

News Release

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GUY CARPENTER LAUNCHES PROBABILISTIC PHILIPPINES FLOOD MODEL

London, 11 May, 2020 – Guy Carpenter & Company, LLC, a leading global risk and reinsurance specialist and a business of Marsh & McLennan Companies (NYSE: MMC), today announced the launch of its new Philippines Flood Model. The probabilistic model provides countrywide coverage and enables insurers to assess flood exposure, one of the most frequently occurring natural hazards in the region.

The Philippines Flood Model is based on a 10,000-year stochastic catalogue simulating both fluvial (riverine) and pluvial (rainfall) flooding, including the impact of typhoon-induced precipitation. The fluvial component of the hazard was developed using leading-edge hydrological and hydraulic modeling to simulate river discharges across the river network in the country. Pluvial flooding is simulated using an in-house methodology accounting for local climate conditions, soil type, land use, and topography.

The enhanced model output offers clients great modeling flexibility. It can produce event-loss tables, occurrence exceedance probability curves, and average annual losses at virtually any level of aggregation. The model is powered by the Oasis Loss Modelling Framework (Oasis LMF), an open-source catastrophe modeling platform designed and built by the (re)insurance industry. Outputs can be leveraged using Guy Carpenter's MetaRisk® platform to analyze reinsurance structures and for capital modeling.

Commenting on the model, Mark Weatherhead, Head of Model Development, Guy Carpenter, said: "Guy Carpenter has long been a pioneer in flood modeling, one of the costliest but least quantified perils globally. Our Philippines model is the latest in a series of flood modeling tools developed to expand our risk management capabilities in Asia Pacific."

Bengt Johnsen, Head of South East Asia and Korea Region, Guy Carpenter, added: "The Philippines have a long history of devastating flood events, and the combined impacts of climate change and rapid urbanization are aggravating the problem. Our model provides clients with best-in-class capabilities to quantify flood risk and make informed business decisions, both for internal risk management purposes and for the placement of reinsurance."

The model was developed by incorporating data from a number of public and private institutions, including JBA, Intermap and the European Space Agency. It features up-to-date flood defense information resulting from a comprehensive survey of current mitigation projects, including those sponsored by the Japanese International Cooperation Agency (JICA). The built environment was created by incorporating data from various sources, including satellite products and Guy Carpenter's proprietary Industrial Park Database. The vulnerability component of the model is based on a compendium of empirical vulnerability functions from scientific literature developed in collaboration with the German Research Centre for Geosciences and presented in a peer-reviewed academic paper on the latest advances in flood vulnerability modeling. The vulnerability component was further calibrated using a database of historical losses in the Philippines.

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TAGS/KEYWORDS

Guy Carpenter, Philippines, flood, model, Manila, probabilistic, fluvial, pluvial, hydrological, hydraulic, Marsh & McLennan, MMC, Weatherhead, Johnsen

About Guy Carpenter

[Guy Carpenter & Company, LLC](#) is a leading global risk and reinsurance specialist with more than 3,100 professionals in over 60 offices around the world. Guy Carpenter delivers a powerful combination of broking expertise, trusted strategic advisory services and industry-leading analytics to help clients adapt to emerging opportunities and achieve profitable growth. Guy Carpenter is a business of [Marsh & McLennan](#) (NYSE: MMC), the world's leading professional services firm in the areas of risk, strategy and people. The company's 76,000 colleagues advise clients in over 130 countries. With annual revenue of \$17 billion, Marsh & McLennan helps clients navigate an increasingly dynamic and complex environment through four market-leading businesses including Marsh, Mercer and Oliver Wyman. For more information, visit www.guycarp.com and follow Guy Carpenter on LinkedIn and Twitter [@GuyCarpenter](#).