COP 9, Milan, 2003: Emissions Trading**
- COP 10, Buenos Aires, 2004: Finance for Carbon Solutions - The CDM**
- COP 11, Montreal, 2005: The Future of Climate Policy**
- COP 12, Nairobi, 2006: Adaptation and Vulnerability**
- COP 13, Bali, 2007: Climate Risk & Opportunity for Financial Services in a Global Economy**



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# Key Publications



Climate Risk

Emissions Trading

Renewable Energy

CDM

The Future of Climate Policy

Adaptation

Carbon Crunch



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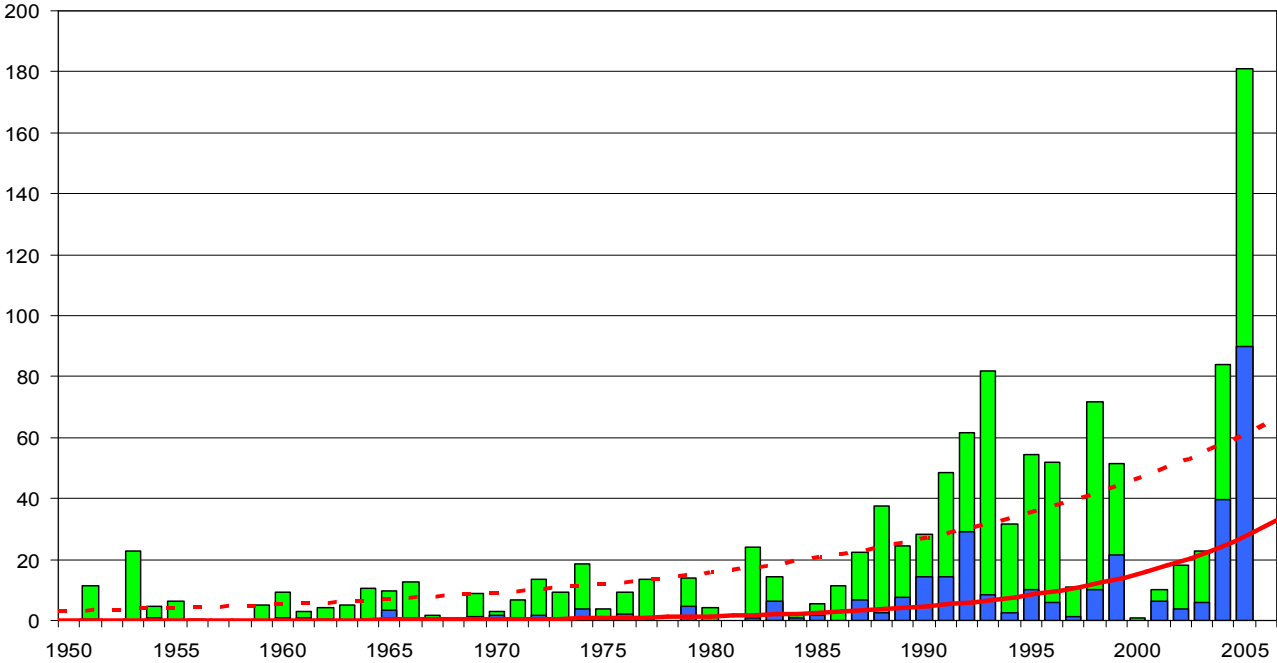
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## Part 2

# Activities of finance and insurance on climate change

# Great Weather Disasters (1950 – 2006)

USD billion (2006 values)



**Strong upward trend:**  
 Higher insurance penetration  
 Growing property values  
 Coastal value concentration  
 Climate change (flood)

Source: Munich Re

Overall Losses Insured Losses





# Climate Change: Investment Analysts' Report

- **Lehman Brothers** – “The Business of Climate Change - Challenges and Opportunities”; A research on the effects of CC to 16 industry sectors
- **UBS** – “Climate Change: Beyond Whether”; Analysis of the effects on CC to investment activities in general and its strategies going forward
- **Citigroup** – “Climatic Consequences: Investment Implications of a Changing Climate”; Selection of 74 firms (from 21 sectors in 18 countries) identified as CC winners

# Climate Change Investments

- **Allianz RCM's Global EcoTrends Fund** – EUR 1 billion portfolio of companies in renewable energy, pollution control, and clean water
- **Swiss Re European Clean Energy Fund** – closed with a value of EUR 350 million acting as anchor investor; maintains a CHF 500 million sustainability portfolio of its investments in alternative energy
- **HSBC Global Climate Change Index** – tracks performance of 300 companies benefiting from exposure to climate change aligned products and services; launched a Global Climate Change Fund for clients to invest in this index

# Carbon Emission Markets

- **Swiss Re** – engaged in worldwide emissions markets; structured risk transfer products for carbon funds and compliance buyers, and secondary carbon market trading
- **UBS World Emissions Index** – first index to track emissions allowances. Launched Nov 2006.
- **Merrill Lynch Green and Gold** – Consultancy service for companies to develop a carbon strategy and voluntarily reduce their firms' carbon emissions.

# Climate Change & Insurance

- **Swiss Re Climate Change Adaptation Program** – insurance against drought to small farming villages in India and Africa.
- **AXA** – comprehensive insurance coverage for wind farms, which generated USD14 million in premium revenue in 2006
- **CarbonRe** – Carbon Delivery Guarantee Insurance for non-delivery in carbon credit transactions.
- **Allianz ECOmotion** – first climate neutral car insurance which neutralizes the annual CO2 emissions of the insured vehicle.

# Carbon neutrality

- **Aviva** – first insurer to carbon neutralise operations on a worldwide basis
- **HSBC** – first major bank and first FTSE100 company to become carbon neutral



# Climate Change Initiatives

- **AXA Research Fund** – EUR 100 million to support academic research on core risks to the human being and the environment
- **Munich Re** – Founding member of Munich Climate Insurance Initiative to develop insurance-related climate change solutions in developing countries
- **HSBC Climate Partnership** – USD 100 million partnership with the Climate Group, WWF, Smithsonian Tropical Research Institute and Earthwatch Institute to respond to the threat of climate change worldwide



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## Part 3

# Climate change adaptation: Roles of finance and insurance

# Bali Roadmap: Process for a post-Kyoto agreement

- Adopted in Dec 2007 at the UNFCCC in Bali, Indonesia
- Process to finalise a post-2012 international CC agreement
- Current financial mechanisms and the Kyoto Protocol focused on **CC mitigation** (eg, carbon markets, CDM/JI)
- Half of Bali Roadmap focused on **CC adaptation**

# Climate Change Adaptation Cost

## **Estimated global cost of adaptation by 2030**

- US\$40bn for agriculture, forestry and fisheries, water supply, human health and coastal zones
- US\$8-130bn for adaptation of new infrastructure

## **Insurance sector expected to play a key role in CC adaptation**

- Public-private partnerships (PPP) for climate related insurance
- Mechanisms for improving risk management & disaster response
- Open access to climate-related data sets

Details to follow...

# Climate Change Adaptation

## Public-private partnerships (PPP) for climate related insurance

<b>Issue</b>	<b>Role of government</b>	<b>Role of private sector</b>
<b>Hazard reduction</b>	Basic data and research Awareness-raising	Risk modelling
<b>Resilience-enhancing measures</b>	Regulation and enforcement	Incentives in product design
<b>Vulnerable sectors/ communities</b>	Infrastructure Pilot adaptation scheme funding Diminishing livelihood support	Micro-finance and -insurance backed by reinsurance Pooled development funds
<b>Risk transfer</b>	Guarantee fund Volatility smoothing	Insurance if conditions of insurability are met Otherwise services for public schemes
<b>Disaster relief</b>	Restricted, using hazard reduction and pre-funding	Relaxed terms of business during emergency. Services for public schemes Claims under climatic impact insurance



# Climate Change Adaptation

## Mechanisms for improving risk management & disaster response

- Alternative risk transfer (ART) products
  - Captive insurance companies
  - Weather derivatives
    - eg. World Food Programme buys WDs from Axa Re for disaster relief in Ethiopia: Indexed payout \$7m, premium \$930k/yr
  - Catastrophe bonds (cat bonds)

### Another example

- Integrated property insurance
  - Conventional insurance: provided once property developed
  - Integrated: Insurers involved from infrastructure planning.

# Climate Change Adaptation

## Open access to climate-related data sets

Accurate & timely data at reasonable prices

- Supports growth in weather derivatives & other risk transfer products (especially in developing countries)
  
- eg. Better weather data in rainfall insurance
  - reduce basis risk for clients
  - improve reinsurance rates

# Credit Crunch: Its effects to climate change financing & investments

## Short Term: CC investment and financing is hit hard

- Lower carbon price, falling oil price
- Intense competition for capital: Sustainable projects less competitive as its business models are based on future prospects
- Political attitude: "let's save the world later"

# Credit Crunch: Its effects to climate change financing & investments

## Medium Term: Where will the money go?

- Cash hoarding cannot last long
- Need for the finance & investment community to rebuild its credibility and reputation
- Opportunity for financiers & investors to re-evaluate their business model. Opportunity to mainstream environmental, social and governance (ESG) factors integrated into core strategies, processes, products and services

# UNEP FI's Recommendations

- **Integrate climate change related risks & opportunities into core financial operations**
- Engage with government decision makers
- Reduce one's own direct impacts contributing to climate change and report annual emissions transparently.





**Thank you for your attention**

**For more information:**

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