



THE ISCM NEWSLETTER

Edited by Randy Law

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2014 RAA Cat Modeling Conference Adapting for Today – Preparing for Tomorrow

Contributed by Shari S. Zola – Munich Re

It has become well-known around the industry that the RAA Cat Modeling Conference has become a “must go-to” seminar for risk accumulation decision makers. The focus is on catastrophe risk, the models and tools available to manage this risk, and their impact on the insurance industry. The February 2014 conference once again proved that this reputation has been well-earned, bringing together professionals from the worlds of science, insurance, and academia. The predominant themes this year were: *Creating Your Own View of Natural Hazard Risk, Severe Convective Storm Model Comparisons, and Flood.*

There were some thought provoking discussions around *Owning Your Own View of Risk.* For many years most companies used model results “out of the box”. If a company was not comfortable with those results, one could use a blended version of two or three models. It seems to be understood that this is no longer an acceptable practice. Many companies want to expand their knowledge around the hazard and vulnerability components of the models. This could lead to model adjustments based on a company’s own view of risk, or at least a better understanding as to what drives the model results in order to make more informed decisions. It was also noted that while it is extremely important for companies to develop their own view of risk, it is imperative that they have personnel with the knowledge and experience to make these adjustments. Because of this, it is an encouraging time in our industry for analysts who have geo-science and engineering backgrounds, as this skill set is becoming more highly valued in the cat modeling world today. And while there are still differences in opinion as to whether to use a single model or multiple models operationally for steering business, all agree that it is good to have multiple models for benchmarking when developing one’s own view and implementing model adjustments as best practice.



Dr. Holly Bamford of NOAA during her presentation on coastal risk awareness and management.

Severe Convective Storm (SCS) is a very challenging peril to model, and fostered some lively conversation at the conference. The SCS panel discussions with the three major modeling companies were informative, and friendly, and it was a pleasure to see the panelists contrasting and comparing their models without being adversarial. Another fun aspect of the panel to learn was that each participant had similar interests on their personal bucket list, which shows they are very like-minded.

So why is SCS such a tough peril to model and why do the results of the different model vendors vary so greatly? The biggest difficulty is how an SCS event is defined spatially and temporally. Each model vendor has a different definition of an event. Another question concerns event set sufficiency, are there enough events to simulate a true distribution of

the risk? There are different ways to handle these issues, all with its own advantages and trade-offs. One method uses a larger grid with fewer simulations. Although this improves run time, it can cause a loss of resolution in the tail of the curve which in turn will impact the reinsurance treaty analysis. Another method uses precise hazard footprints, allowing for more realistic events. This approach may not have enough spatial coverage and could produce gaps for primary insurance rate making. The underlying frequency and smoothing

assumptions can account for most of the differences in the models. While there is a standard resource used by all modeling vendors for SCS data, this resource is incomplete and causes the modelers to make significant assumptions around frequency and severity. These assumptions lead to a large differential between model vendors, unlike the perils of earthquake and hurricane, where data from the USGS on attenuation and HURDAT landfall data available from NOAA is much more complete.

While each of the models has its advantages, users must also be aware of their limitations. One must understand how they are being used (i.e. primary rate making vs. portfolio view) and complement the results with experience and underwriting judgment. One drawback commented on was the difficulty in estimating post-event loss results. Many companies are using exposure tools for managing this risk.

At the conference there were a number of vendors that provide tools that supplement the primary modeling tools. The major model vendors are even partnering with other companies and are no longer trying to do it all themselves. Both AIR and RMS have recently released updated SCS models.

There were a number of sessions around *Flood Modeling*, and several companies are focused on this peril. Both KatRisk and AIR showed their latest advances in flood modeling. AIR is expected to release their U.S. inland flood model this year. Currently, RMS has an advanced storm surge model and plans to provide U.S. Flood Hazard data within the next year, followed by a probabilistic flood model in 2-3 years for both storm surge and inland flood. Both of these models will cover all types of U.S. flooding,



Federico Waisman moderating the Model Comparison Panel with (l to r) Matthew Nielsen, Scott Stransky and Thomas Larsen.

from tropical cyclone surge, to hydrological and flash flooding. Further, there are several other companies providing flood data tools as well. Regarding flood insurance, most in attendance felt the NFIP would continue to exist until there is a better platform and acceptance of

risk adequate pricing by location. Following the conference, President Obama signed the Homeowner Flood Insurance Affordability Act of 2014 into law. This act repeals and modifies certain provisions of the Biggert-Waters Flood Insurance Reform Act, rolling back rate increases to NFIP.

Overall, the conference provided superior educational content, stimulating dialogue, and most importantly... exceptional networking opportunities along with some fun.

Please visit the ISCM Website at www.catmanagers.org. We look forward to hearing the members thoughts, ideas and suggestions. Attendees of the RAA Cat Modeling Conference receive a one-year membership to the organization.



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