

**Consultation with Insurance Sector on Finance and Investment Flows
to address Climate Change
London, 20 June 2007**

1. Objective and agenda for the meeting

The objective of the meeting was to identify ways to enhance the insurance sector participation in the management of climate change risks and in finance and services for carbon markets/ clean technology development.

The following issues were discussed in the context of adaptation and mitigation:

1. Barriers and risks faced by insurers;
2. Role of insurance;
3. Application of specific risk transfer tools;
4. Regulatory frameworks;
5. Possible role of the Climate Change Convention and the Kyoto Protocol in promoting the participation of insurance sector in the climate change process.

2. Adaptation and insurance

There has been an increase in number of catastrophic events across the globe that has impacted the insurance business. Major tropical storms both in the Atlantic and the Pacific region have already increased since the 1970s in duration and intensity by about 50 percent. The projections are, that this trend exacerbated by global warming will continue in the future. Due to climate change the sea surface temperatures have already increased by 0.5°C. Recent scientific studies indicate that there is a causal link between global warming and increasing occurrence of catastrophes/hazard. These findings that indicate further climate change will be accompanied by substantial losses in the future.

The increased risk due to climate change has lead to modification of risk profiling and strategies of insurers. The catastrophic risk insurance has been treated as non-life insurance business and premium have been renewed every year with changing perception and analysis of risk of occurrence of catastrophic events. Operating in an environment of rising levels of risk leads to higher costs of insurance. Insurers attempt to raise prices of their products by increasing premium rates in anticipation of higher risks. Rising insurance cost has resulted in consumer and regulatory resistance, leading to political intervention on behalf of consumers. The reaction of insurers has been to withdraw from the high-risk zones or areas that have recently been struck by catastrophic events in places such as New Orleans. There is therefore a need to find a way for the insurance industry to support adaptation while being allowed to charge the technical rate for the risk

Risk quantification and communication

The quantification and communication of the true cost of risks has been a big concern for insurers as it is normally very high. Climate change necessitates a 'dynamic view of risk' in climate peril models. The issue of true cost of risk due to climate change requires developing tools and techniques to estimate the true cost of risk. There is uncertainty in the information available and thereby methodological difficulties to account for the risk of high consequence/impact and lower

frequency. In a time of raised risk the transition from a non-technical to a technical risk-pricing regime can be very difficult. There is a need to have a multiyear transition period. There is a need to incorporate the slow but high consequence impacts into the calculations of risk. However these calculations require comprehensive modeling. An uncertainty with models is an issue of discussion for insurance sector. Many insurance companies do not have clearer understanding how the models work. Therefore, they are not convinced to use these models, as these models are not transparent. Insurance companies need to get access to information processed by super computers, appropriate for climate change modeling. Industry has different opinion on risk-based prices therefore collaboration of insurers with Catastrophic (CAT) modeling companies is needed. Regulatory intervention may help transparency in costing and risk by modifying the existing regulatory frameworks

It is not easy to communicate pricing signals related to risk reduction activities. The tendency is to let high-risk poor people be cross-subsidized by the richer ones. In some cases companies prefer to maintain the market price so as not scare people. Insurers do not tell customers the true cost of the risks even when it is known fearing loss of business. Politicians rarely tell their constituencies about the possible catastrophic risks and prefer that the insurance companies inform customers about these risks.

Demand and supply side barriers

There are different demand and supply side barriers impeding the spread of insurance to cater to the new risk posed by climate change. Demand side barriers include low risk awareness on part of the customers thus their perception of risk, particularly those of low frequency high impact events. Only consumers who know they are at high risk will buy cover leading to anti-selection. High premiums deter consumers from buying insurance as they indicate either the high risks, or uncertainty. Also if the consumer feels that indemnity is uncertain or slow; or if they are paying more than their fair share, there is a tendency not to take insurance coverage. The supply side barriers for insurance industry are data availability on hazards and exposures in developing countries. Geographical and climate data is poorer and often prohibitively costly, detailed climate change impact analyses are lacking. There is weak control of risk framework (land development, construction, etc) to avoid "moral hazard". Domestic laws of many countries may prevent insurers from issuing derivatives directly to clients like foreign companies may be restricted from establishing businesses in developing countries

Other barriers

There is also a need for revisiting the existing laws of taxation and accounting for evolving insurance products for linking conventional insurance products with capital markets to spread the risk. Instruments for alternative risk transfer like CAT bonds are treated as derivative products and perceived differently from insurance products leading to accounting hurdles for insurance industry. Accounting regulations treat disaster insurance like motor insurance, not life insurance. There is a need to have a fresh look at the regulations governing insurance industry to support innovation for increasing risk of climate change.

Perspective from developing countries and SIDS

Developing countries and Small island countries need to have a different perspective for insuring the increased risk due to climate change. Lack of availability of credible hazard and catastrophic risk data, lower capacity of local insurers to cover risk, regulatory barriers and higher transaction cost to increase the insurance spread are some of barriers for insurers in developing countries. There have been some successful stories from countries like India and other Latin American

countries, where insurance products have been successful in covering weather variability risks. There is a need to develop and enhance insurance-related solutions to help manage the impacts of climate change especially in developing countries. Pilot projects should be supported for the application of insurance-related solutions, in partnerships and through existing organizations and programs.

Small Islands Developing States (SIDS) often have high debt with high dependence on donors to support post disasters. They have limited capacity to spread risk due to their small sizes and limited access to insurance. Climate change triggered extreme events may cause damage equal to the GDP of the country. A novel initiative like Caribbean Catastrophe Risk Insurance Facility (CCRIF) with parametric form of insurance provides immediate liquidity to the economy struck by an extreme event. The CCRIF is a good example of a Public-Private partnership where Caribbean governments purchase insurance and the CCRIF trust fund with contributions from donors and premium is managed by World Bank.

Another initiative is the Munich Climate Insurance Initiative (MCII) which is an interdisciplinary initiative of the World Bank, scientists, NGOs and the insurance industry seeking solutions for developing countries to insure against increasing hazards of weather related natural disasters they are facing.

3. Mitigation and the insurance

The last few years have seen an unprecedented growth of renewable energy industry both in developing and developed countries. Consequently there has been a spread of insurance coverage, with both conventional and innovative insurance products, to meet the demand of insurance cover for technical and non-technical risks of the industry. The insurance industry faces both opportunities and challenges. Opportunities include the booming carbon market that is pushing renewable energy industry, innovative insurance products like weather insurance derivatives and new markets and conducive regulatory environments. The challenges include lack of data on the commercial operating history and technical expertise with local insurers and many market barriers. However, the perspective of insurance industry to insure risk associated with mitigation technologies varies with the climate change regime in which it is operating. The regulatory regime for renewable energy markets varies from compliance to voluntary and thereby affecting the penetration and market growth of the insurance industry. The renewable energy target in EU has marked the growth of many low carbon technologies like wind, biomass, hydro and others for power production. There has been great optimism among insurers to provide conventional and innovative insurance risk coverage options for these existing and emerging mitigation technologies

Insurance opportunities associated with new mitigation technologies

Carbon Capture and Storage (CCS) technologies present enormous opportunity for storing CO₂ and mitigating its climate change impacts. CCS has its unique impacts and liability in terms of leakage, health and environmental impacts and risks. The extent of the liability insurers want to engage in discussion with policy makers on CCS regime has a great bearing on regulatory structure and the possible insurance products. The fundamental question is whether the CCS technology is a long-term solution or short cut reorganization of CO₂ as a waste, toxic or nuclear. The nature accepted under law and standards will affect the CCS. There is a view of insurers that government should take long-term liability exposure and support regulatory environment and

policies to break it down to a level it can be insured. The liability of storage should be passed to government after five years or to who owns the carbon in CCS capture emitters or storage site owners. In addition to regulatory barriers for CCS, current emission reduction credit prices may not give the required incentive for markets to push CCS as a commercial mitigation option. This has its bearing on the insurance industry to provide insurance coverage for the risks associated with CCS technology.

The insurance industry has developed innovative products to cover the risk of **carbon credits trading**. Risks associated with generation and delivery of carbon credits from mitigation projects are covered by various insurers. There is a need of long-term policy and regulatory signals for continuation and development of this niche sector to support carbon market.

The **forestry** sector offers a viable mitigation potential and huge opportunity for the insurance sector. There are however technical issues such as lack of experience and capacity on part of the insurance industry to insure the forestry sector. Lower demand for forestry credits due to permanence and leakage issues has not created strong pull factor for insurance industry but there is emerging opportunity of monetization of ecosystem services with carbon sequestration credits to expand the market. Remote sensing technology and GIS tools can be helpful in overcoming some of the technical barriers for insuring forestry mitigation projects.

Ways to facilitate participation of the insurance industry in the climate change process

The insurance industry needs to get involved in the national planning processes so as to get the true cost of the risks. It is necessary for the insurance sector to build stable and trustworthy market and to foster collaboration between stakeholders, insurers, insurance regulators, government, scientists, customers and investors. Insurance companies need support and encouragement to initiate programmes that reduce emissions in order to reduce the risk of climate change. For example, although there is a lot of uncertainty in the forest sector, it is a promising market - especially in the new climate change regime.

Some national regulations are hindering the operations of insurance companies. There is need for increased dialogue with regulators to re-visit existing laws and regulations to provide incentive to insurers for covering catastrophe and increased climate change risk.

There is also a need to promote insurance approaches in cooperation with other organizations and initiatives within existing frameworks such as the United Nations system, International Financial Institutions, international donors, and the private sector. The proposal for pooling intergovernmental funding for aligning insurance sector to climate change and catastrophe risk insurance could be a novel initiative addressing the issues of equity and global risk sharing.

Suggestions for the secretariat

The UNFCCC secretariat should facilitate:

- A dialogue between the economic development, disaster reduction and climate change practitioners to talk to each other in order to ensure that the limited funding is used properly. The identification of needs and possible solutions for the insurance services as they relate to climate change;
- A dialogue among modelers, insurance companies and Parties;
- A dialogue between the finance sector, intergovernmental organizations and insurers. Some insurers feel that they are not being fully utilized by governments. To launch a consultative and collaborative process with UNEP-FI;

- Insurers feel that there a number of issues such as the regulatory nature, value and potential of CCS as a mitigation technology that need to be clarified by the UNFCCC process in order to pave the way for the insurance industry to take serious consideration of covering this mitigation technologies;
- UNFCCC process could help in coordinating the different modeling agencies with a view to improve predictions for CATs for new generation of CAT models;
- Top UNFCCC officials should endeavor to meet the CEOs of key insurance companies with a view to discuss these companies possible roles in the climate change process.

ANNEX I

List of presentation made at the Consultation with Insurance Sector on Finance and Investment Flows to address Climate Change

- 1. Insurance Sector in Adaptation: Andrew Dlugolecki**
Introduced the agenda to the participants with brief background information on catastrophe events, climate change and insurance sector. He facilitated the session on Insurance Sector and Climate change Adaptation.
- 2. Catastrophe Modelling and Insurance: Robert Muir-Wood (RMS)**
Discussion on the issues of catastrophe losses and catastrophe modelling with implication on insurers operating in high-risk zones.
- 3. The Munich Climate Insurance Initiative (MCII): Prof Peter Hoeppe**
Information on natural catastrophes or loss events worldwide and a brief communication on the MCII. MCII is an interdisciplinary initiative with representatives from World Bank, scientists, NGOs and insurance industry seeking solutions for developing countries to insure against increasing hazards of weather related natural disasters they are facing.
- 4. Caribbean Catastrophe Risk Insurance Facility: International Financial Cooperation and World Bank**
Introduction to CCRIF, its structure, governance, portfolio and risk financing capacity:
- 5. Climate Change, SIDS and Insurance: Nick Silver**
Discussion on the vulnerability of SIDS to Catastrophe events and summary of SIDS project funded by DEFRA. A case study of Jamaica was presented to bring issues of increased climate change risk and insurance in perspective.
- 6. Climate Change Mitigation and Insurance Sector: Erik Haites**
Discussed the role of insurance sector in insuring the risk of potential mitigation technologies and risk assessment techniques. Deliberated with Insurers on issues of emerging mitigation technologies like CCS and Forestry in preparing regulatory framework.
- 7. Climate Change and the Insurance Market: IFC**
Presented the financial institution perspective on increasing climate change risk and use of insurance for hedging the risk in investments.

ANNEX II

Confirmed list of participants for Consultative Event with Insurance Sector on Finance and Investment Flows to Address Climate Change 20th June, London		
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