

Welcome Greeting by

Professor PAN Tso-Chien
Executive Director, Institute of Catastrophe Risk Management, NTU

Third International Symposium on Catastrophe Risk Management – Black Swan Events

Tuesday, 21 February 2012
8:50 a.m. @ Grand Copthorne Waterfront Hotel, Singapore

Good morning,

Guest of Honour, [Mr S. R. Nathan](#), Sixth President, Republic of Singapore,

[H.E. Dato' Misran Karmain](#), Deputy Secretary-General of ASEAN for ASEAN Socio-Cultural Community

[Professor Freddy Boey](#), Provost, NTU

[Professor Su Guaning](#), President Emeritus, NTU

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

Distinguished Speakers, Delegates and Guests

Colleagues

Ladies and Gentlemen

On behalf of ICRM at NTU, we would like to extend our warmest greetings to everyone to the Third International Symposium on Catastrophe Risk Management. We have about 140 participants from over 10 countries. To our guests from overseas, welcome to Singapore!

ICRM Development

ICRM was launched in January 2010 jointly by Managing Director of the Monetary Authority of Singapore Mr Heng Swee Keat who is now Minister for Education, NTU President Prof Su Guaning who is with us today, and President of General Insurance Association of Singapore Mr Derek Teo. Since then, we have received very encouraging support from the government as well as the finance industry towards our R&D activities in catastrophe risk management.

In August 2011, we received a major research funding from Singapore government for two key start-up projects on flood and earthquake risk assessments of major cities in Southeast Asia region. In addition, Aon Benfield Asia has pledged a gift to establish the Aon Benfield - NTU PhD Research Awards. Willis Reinsurance has

funded Post-doctoral Fellowships at ICRM. We have also received generous supports from Asia Capital Reinsurance, RMS Inc., etc.

We are currently in active discussions with international aid agencies to share our goals and vision towards building the capacity for regional risk assessment of the ASEAN community. I am thus most encouraged that more regional collaborations are in the pipeline.

Black Swan Events

On 3 March 2011, when we met in this room for the Second ICRM Symposium, we recalled the M=6.3 earthquake that struck Christchurch, New Zealand, and left its downtown in ruins, about 10 days before our Symposium. The Christchurch earthquake occurred only a few months after the raging floodwaters in Australia.

Little did we expect the massive Tohoku Earthquake in Eastern Japan on 11 March 2011, one week after our Symposium, which caused devastating tsunami that in turn led to the catastrophic meltdown of nuclear power reactors. This was then followed by the Great Thailand Flood in October/November 2011 which devastated a huge area of the country together with her people and the industry.

Were these events Black Swan Events, ie *unknown unknowns*? Or, they were just *known unknowns*?

Identifying black swan events which are surprises to the observer is obviously a major challenge. This may be part of the reason that we see in the Symposium program paper titles of black swan, red swan, grey swan, or simply “black swan does not exist”. However, given the higher frequency of occurrence of major natural catastrophes in recent years, it appears that rare and improbable events do occur much more than we dare to think. It is thus equally challenging to build robustness into our society **to cope with the black swan events.**

Therefore, 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 address the two pressing issues – **Identifying a Black Swan Event** and **Coping with Black Swan Events**, which will then lead to the development of novel and innovative public-private partnerships towards mitigating and managing such risks.

In closing, I would like to thank our Guest of Honour, Mr SR Nathan, Sixth President of the Republic of Singapore and all of you for joining us at the Third Symposium on Black Swan Events. I wish all of you a fruitful time at the Symposium.

Thank you.