Introduction

1. It is my pleasure and honour to join you today at the 10th anniversary of the NTU Institute of Catastrophe Risk Management (ICRM)’s annual symposium. Since its establishment in 2010, ICRM has come a long way to become one of Asia’s leading research institutes in catastrophe risk modelling and management.

2. The theme for this year’s symposium - “Towards Viable Disaster Risk Financing Solutions for Southeast Asia” - is a timely one. In the face of growing climate and disaster risks in the region, it is a pressing priority for all of us to come together to tackle the widening natural catastrophe protection gap, and contribute towards a sustainable and resilient future.

Reaching Boiling Point

3. Asia has borne the brunt of catastrophe disasters. Over the last 50 years, Asia accounted for half of the world’s economic losses from natural disasters, amounting to more than US$1.3 trillion. In 2018, Asia was again the worst affected, beset by a number of significant events, including:

   - Typhoon Jebi and Trami, which affected Japan and Taiwan,
   - Typhoon Mangkhut, which impacted mainly Hong Kong, China and Philippines; and the
   - Earthquakes and tsunamis in Sulawesi.

4. Natural disaster losses are high and rising. Climate change is further amplifying the risks of extreme weather events and sea level rises, where wildfires, droughts, heatwaves, torrential rain and coastal flooding would bring to mind grey rhinos, and not just black swans. Here in Asia, home to many densely populated megacities, such natural disasters can inflict even greater damage.

5. Already, half of the top ten countries which are most impacted by climate risk\(^1\) in terms of fatalities and economic losses, are located in emerging Asia. A large proportion of these countries’ population and economic activities are concentrated along coastlines and low-lying areas, which make them highly exposed to extreme weather and rising sea levels. Moreover, many of these countries are also heavily dependent on agriculture, forestry and fisheries for livelihoods, and which are most vulnerable to climate change.

6. Yet, Asia remains under-prepared and under-protected against natural disasters. Currently, less than 10% of Asia Pacific’s catastrophe losses are insured, compared to 40% in developed countries. United Nations has estimated that economic losses due to catastrophe events in Asia Pacific are set to rise, and could exceed US$160 billion annually by 2030. Against this backdrop, countries will face a widening protection gap, if no intervention measures are taken. ASEAN and its governments must act today, and chart a sustainable course to ride out the brewing storm.
7. So far, disaster risk financing initiatives in Asia have largely been limited to raising funds on an ex-post basis, or post disaster response funding. Many countries have had to reallocate budgets, issue debt, or rely on foreign aid to finance immediate relief and reconstruction efforts. Most have yet to develop robust public disaster risk financing strategies using ex-ante risk financing solutions, which includes setting aside reserves, establishing contingent credit, and tapping on insurance and capital markets.

8. Several ASEAN countries, however, have made significant strides in the right direction.
   - For instance, Philippines has put in place a disaster risk management strategy since 2010, and implemented a parametric insurance programme covering 25 provinces, which will provide rapid liquidity for the government to enable rebuilding and recovery efforts when disaster strikes. It is now working with the World Bank on a sovereign catastrophe bond to complement the insurance programme, which will provide cover for more extreme events.
   - Over the years, Indonesia has consistently increased its budget allocation for disaster management. Most recently, Indonesia has adopted a new disaster risk financing and insurance strategy, which encompasses the government insuring government buildings from this year.

A Coordinated approach to Disaster Risk Financing

9. While national disaster risk management efforts are important, ASEAN member states can achieve even more by taking collective responsibility, and adopting a coordinated approach to building a regional platform in order to:
   - Collect good quality, high resolution data, which is necessary to quantify ASEAN’s economic and insurance exposure to disasters
   - Enhance capacity building, learn from each other’s experience and consolidate best practices, as well as equip policymakers with knowledge on enabling legal and regulatory frameworks to deploy disaster risk financing solutions; and
   - Third, develop robust regional disaster risk financing solutions such as regional sovereign risk pools and catastrophe bond programmes.

10. Over the past decade, ASEAN has made notable progress to institutionalise disaster risk management across the region. Specifically, it has put in place the necessary coordinating platforms to manage disaster risks holistically across the entire value chain of disaster risk assessment, disaster risk financing and disaster risk response.
   - First, Disaster Risk Assessment. In 2013, the ASEAN Cross Sectoral Coordinating Committee on Disaster Risk Financing and Insurance (ACSCC) was established to strengthen regional coordination of disaster risk management. ACSCC brings together 3 key stakeholder groups: Finance Ministers and Central Banks represented by the ASEAN Finance and Central Bank Deputies Meeting (AFCDM); Insurance regulators represented by the ASEAN Insurance Regulators Meeting (AIRM), and the National Disaster Management Organisations which are represented by the ASEAN Committee of Disaster Management (ACDM). Under ACSCC, the ASEAN Disaster Risk Financing and Insurance (or ADRFI) programme was established as the central platform to coordinate ASEAN-wide efforts in developing and implementing disaster risk financing strategies over 3 phases. Phase 1 was completed in 2017, which developed a historical loss database of 5 ASEAN countries for earthquake and typhoon events, initial country studies for Philippines and Thailand to review their national policy and legislative frameworks, and two workshops on disaster risk financing.
   - Second, Disaster Risk Financing. The ASEAN+3 countries have recently come together to establish the Southeast Asia Disaster Risk Insurance Facility, known as SEADRIF, in
partnership with the World Bank. As the first regional catastrophe risk facility to be established in Asia, SEADRIF will provide participating ASEAN countries with climate and disaster risk solutions. To be incorporated and licensed as a general insurer in Singapore in September 2019, SEADRIF will start with a flood risk pool to provide rapid response financing to Myanmar, Laos and potentially Cambodia.

Third, Disaster Risk Response. Since 2005, the ASEAN Agreement on Disaster Management and Emergency Response (AADMER) has served as a common platform to jointly respond to disaster events in ASEAN. As part of the AADMER work programme, the ASEAN Coordinating Centre for Humanitarian Assistance on disaster management was set up in 2011 to be the home of “One ASEAN One Response”. It has since played a key role in monitoring disasters, raising regional standards in disaster preparedness, and coordinating ASEAN’s collective response to disasters.

**ASEAN Disaster Risk Financing and Insurance Programme**

Today, I am pleased to announce the official launch of Phase 2 of the ASEAN Disaster Risk Financing and Insurance Programme. ADRFI Phase 2 will be impact-focused, and targeted at strengthening ASEAN’s capabilities in ex-ante risk financing and risk transfer strategies. ADRFI Phase 2 was approved by the ASEAN Finance Ministers at the ASEAN Finance Ministers Meeting in April 2018 and the 3-year detailed Plan of Action was subsequently endorsed in April this year.

To drive ADRFI Phase 2 forward, the Plan of Action will be implemented by a dual programme office, to be led by the ASEAN Secretariat and the NTU-ICRM. The dual programme office will adopt an open architecture structure to support global collaboration with stakeholders including policy makers, governments, multilateral development banks, international organisations and the private sector.

Allow me to provide an overview of ADRFI’s 3 focus areas over the next 3 years. These are: (i) Risk Assessment, as I mentioned earlier (ii) Risk Advisory; and (iii) Capacity Building. Leveraging on their respective strengths, ICRM will lead the Risk Assessment and Risk Advisory pillars, while ASEAN Secretariat will lead the Capacity Building pillar.

These are upstream activities which will strengthen ASEAN’s disaster risk management capabilities, and complement the downstream public and private disaster risk financing solutions, such as the SEADRIF. Let me elaborate further on the 3 key focus areas.

First, Risk Assessment. Good quality data is necessary to quantity ASEAN’s economic and insurance exposure to natural disasters. Moreover, countries are facing increasingly complex threats that compound the negative impacts of disaster and climate shocks, ranging from supply chain disruptions, to population migration and adaptation issues, to the risk of pandemics. Good data and analytical tools will allow policy makers to identify disaster risk zones, and to quantify the risks as well as the potential fiscal impact. This will in turn, empower governments, regulators and industry to make more informed decisions on disaster risk management, from infrastructure planning, to the use of disaster financing strategies and the development of solutions.

To this end, ADRFI will establish a new ASEAN Data and Analytics Platform, to construct a high resolution and objective natural catastrophe database for ASEAN. This platform will use remote sensing technologies such as satellite imagery, and advanced extraction techniques, to produce top down economic exposure data. Such data include building attributes like age and type of construction, as well as building values, will be fused with bottom-up insurance exposure and loss data, to form a holistic and more accurate picture of risk.

You may already be familiar with the Natural Catastrophe Data Analytics Platform (or...
NatCatDAX), also led by ICRM, that is already utilising these new methodologies to bridge the data gap in Asia. The ASEAN platform, will build on NatCatDAX's efforts in Thailand, Indonesia and Philippines, and extend the coverage to other countries to further enhance data availability in ASEAN.

18. **Second, Risk Advisory.** On the demand side, ASEAN member states have varied needs, due to differences in economic assets, population size, types of hazards and exposures faced, and the stage of development of their respective disaster risk financing strategies and markets. On the supply side, there is a wide range of disaster financing solutions such as insurance, reinsurance, index-based products, parametric covers, insurance-linked securities (ILS) and regional pools; and many solution providers, ranging from private insurance and insurance-linked securities markets, multilateral development banks, and international organisations. ADRFI can connect both sides together, and play the role of analysing countries’ needs, harnessing risk advisory expertise of stakeholders, and structuring optimal and cost effective disaster risk financing strategies under this risk advisory pillar; and

19. **Third, Capacity Building.** This pillar will focus on enhancing knowledge of disaster risk financing strategies and solutions, and equip policy makers with a good understanding of regulatory, legal, administrative and technology pre-conditions to deploy effective disaster risk financing solutions. ASEAN Secretariat will work with knowledge partners such as the World Bank, Asian Development Bank, Insurance Development Forum and the insurance industry to develop and implement a 3-year training road map to address ASEAN’s knowledge gaps.

20. By forging public-private partnerships amongst various stakeholders including policymakers, international organisations and the private sector, ADRFI will play a key role in forging a robust and comprehensive disaster risk financing strategy in the region. This will help to strengthen ASEAN’s disaster risk resilience, and move our economies onto a sustainable and inclusive growth path.

**Conclusion**

21. In conclusion, climate change and natural catastrophes are clear and present dangers in ASEAN. We must act quickly to fortify our economies by adopting a comprehensive disaster risk financing strategy. This is a complex undertaking, but we can solve this together through regional collaboration and knowledge sharing. ADRFI Phase 2, providing a focal point for regional cooperation in disaster risk financing, marks a significant milestone in our journey towards enhancing ASEAN’s disaster risk resilience.

22. Singapore, along with our ASEAN counterparts, remains strongly committed to protecting our societies against the effects of natural disasters. I am pleased that NTU is contributing to this significant initiative in many ways, and we look forward to the strong commitment and support from our public and private partners.

23. Thank you.

1 Global Climate Risk Index 2019
2 ACDM comprises the national emergency authorities. SCDF is Singapore’s representative.
3 Thailand, Malaysia, Myanmar, Philippines and Singapore.
4 Insurance Development Forum (IDF) is a public-private partnership led by the insurance industry, United Nations and World Bank, and aims to enhance the use of insurance to build greater resilience for people, communities and businesses, and public institutions that are vulnerable to disasters.