



Understanding Impact and Implications of Data Standards on Post Disaster Risk Analysis

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Although the physical and humanitarian effects of a natural catastrophe are often bound to the locality of the event the financial impacts can have global effects. This is particularly prominent in the re/insurance community, where through a number of market mechanisms and re/insurance structures financial loss is mitigated amongst many companies across the globe. The level of risk a company wishes to retain, given an event, represents the level of risk decision makers deem acceptable. Catastrophe risk modelling tools aid the estimation of risk retention and transfer mechanisms, and increasingly the level of capital required to withstand a catastrophic event. These tools rely on appropriate representations hazard, exposure, vulnerability and insurance conditions that reflect the reality of risk. In addition, accurate estimation of loss potential in the aftermath of a catastrophic event equally relies on the data available to assess the scale of damages experienced and to provide views on the likely scale of loss. A coherent and focussed data and modelling strategy is required to ensure that the risk assessment made is as accurate as possible.

A fundamental factor in determining the accuracy of catastrophe output, is the quality of data entered. It is of vital importance, therefore, to have an understanding of both the data used as well as the standard of this data, which will so powerfully impact upon the decision making process. This is perhaps best illustrated through the study of historical events, such as Hurricane Katrina and Ike. The extent of data variance in post disaster analysis clearly demonstrates issues of data discrepancies, vintage, resolution and uncertainty propagation, and reflects on the standard of the original data utilized for modelling purposes and decision making.

Using experience gained from recent events, this paper will explore current data variabilities, and the impacts on effective loss estimation, both in relation to reinsurance structuring, but also in terms of effective post-event analysis. It will provide views on how data is currently applied in this context, and will make suggestions as to the most important areas for future data improvements.