

News Release

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Guy Carpenter Asia-Pacific Climate Impact Centre Publishes Third Annual Report on Region's Climate

New York, July 2, 2012

The Guy Carpenter Asia-Pacific Climate Impact Centre (GCACIC), a joint initiative of Guy Carpenter & Company, LLC and City University of Hong Kong, today released its third annual report, which presents the findings of the 27 research projects conducted by GCACIC members on climate issues in the Asia-Pacific region in 2011.

The report, available for download at www.gccapitalideas.com, covers a wide range of climate-related events and phenomena affecting the Asia-Pacific region, as well as across the globe. Key highlights include:

- **Tropical Cyclones** – the increasing intensity of tropical cyclone precipitation due to global warming and the inactive period of western North Pacific tropical cyclone activity from 1998-2010.
- **Monsoons** – the long-term change in summer moisture circulation over South China, changes in the seasonal cycle and extremes in China, the East Asian monsoon-typhoon connection and the relationship between Ural-Siberian blocking and the East Asian winter monsoon. The section also explores quantifying the reliability of precipitation datasets for monitoring large-scale East Asian precipitation variations, mechanisms for establishing the early morning maximum summer rainfall over southeast China, seasonal changes of variation of rainfall over southeast China and observational and supportive modeling analyses of winter precipitation change in China over the last half century.
- **ENSO and ENSO (El Niño Southern Oscillation) Impacts** – the teleconnected influence of North America sea surface temperature on El Niño onset, interdecadal modulation of the influence of La Niña events on Mei-Yu rainfall, the impact of ENSO and Madden-Julian Oscillation (MJO) on Western North Pacific (WNP) typhoon activity, coupling between El Niño-Southern Oscillation and water transport over East Asia-WNP and implications of the ENSO signal for South China monsoon climate.
- **Global Circulation** – the climatology of anticyclonic and cyclonic Rossby wave breaking on the dynamical tropopause in the Southern Hemisphere, and linkages between the zonal

asymmetry of the annular mode pattern and its downstream subtropical jet downstream of the storm track.

- **Climate Variability and Prediction** – the leading modes of East Asian winter climate variability and their predictability, a statistical model for long-lead probabilistic precipitation forecasts for East Asia, the impact of summer East Asian jet stream biases on surface air temperature in east-central China and regional climate simulations of summer diurnal rainfall variations over East Asia and southeast China.
- **Global Warming** – global warming and water vapor change in the southern hemisphere.
- **Climate Change** – Pakistan’s two-stage monsoon and links with the recent climate change.
- **Air Quality in Pearl River Delta** – the source and patterns of nitrogen oxide pollutants for air quality predictions, aerosol and trace gas profiles in the lower troposphere from spectroscopic sunlight observations and air quality simulations over the Pearl River Delta.
- **Analysis Technique** – the geophysical application of partial wavelet coherence and multiple wavelet coherence.

QUOTES

Professor Johnny Chan, Director, Guy Carpenter Asia-Pacific Climate Impact Centre

“The Asia-Pacific region continues to be a hot spot for climate-related phenomena – one that is particularly vulnerable to the effects of these events. This year we expanded our research to include general climate issues on a global scale, understanding that the risks related to climate change are borderless. Through GCACIC, it is our goal to further develop the predictive tools and analysis needed to better understand and predict climate-related phenomena.”

James Nash, CEO – Asia Pacific Region, Guy Carpenter & Company

“The first step in combating climate-related risks is to understand them, which is why GCACIC remains committed to studying the climate issues most pressing to businesses operating within the Asia-Pacific region. The initiative will continue to provide the resources needed to advise the insurance industry on how to better understand, prepare for and manage the risks associated with natural disasters and catastrophes.”

TAGS/KEYWORDS

Guy Carpenter, GCACIC, City University of Hong Kong, climate, tropical cyclone, monsoon, typhoon, El Niño, ENSO, Western North Pacific, global warming, climate change, Western North Pacific, air quality, Chan, Nash, climate prediction, climate variability

About Guy Carpenter Asia-Pacific Climate Impact Centre

The Guy Carpenter Asia-Pacific Climate Impact Centre (www.cityu.edu.hk/gcacic) was established in June 2008 with City University of Hong Kong. The Centre integrates academic and industry research to advance the understanding of climate-related perils and catastrophic risks across the Asia-Pacific region.

About Guy Carpenter

Guy Carpenter & Company, LLC is a global leader in providing risk and reinsurance intermediary services. With over 50 offices worldwide, Guy Carpenter creates and executes reinsurance solutions and delivers capital market solutions* for clients across the globe. The firm's full breadth of services includes line-of-business expertise in agriculture; aviation; casualty clash; construction and engineering; excess and umbrella; life, accident and health; marine and energy; medical professional liability; political risk and trade credit; professional liability; property; retrocessional reinsurance; surety; terrorism and workers compensation. GC Fac® is Guy Carpenter's dedicated global facultative reinsurance unit that provides placement strategies, timely market access and centralized management of facultative reinsurance solutions. In addition, GC Analytics®** utilizes industry-leading quantitative skills and modeling tools that optimize the reinsurance decision-making process and help make the firm's clients more successful. For more information, visit www.quycarp.com.

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