

Pamela Simpson,
Climate Risk Disclosure (EX) Working Group
Climate Change and Global Warming (EX) Task Force
National Association of Insurance Commissioners

September 15th, 2008

Dear Ms Simpson,

I am writing to submit comments from Risk Management Solutions on the August 15th draft of the 'Climate Risk Disclosure Proposal', produced by the NAIC Climate Risk Disclosure (EX) Working Group.

Our comments are focused on addressing the issues connected with Question 5 of the proposal, but we would also like to offer an endorsement of the the principle of disclosure.

The principle of disclosure

Climate change has the potential to have a profound effect on the risk of insured losses from weather-related events. Even if efforts to stabilize concentrations of greenhouse gases in the atmosphere are ultimately successful, we are committed to climate change in the coming decades, which will affect the frequency, intensity and geographical distribution of extreme weather events in different regions, including the United States. In June 2008, the United States Climate Change Science Program published its report on 'Weather and Climate Extremes in a Changing Climate' focusing on North America, Hawaii, the Caribbean and U.S. Pacific Islands, and concluding:

"In the future, with continued global warming, heat waves and heavy downpours are very likely to further increase in frequency and intensity. Substantial areas of North America are likely to have more frequent droughts of greater severity. Hurricane wind speeds, rainfall intensity, and storm surge levels are likely to increase. The strongest cold season storms are likely to become more frequent, with stronger winds and more extreme wave heights."

Losses from these events could be limited by effective measures to adapt to the impacts of climate change. However, the global insurance industry will also need to adapt to these changes to ensure it can continue to operate and maintain the future insurability of people and their properties against weather-related risks. It is essential that those public and private organizations offering insurance and reinsurance against weather-related losses assess how climate change will impact insurance systems in the future. It is in the interests of the industry and of the wider public that the results of these assessments, and the planned responses from public and private insurers and reinsurers, are appropriately disclosed and open to scrutiny.

Question 5

Question 5 of the proposal states:

"Describe the company's utilization of computer modeling to assess the impacts of climate change impacts."

Computer catastrophe models are used throughout the insurance industry in the United States to help insurers and reinsurers to manage their exposure to losses from weather-related perils, such as flooding, hurricanes, tornado/hail and windstorms.

One of the key implications of climate change is that future weather hazards will change in their frequency, intensity and geographical distribution. This means that, all else being equal, the risks from weather-related events will change with time. Therefore, it is necessary to explicitly take account of the period under consideration when projecting future losses.

Insurers and reinsurers undertake a number of activities, conducted over different timescales and requiring discrete loss-projection types, as shown in the following table.

Type of loss projection	Timescale	Periodicity of activity	Activity
Short-term	<1 year	Seasonal	Near-term hedging
Medium-term	1-5 years	Annual	Underwriting Capital management Relationship structuring Risk transfer strategies
Medium-long-term	5-20 years	Multi-year	Portfolio management Corporate investment
Long-term	20+ years	Multi-decadal	Construction planning Development strategies

At present, catastrophe models are primarily designed to provide medium-term projections of losses, assuming no significant changes in hazard over a period of up to five years. Catastrophe models are traditionally based on historical records of weather events in order to produce a stochastic event set, from which hazard probabilities (eg windspeeds, flood depths) are calculated. All new versions of RMS catastrophe models for weather-related risks take into account any patterns in the historical record of hazards, including trends due to climate change as well as multi-annual and decadal variability.

For instance, the RMS model for US hurricane risk takes account of the evidence that annual activity in the North Atlantic increased significantly after 1994. Previously, US hurricane models assumed a stationary hazard trend, such that the extrapolation of a simple mean of historical activity was used to project future losses. However, it is clear that an extrapolation of the long-term historical mean underestimates average annual hurricane activity in the North Atlantic after 1994. RMS now incorporates the results of a sophisticated expert elicitation process, based on the weightings of multiple forecast models by independent researchers, in order to project annual hurricane activity over a future five-year period. Among the forecast models that are used are those based on climate projections for the Intergovernmental Panel on Climate Change.

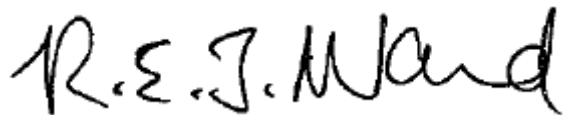
In addition, RMS is now investigating how catastrophe models can be used for multi-year and multi-decadal activities by providing medium-long-term and long-term loss projections. Climate model outputs can be utilized to adjust the background climate (eg to take account of higher sea levels), or to adjust the characteristics and frequencies of extreme events (eg to take account of more frequent major hurricanes). It should be noted that the uncertainties accompanying these projections are greater than those for medium-term projections.

Such innovations in modeling are at a comparatively early stage of development, and rely on the latest climate model projections from the scientific community. They can incorporate assessments of potential changes in hazard, as well as projected changes in exposure and vulnerability of properties. These innovations can assist decision-making about, for instance, the potential effectiveness of adaptation measures to limit future losses from weather-related events.

In view of these developments, we believe that insurers are likely to find it easier to disclose appropriate information in response to Question 5 if it explicitly specifies the time period over which climate change impacts should be considered.

Finally, we would like to highlight the fact that current regulations applied to catastrophe models in some parts of the United States are creating disincentives against innovative methodologies that take account of natural climate variability and anthropogenic climate change. In particular, modelers may submit novel methodologies which fail to satisfy regulations because they include non-stationarity in the annual frequency and/or intensity of weather-related events. In our view, regulators and modelers share a responsibility to ensure that the regulation of catastrophe models keeps pace with methodological advances and promotes the most accurate, rather than the most conservative, projection of losses. If they do not, insurers and reinsurers will be hampered in their efforts to assess their exposure to higher risks of losses due to climate change, which ultimately will be to the detriment of the industry and consumers.

Yours sincerely,

A handwritten signature in black ink that reads "R.E.J. Ward". The letters are cursive and connected, with a prominent "W" at the end.

Bob Ward
Director, Public Policy