

Institute of Catastrophe Risk Management

Welcome Greeting by

Professor PAN Tso-Chien

Executive Director, Institute of Catastrophe Risk Management, NTU

**Sixth International Symposium on Catastrophe Risk Management – “MegaCities of Asia
and their Evolving Risks – Are these Risks Manageable?”**

Thursday, 23 April 2015

9:30 a.m. @ Nanyang Executive Centre, NTU, Singapore

Good morning!

Guest of Honour, [Mr Lim Chuan Poh](#), Chairman, Agency for Science, Technology and Research (A*STAR), Singapore; Member, Board of Trustees, Nanyang Technological University (NTU)

[Professor Haresh Shah](#), Chairman, International Advisory Board of the Institute of Catastrophe Risk Management (ICRM), NTU, and Emeritus Member of NTU's Board of Trustees,

Distinguished Speakers, Delegates and Guests

Colleagues

Ladies and Gentlemen

On behalf of ICRM at NTU, I would like to extend our warmest welcome to everyone to the Sixth International Symposium on Catastrophe Risk Management, ***MegaCities of Asia and their Evolving Risks – Are these Risks Manageable?*** To our guests from overseas, welcome to Singapore!

ICRM Symposia

ICRM has held five international symposia on catastrophe risk management since January 2010. The five symposium themes are:

- “Public-Private Partnership in Understanding, Communicating and Managing Catastrophe Risk” in 2010,
- “Climate Change – Implications on Food & Water Security” in 2011,
- “Black Swan Events” in 2012,
- “Evolving Risks due to Extreme Events in Asia-Pacific” in 2013, and
- “Financing of Natural Catastrophes in Asia” in 2014.

Today, the sixth symposium is on ***MegaCities of Asia and their Evolving Risks – Are these Risks Manageable?***

ICRM Development

ICRM was launched in January 2010 by Mr Heng Swee Keat who was Managing Director of Monetary Authority Singapore (MAS) then and is Minister for Education now, together with NTU President and President of General Insurance Association of Singapore. Since then, ICRM has received very encouraging support from the government as well as the finance industry in its R&D activities in catastrophe risk management.

Since August 2011, ICRM has been working on two pilot R&D projects which are co-funded by MAS and NTU to create a prototype of analytical platform for flood risk and earthquake risk assessments of major cities in the Southeast Asia region. We are pleased to announce that as part this Symposium, we are going to hold an **Industry Seminar** to share with the insurance and reinsurance industry the progress of the analytical platform. The platform will be released in August this year via MAS to the public, and can thus be utilized by the finance and insurance industry.

In addition to the university and the government supports to ICRM, Aon Benfield has provided a gift to establish PhD Research Awards, while Willis Research Network has funded Post-doctoral Fellowships at ICRM. Over the years, we have also received generous supports from Asia Capital Re, Munich Re, Maipark, Guy Carpenter, RMS Inc, and RMSI.

These public and private financial supports are in parallel to **NTU’s strategic funding** support for us to collaborate with our academic partner, Centre for Risk Studies at Judge Business School of the University of Cambridge in UK. Our collaboration is on System Shocks Research Programme, which focuses on Urban-Based Risks of Asian MegaCities and Financial Risks resulting from interruption of Supply Chains.

In this connection, I am also most pleased to announce that ICRM is the institute leading NTU’s efforts in the joint research work with ETH Zurich on **Future Resilient Systems (FRS) Program**. The FRS Program is a major research initiative funded by Singapore’s National Research Foundation (NRF) via Singapore-ETH Centre (SEC) which is housed in the Campus for Research Excellence and Technological Enterprise (CREATE). Working collaboratively with ETH, NUS and SMU, the ICRM/NTU research teams of FRS will look into the cascading failure of interdependent critical infrastructure that exhibits highly complex behaviour with hidden dependences, which may include social-technical linkages. Reflecting the complex interactions between the social and technical networks, the ICRM research team on FRS has faculty, PhD students and postdocs from NTU’s schools of Civil & Environmental Engineering, Electrical and Electronic Engineering, Nanyang Business School, and Humanity & Social Sciences.

MegaCities of Asia and their Evolving Risks

At every ICRM annual symposium, we take a hard look at what natural catastrophes that have happened in the prior years. We now know that the Great Tohoku Earthquake and Tsunami of Japan in 2011 weighed heavily on the automotive production in the Philippines, Thailand and Indonesia. It also lowered the electronic component production in Malaysia and the Philippines. The Thai floods in late 2011 disrupted exports, which in turn hurt Japan's manufacturing production.

Natural catastrophes have disproportionately affected Asia in terms of the economic losses and casualties, which could be attributed to low insurance penetration, low catastrophe risk awareness, and inadequate risk transfer mechanisms in the region. This results in a large part of the loss being explicitly or implicitly taken by the governments. Asia's, and particularly South East Asia's economic growth is impressive, and by and large is concentrated in the big urban centres and industrial clusters. This creates massive risk concentrations exposed to a spectrum of natural perils affecting Asia – from earthquakes and tsunamis to volcanic eruptions, powerful tropical typhoons, and flooding.

In fact, **an Asian Development Bank (ADB) report** released in April 2014 noted that natural disasters eat up a chunk of economic growth in the ASEAN region. Actually, the cost of disaster in some cases is exceeding the increase in economic growth. The report further suggests that it is a good option for ASEAN to establish a disaster risk management fund that can strengthen financial resilience when calamities strike.

One of the goals of the Symposium today is to provide a platform where we can learn from the world's leading experts and from one another. This will hopefully help us develop not only the technological solutions, but also the insurance and capital market solutions, which enable workable risk transfer markets that serve the governments, businesses, and societies. We can thus manage better the catastrophe risks in Megacities of Asia.

In closing, I would like to thank our Guest of Honour, Mr Lim Chuan Poh, Chairman of A*STAR, and all of you for joining us at the Sixth Symposium on ***MegaCities of Asia and their Evolving Risks – Are these Risks Manageable?***

I wish all of you a fruitful time at the Symposium.

Thank you!