



NEWS

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FIRST EVER MULTI-PERIL PROBABILISTIC FLOOD MODEL FOR VIETNAM

JBA Risk Management has released the first ever high resolution, multi-peril flood model for Vietnam to help the insurance industry better understand flood risk in Vietnam.

Jane Toothill, director at JBA Risk Management, a UK-based hazard modelling company, explained: "The model allows insurers to better understand which locations are most exposed to severe and frequent flooding. It will be particularly useful for understanding flood correlations between areas of major exposure such as industrial parks and large cities."

The 2011 flooding in Thailand had a huge impact on Thai industry, which had cascading global impacts. Industrial parks and factories for multinational companies were severely affected across the country. As the Asian insurance market continues to recover from the US\$12 billion in loss, the industry is starting to question if it is prepared for the next large event in this region.

Insurance is one of the fastest growing sectors of the Vietnamese economy. Industrial zones have been a large part of that growth, with revenues from these industrial zones increasing by 90% since 2014. Increasing industrial developments have encroached onto historic flood plains, so there is increasing potential for extreme flood loss in Vietnam.

JBA Risk Management's Vietnam Flood Probabilistic Model is the first multi-peril (river flood and surface water) catastrophe model for the re/insurance industry, aiding risk management in Vietnam. The model has been developed to cater for the aggregated exposure portfolios while maintaining the need for high resolution flood analysis.

The event set was developed using JBA's Global Flood Event Set (GFES) methodology, resulting in tens of thousands of tropical cyclone and non-tropical cyclone driven plausible flood scenarios. Each event can be made up of elements of one or two perils described by the return period of the flood intensity.

According to JBA Risk Management, flooding is an extremely localised peril, with hazard intensities often varying considerably on very short spatial scales with underlying topography. For this reason, the model is based on consistent 30 metre mapping and allows for detailed latitude/longitude level risk analysis with the inclusion of 646 industrial zones to enable site-level analysis.

Quantifying flood risk as accurately as possible requires the effects of flood defences to be represented realistically in the model. More than 2,000km of detailed flood defences are included in the model from detailed mapping of aerial imagery.

Vulnerability functions for properties have been specified for each occupancy / structure type for residential, commercial and industrial lines of business, as well as the inclusion of motor (motorbikes and roads) and agriculture (crops and farm buildings). Vulnerability functions were

developed for each property type demonstrating significantly different vulnerability to flood, whilst ensuring the total number of distinct functions was appropriate given the uncertainties involved.

Portfolios of insured assets may be analysed in the model in JBA's catastrophe modelling platform, JCalf®; the model may be licenced in this platform or JBA can carry out bespoke portfolio analysis run in-house. The components are also available to licence separately to run in alternative catastrophe models.

For more information or to request an interview with Jane Toothill (director) or Ian Millinship (senior catastrophe risk analyst), please contact:

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NOTES TO EDITORS

For more information visit www.jbarisk.com.

About JBA Risk Management:

JBA Risk Management is a UK-based leading provider of natural hazard modelling services for the insurance and reinsurance industry globally. JBA people are experts in their field and have great ideas which they deliver through exceptional technical expertise. JBA Risk Management provides security through knowledge, helping clients to understand and manage risks from natural hazards.

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