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UNEP Insurance Industry Initiative
- Background Document-

Executive Summary

The Kyoto Protocol and Beyond: Implications for the Insurance Industry

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The full report will be available by the end of 1998

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1. Implications of the Kyoto Protocol for the Insurance Industry

The insurance industry is a major player in the global economy and provides cover for risks related to natural hazards such as windstorms and other extreme events. The industry has in recent years taken a great interest in climate change and has actively participated in the ongoing UNFCCC negotiations.

Leading insurance companies have welcomed the Kyoto Protocol, which will eventually establish the framework that will deliver the greenhouse gas emission reductions agreed upon by the Parties. At a meeting of insurance companies in Cologne (9-10 June 1998) sponsored by the Insurance Industry Initiative for the Environment in collaboration with UNEP the following points were stressed:

- The insurance industry stresses the importance of implementing Policies and Measures, which represent the principal way of achieving greenhouse gas emission reductions. The insurance industry is prepared to contribute by making efficient use of energy and resources in managing internal operations and physical assets and by supporting programmes directed at introducing energy efficient technologies and practices.
- The insurance industry also welcomes the creation and introduction of flexible market mechanisms such as Emissions Trading (ET) and the Clean Development Mechanism (CDM) to aid in delivering emissions reductions. It also supports the continued operation of Joint Implementation (JI) projects. The inclusion of Economies in Transition (EIT) within the umbrella of the ET scheme is a particularly encouraging development.
- The three flexible mechanisms, while welcomed, require further clarification in particular with respect to the modalities and operational aspects of the CDM and ET mechanisms.
- Certain issues are of particular concern and include the following : issuance of emission credits, baseline emissions verification (for JI and ET projects), rules governing the banking of credits, “hot air”, limits to trading.
- The issue of non-compliance of Parties to meet their QELRO obligations is a major concern and requires further attention by negotiators.
- Until open issues concerning market mechanisms and non-compliance of Parties are clarified, it is not possible to define possible roles for commercial insurance in furthering ET, CDM and JI.

2. Climate Change and Natural hazards - Insurance Implications

The impacts of climate change on natural hazards is of particular concern to the insurance industry because of the potential adverse effect it could have on property insurance and related activities. The following specific effects are of concern:

- According to IPCC the balance of evidence suggests a discernible human influence on global climate change. The global mean surface air temperature is expected to increase by 1 to 3.5 °C by the year 2100. Sea levels are expected to rise beyond critical levels in several regions, as a consequence of thermal expansion and melting of ice masses
- According to simulations based on known physical mechanisms, man-made global warming will contribute to an enhanced global mean hydrological cycle and to shifts in atmospheric and oceanic circulation patterns. This may affect regional storm paths and alter the frequency and intensity of extreme weather events and/or their geographical distribution.
- Even small shifts in regional climate zones and/or storm patterns carry the risk of a large increase in property damage, exacerbated by inadequate planning and construction, in certain areas. Because of the non-linearity of the relationship between the intensity of a meteorological event and the property damage incurred, damage can increase rapidly beyond certain thresholds (e.g. increasing the wind gust speed of a 200 km/h storm by 10 % leads to a damage increase of about 150%). For example, an intense hurricane making landfall in some areas could, already today, generate insured losses in the order of USD 100 billion in only few hours.
- In addition, the insurance industry is concerned about a possible link between global warming effects and the severity and frequency of the natural El-Nino effect.

Risk Management

Insurers are convinced that global climate change creates significant environmental, economic, social, and geopolitical risks. A precautionary approach should be taken in dealing with the issue by international cooperation, research and preventative action.

Policy-makers have a leadership role in establishing and enforcing long term priorities and values in the management of natural hazards. This encompasses short and long-term planning of land-use, infrastructure projects, regulation of building quality, risk education, and implementation of incentives (or disincentives) to promote sound risk management by all sectors of society.

There are important advantages in involving the private insurance sector in planning for disaster mitigation. It has the skills to provide the assessment, quantification and mapping of risks, prompt disaster recovery, fraud control, avoidance of duplicate administration and the access to international resources. It can thus contribute considerably to an efficient risk management system.

Underwriting of property at risk from natural hazards such as windstorm, flood and subsidence is based on the concept of “return periods”. Return periods are generally calculated based on observed events and historic claims costs. Rapidly changing climatic conditions will lead to difficulties in calculating return periods and to lagging risk premium adjustments. Unfortunately, the scientific understanding of climate change is not sufficiently advanced for insurers to include such effects in their tarification tools and to develop appropriate new products or services to cope with climate change.

3. Implications for Investment Strategies

There are also likely to be implications for investment activities as society plans for, and adapts to, the new climate regime. The economic situation of selected regions, such as coastal zones and islands, or of whole industries could be affected. As much as one third of investments in global stock markets (with a total capitalization of more than US$ 15 trillion) are presently managed by the insurance industry. It is therefore in the interests of the industry to understand better the investment opportunities and challenges which will arise from measures to reduce greenhouse gas emissions and to reduce the vulnerability of society.

The decarbonisation path postulated by the Kyoto Protocol will ultimately lead to structural changes in the economy, favoring carbon light sectors and burdening carbon intensive ones. This will lead to changes in the economic situation and related risk landscape of whole sectors and selected regions, which insurance companies need to consider in their investment activities and in insuring and reinsuring risks.

Insurance companies and pension fund managers have taken the lead in creating new investment instruments which favor companies that are committed to substantially lowering their greenhouse gas emissions and demonstrate best practices in energy efficiency. However, the amount of money under management in such funds is still very small. Investment managers of insurance companies and pension funds should work together to develop environmental reporting standards which are generally accepted and therefore used in practice besides benchmarks for profitability and security.

The Insurance Industry Initiative for the Environment in collaboration with UNEP has researched and promoted the concept of standardized corporate greenhouse gas inventories leading to a global warming indicator (GWI)‘, so that investment portfolios can be managed based on accurate and relevant information.

4. What Role for Insurance in Implementing ET, CDM and JI?

Based on its experience, the insurance industry in collaboration with other financial institutions can provide a large array of services to other sectors of the economy including assistance in assessing ‘carbon’ liabilities of companies, project insurance for infrastructure projects, verification and certification services.

The envisaged market-based mechanisms Emissions Trading (ET), Clean Development Mechanism (CDM) and Joint Implementation (JI) may present opportunities for the involvement of commercial insurance in future. At present the details for such mechanisms are not well enough defined to assess the viability and commercial interest of the insurance industry in covering related risks.

Joint Implementation projects are currently the best defined setting for the application of commercial risk management techniques and as such pose the most attractive proposition for insurer involvement. In this setting, the use of observable emissions baselines and independent verification of emission credits are recommended.

1 “Creating a Standard for a Corporate CO2 Indicator”, Charles Thomas and Tessa Tenant, IIIE Working document , May 1998.

Emissions Trading ist currently the most uncertain setting from the viewpoint of commercial insurance. The long timescales involved in international verification procedures, and the scale of the related political risk, would seem to render this an inappropriate area for commercial insurance at present.

5. Conclusion - Way Forward

In the light of the Kyoto Protocol, the insurance industry has a key role to play both in awareness and capacity building and in its function as provider of risk management services.

It stresses the importance of implementing policies and measures and welcomes the introduction of flexible market mechanisms such as Emissions Trading, Joint Implementation and the Clean Development Mechanism to achieve the agreed upon emissions reductions. Until open issues concerning the flexible mechanisms and non-compliance of Parties are clarified, though, it is not possible to define possible roles for commercial insurance in furthering ET, JI and CDM.

It is recommended that the insurance industry set up forums with other stakeholders in the UNFCCC process to further develop best practices in energy and environmental management, in introducing reporting standards that allow incorporation of climate protection considerations in investment, and in further developing flexible market-based mechanisms in a way compatible with the functioning of the private sector.