Fact Sheet

Launch of NTU’s Institute of Catastrophe Risk Management (ICRM)

Thursday, January 21, 2010
Grand Copthorne Waterfront Hotel

Background

In recent years, the nature and impact of major disasters on society have changed. Simultaneously in Asia, high levels of economic activities take place in a low ‘risk-awareness’ environment. Asia faces challenges in understanding and recognising risk, risk quantification (in social, economic and environmental realms) and risk management.

Understanding, communicating and managing catastrophic risks require comprehensive methodologies for risk quantification and mitigation. The Institute of Catastrophe Risk Management (ICRM) will be the first multi-disciplinary risk management research institute of its kind in Asia and amongst a handful of such foremost research centres worldwide. It will lead NTU in a new wave of integrative research efforts in this domain. It will also be a key player in Singapore’s effort to further strengthen its position as a major financial hub.

Institute of Catastrophe Risk Management (ICRM)

The vision of ICRM is to become Asia’s leading research institute in catastrophe risk management and to help those at risk worldwide in general and Asia in particular.

The mission of ICRM is:

(a) To undertake multi-disciplinary research projects in science, engineering, finance, technology, economics and socio-political aspects related to catastrophe risk.

(b) To help communities better understand the fundamental characteristics of risks related to natural disasters such as earthquakes, tsunamis, typhoons, volcanic eruptions, floods, droughts, as well as non-traditional risks such as infectious diseases, sovereign risks and terrorism.

Based in NTU’s College of Engineering, ICRM will work synergistically with the University’s institutions such as the Earth Observatory of Singapore, the S Rajaratnam School of International Studies, the Nanyang Business School (College of Business) as well as researchers from other universities.

The ICRM will also form collaborative projects with similar leading centres of catastrophe risk management in North America and Europe.
The Director of ICRM is Professor Pan Tso-Chien, Dean of the College of Engineering, NTU.

The Chairman of the ICRM Advisory Board is Professor Haresh Shah, Emeritus Professor, Stanford University; Member of the NTU Board of Trustees and founder of Risk Management Solutions Inc, USA.

**Benefits brought about by ICRM**

Currently, insurance penetration in most Asia-Pacific economies (with the exception of Japan, Australia, and New Zealand) is very low, and the burden of losses has been carried by governments and through international assistance. This is not sustainable, especially for major catastrophes. As many uninsured individuals are also likely to be affected by such catastrophes, the effect on the economy can and do threaten a nation’s growth potential.

To alleviate issues related to low insurance penetration and high growth potential, the insurance and reinsurance industry needs to develop innovative products and ideas for risk transfer. Parallel to this, the characteristics of longevity and catastrophic risks, and associated financial tools and securities need to be better understood and modelled more accurately. Through ICRM, Singapore can take the lead and develop a centre of excellence to fill this need for the Asia-Pacific region and thereby further strengthen its position as a major financial hub in Asia.

Through the ICRM’s initial research projects, more immediate benefits would include the development of hazard maps, risk simulation and economic loss models, as well as the training of manpower and competence in the assessment of regional natural hazards (e.g. earthquakes and flood) along with the mitigation, planning and response efforts that would be required for such disasters. As Singapore is economically linked with the rest of the world, understanding how disasters elsewhere affect its economy would allow Singapore to respond in an effective manner.

Longer term benefits include having a world recognised centre of disaster mitigation that performs leading research and develops practical tools and solutions for the rest of the world. ICRM will develop Asian catastrophe risk models and build up industry benchmarks and indices to reflect Asian catastrophe risks.