

## GC BRIEFING

October 2012

## INDUSTRIAL PARKS OF ASIA

*Guy Carpenter has developed an exhaustive database of industrial parks in China, Taiwan, Thailand and Indonesia.*

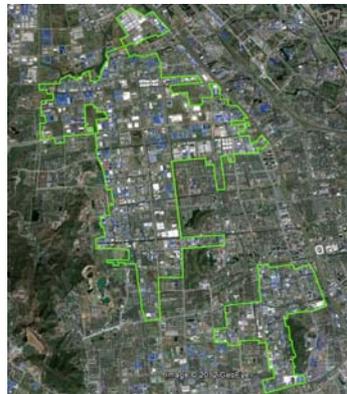
In 2011, Thailand experienced its worst flooding in years, which severely damaged and disrupted manufacturing operations in seven large industrial parks. Due in large part to the significant concentration of insured values in these parks, the total insured loss from the 2011 flood is estimated to be in the range of USD 15 to 20 billion.

Reports said around 1,300 factories across central Thailand were affected by the floods, disrupting manufacturing supply chains inside and outside of Thailand. The production of cars, electronics and other goods was suspended for months as hundreds of factories were under water. Disruption to supply chains also halted operations, causing a knock on effect to global manufacturing. The disruption to operations lasted several months and had a similar impact on production as did the Tohoku earthquake in March 2011. As Thailand plays a critical role in the global supply chain, the flooding forced many companies to organise alternative production facilities or supply routes for parts.

In light of the disproportionate contribution of losses from industrial parks to the overall insured loss, Guy Carpenter has identified the industrial parks in China, Taiwan, Thailand and Indonesia. The actual boundaries of the industrial parks have been digitised and will be accessible to clients using i-aXs®, Guy Carpenter's proprietary and award winning web-enabled exposure visualisation and portfolio management platform. Using i-aXs®, Guy Carpenter clients will be better able to evaluate concentration risk arising from having multiple insured risks within an industrial park.



Bangkadi Industrial Park, Thailand



Suzhou Industrial Park, China



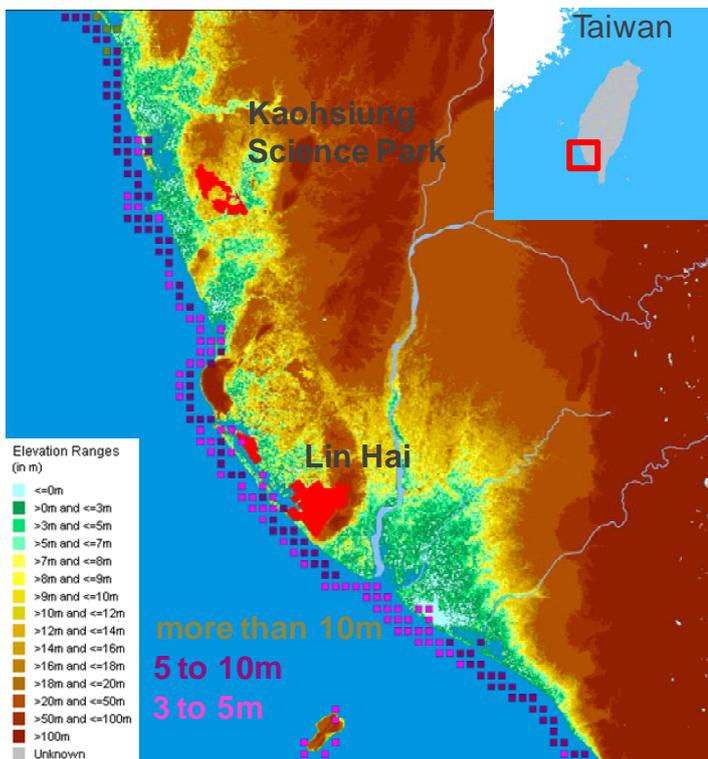
Hsinchu Industrial Park, Taiwan

In addition to determining the location and extent of the estates, Guy Carpenter is maintaining a list of all the companies in the various parks as well as where available their supplier information and type of industry. It is believed the supplier information will be a useful first step to investigate Contingent Business Interruption loss potential across various countries and perils.

Utilising our in-depth knowledge of licensed catastrophe models from AIR, EQE and RMS, Guy Carpenter is working on associating the risk at location level at each of the industrial parks due to earthquake, typhoon and storm surge. To access flood risk, Guy Carpenter is using a licensed model for Taiwan and proprietary models developed for Thailand, Indonesia and India with work under way for other countries in Asia. As for non-modeled perils like tsunami, volcanoes, winter storm, sea level rise, settlement of cities (like Jakarta, Bangkok and Shanghai) etc, Guy Carpenter is actively working with various consultants and universities to develop solutions that will benefit our clients.

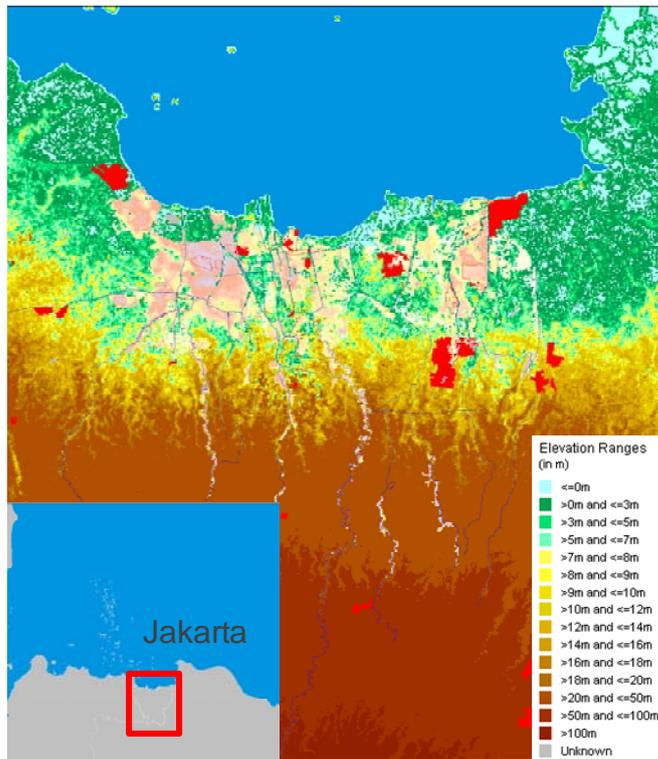
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*i-aXs® is a revolutionary platform that allows clients to better collaborate with their brokers and make quicker business decisions about risk. The simple-to-use, online, real-time risk management platform provides immediate access to vast amounts of exposure data, along with a unique suite of reporting tools customizable for clients' needs. This new technology offers insurers the ability to leverage vast data repositories for better and faster decision making, right from their own desktops. With i-aXs®, clients have direct access to information and reports that could have taken a team of people weeks to deliver, now available in a matter of minutes.*



Impact of tsunami generated by  $M_w$  9.0 Manila trench Earthquake (scenario) on Southern Taiwan (Source: NASA SRTM)

The extent of the Industrial parks are denoted in Red



100year flood map for Jakarta (Source: NASA SRTM and GC Jakarta flood model)

The extent of the Industrial parks are denoted in Red

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