ASEAN STRATEGIC POLICY DIALOGUE ON DISASTER MANAGEMENT

DISASTER RESILIENCE: UNDERSTANDING WHAT LIES AHEAD

Event Report
24 August 2023
Event Report

ASEAN STRATEGIC POLICY DIALOGUE ON DISASTER MANAGEMENT (SPDDM) 2023

DISASTER RESILIENCE: UNDERSTANDING WHAT LIES AHEAD

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EXECUTIVE SUMMARY

Preparation for the future is always paramount in disaster resilience. Considering the rapidly changing climate landscape, there is a need to generate dialogue and create consciousness about forward-looking ideas that can potentially enhance disaster resilience in ASEAN. Under this year’s theme, “Disaster Resilience: Understanding What Lies Ahead”, the SPDDM 2023 provided an opportunity to bring together stakeholders from various backgrounds to engage with each other and share their perspectives on disaster management, providing participants with a holistic view of disaster resilience.

This report summarises the key points from the panel discussions and presentations. The keynote discussion focused on “Building Resilience to Climate-Induced Disasters” in which speakers discussed the link between climate change and disasters, and the factors needed to build disaster resilience. The High-Level Panel Discussion on “Bridging the Gap: Enhancing Communication and Early Action for Proactive Disaster Management” explored topics such as the geographical shifts in disasters due to climate change and the need to invest in faster risk communication. The dialogue concluded with the Thematic Session on “Risk Governance and Innovative Technology in Disaster Management” in which speakers highlighted the need to move beyond the creation of new data and focus on expanding analysis capacities for pre-existing data.
Mr. Eric Yap Wee Teck
Commissioner, Singapore Civil Defence Force

Mr Eric Yap, Commissioner of the Singapore Civil Defence Force, delivered the welcome remarks. He highlighted the importance of disaster resilience, emphasising on the ability for a nation to not just survive, but thrive in the face of adversity. Given the ever-growing complexity and scale of disasters faced by the ASEAN member countries, the partnerships developed have become increasingly important towards building a shared vision of resilience. ASEAN solidarity was exemplified by the ASEAN response to Cyclone Mocha in May 2023 which resulted in more than 140 lives lost, 130 people injured, and 1.23 million people affected. This disaster response operation showed that swift mobilisation of resources and aid was crucial and pointed to the importance to further the development of this limb of ASEAN disaster management.

Stressing the need for adaptation as the challenges faced by ASEAN grow increasingly unfamiliar and complicated, Mr Yap highlighted the importance of integrating technology into ASEAN’s disaster management repertoire. Through the incorporation of advanced technologies in forecasting systems, information dissemination, and other key disaster management infrastructure, ASEAN nations have rapidly enhanced their disaster management capacities. However, it is key that we do not stagnate, and continually seek to further develop our technological capabilities and subsequently upgrade ASEAN disaster management systems across the region.
Mr Philipe Strub, Deputy Head of Mission, the Swiss Confederation to ASEAN, delivered the opening remarks. With a vision for the future, he proposed a number of questions centred around the concepts of futureproofing disaster risk management measures and lowering civilian risk whilst still ensuring sustainable development. With disasters becoming more complex, in part due to the worsening climate crisis, the ability of ASEAN nations to balance disaster response with climate considerations becomes ever more important.

Mr Strub suggested that the best approach towards handling these considerations would be a system of integrated risk management, a process that incorporates other risks beyond those traditionally posed by natural disasters, such as the changing climate. This integrative approach allows for more accurate futureproofing of disasters, as nations continually adapt risk management measures with an eye on the future at all times. It should aid disaster preparedness and in turn, disaster resilience, as nations more accurately forecast disaster risks and potential hazards.
KEYNOTE DISCUSSION: BUILDING RESILIENCE TO CLIMATE-INDUCED DISASTERS

For Professor Winston Chow, there are three key risks that have been increased by climate-induced disasters. First, the disastrous changes in heat globally have resulted in those which in fact contribute the least to climate change becoming the most vulnerable. Second, cascading impacts of heat and other issues have resulted in disasters such as severe floods, rainfall, and rising sea levels, all of which pose significant risks to biodiversity. These disasters subsequently impact agriculture and food security as the yield may sustain, but nutritional values will likely decrease. Third, the health impacts are ever-growing as heat-related mortality steadily increases.
The concept of compounding risks is highly prevalent, as minor changes in the climate are capable of greatly exacerbating the scale of disasters and cascading over time, potentially producing risks we have yet to face. This is particularly pertinent in the ASEAN region given the vulnerability of nations to disasters and climate change. Global temperatures have risen by 1.1 degrees Celsius so far, and at the present rate of warming, also seem likely to cross the threshold indicated in the Paris Agreement. This suggests that extreme climate-driven risks are more likely to occur. Furthermore, the steady increases in sea level suggest a similar growth in the frequency of extreme sea level events including floods over the next 20 years or so. Combining these enhanced risks with the existing threats of extreme rainfall and other disasters, the potential scale of disaster risk only increases over time.

For Ms Tizana Bonapace, transboundary cooperation is extremely important. As disaster damages become increasingly climate-related, regional interconnectedness becomes imperative toward not only recovering from a disaster, but also in disaster preparedness. This is particularly relevant to ASEAN given the region’s vulnerability to floods and droughts, which are becoming more devastating with increased temperatures and heat. Furthermore, the importance of swift action was stressed, as by the end of the decade, a projected 3% of GDP for the Asia-Pacific will be lost to disasters, with ASEAN member states likely incurring a 2% loss of GDP under a 1.5°C climate warming scenario. However, the estimated cost of investing in the region’s disaster risk management stands at 0.98% of regional GDP, suggesting that inaction may prove far more costly.

To tackle the challenges posed by the cascading risks of climate-induced disasters, Ms Bonapace proposed two potential solutions to diversify a nation’s financial instruments: public financing and overseas development aid (ODA). Given the structures of modern societies, financing is ultimately necessary for any sufficient action to be taken. The incorporation of augmented debt sustainability, a process through which the government increases debt levels by investing in disaster resilience and sustainable adaptation, would allow for long-term, sustainable, and environmentally sound disaster management practices. This is something most countries, particularly those in ASEAN, have the fiscal space to adopt. As for ODA, this should be used to consistently finance trust funds and other disaster infrastructure elements so that they can be used when a disaster hits, instead of only then scrambling to set them up.
QUESTION AND ANSWER SESSION

The questions raised to Professor Chow and Ms Bonapace centred around the topics of cascading economic risks and investing in prevention. In response to the first, the idea of cascading risks was fleshed out by both speakers, detailing how a potential economic issue can transform into a social or even political challenge, which in turn can socially destabilise a nation in a time of crisis. As disasters grow in complexity, cascading risks increases.

On the topic of prevention, a lack of investment was largely attributed to the ‘it can’t happen to me or my country’ mindset that must be changed to ensure total societal participation and advocacy for development of prevention infrastructure. This will require participation of all levels of society as well as effective information dissemination to highlight the exacerbated risks posed by inaction.

Furthermore, government funding is a competitive process where all ministries seek to fulfil their priorities and it often proves difficult to outright decide where money is best allocated. However, it is worth noting that progress has been made towards this, as the science-policy gap closes and both sides develop a higher propensity for information sharing, subsequently enhancing impact-based forecasting and early warning systems regionally.
HIGH-LEVEL PANEL DISCUSSION
BRIDGING THE GAP: ENHANCING COMMUNICATION AND EARLY ACTION FOR PROACTIVE DISASTER MANAGEMENT

Speakers

Mr. Hiro Nishiguchi
President, Japan Bosai Platform

Mr. Boontham Lertsukekasem
Director General, Department of Disaster Prevention and Mitigation (DDPM), Ministry of Interior of Thailand

Mr. Benjamin William
Secretary-General and Chief Executive Officer, Singapore Red Cross

Moderator

Dr Lina Gong
Research Fellow, S. Rajaratnam School of International Studies, Nanyang Technological University, Singapore
There is a need to develop a strategy and action plan to deliver increased support to the development of national policy and legislation to ensure the mainstreaming of Early Warning and Anticipatory Action across national and local policy frameworks for finance and delivery mechanisms, risk communication and community engagement, social protection and disaster risk management. This will need to embed the principles of anticipatory action into social assistance through a shock-responsive social protection system. The High-Level Panel explored the components needed for effective disaster governance to enhance community resilience and minimise the impact of disasters on society, especially within ASEAN.

Mr. Boontham Lertsukekasem pointed out that climate change had caused changes in the very nature of the seasons such as in extreme temperatures in summer and winter or in the increased intensity of rainy seasons. This means that the impacts of disasters are felt globally rather than limited to certain communities at local level. In addition, the geographical spread of disasters and the population affected have changed. He also noted that the public expectations of disaster response by the government have become higher. For instance, people may expect the government to provide immediate disaster relief including economic assistance in the wake of a disaster. However, this is may not be possible in a post-disaster situation where the government also needs to deal with numerous other immediate problems, such as repairing damaged infrastructure.

Mr. Boontham highlighted the need for quick and efficient disaster relief in order to prevent affected communities from being left behind. This can be done by proactive disaster reporting through the use of apps, such as ‘Traffy Fondue’ in Thailand. Fast communication is key, particularly in the dissemination of information during disaster relief and recovery. Mr Boontham noted that in order for ASEAN to strengthen its role in building disaster resilience, it must first strengthen regional collaboration. This can take place in a variety of ways including exchanging best practices, being active in sharing information, learning from each other and cooperating in transboundary disaster risk reduction. He highlighted the need for such practices in the countries bordering the Mekong River where disasters are routinely transboundary in nature.

Mr. Nishiguchi suggested that disaster management had 3 key components, namely governance, investment and people. These are all interdependent elements which are all required for successful management. In order to improve a country’s disaster management system, there is a need to first identify their strength and weakness before working to build capacity accordingly. He also noted the importance of preparation and anticipatory actions in line with the fundamental rule of the disaster management system, ‘the more you spend beforehand, the less you spend during and after’. Moreover, there is a need to
keep up maintenance and investment into disaster management infrastructure to ensure their efficacy in times of need.

Mr Nishiguchi pointed out the need for the private sector to be involved in disaster management. Going beyond merely making a profit, the private sector has the resources to identify the gap between the present and the future and then find solutions to fill that gap as seen with humanitarian entrepreneurship. Finally, Mr Nishiguchi also highlighted the wisdom accumulated in the joint experiences in disaster management between ASEAN and Japan, stressing the need to make use of this wisdom by strengthening information sharing for improvement in both countries.

For Mr. Benjamin William, the enormity of the task of disaster management has only increased with the existential issue of the climate crisis. Disasters are now affecting all countries, not only developing countries. In addition, conflicts significantly weaken the capacity of affected countries to cope with climate change and disasters. He highlighted the changing definition of vulnerable communities. While the identification of particular vulnerable demographics was previously possible, the increasing unpredictability of disasters have led to new communities becoming vulnerable. In order to overcome these challenges, there needs to be a whole-of-humanity approach, which mobilised all groups in society, including the youth and the private sector.

Mr Benjamin introduced the work of Singapore Red Cross on building the capacity of communities on the ground, such as strengthening climate resilience through digitalisation. He suggested that more groups should build humanitarian partnerships across ASEAN. Such partnerships can involve building capacity in vulnerable communities through the sharing and exchanging of best practices and increased collaboration between different stakeholders to support and leverage each other’s strengths.

QUESTION AND ANSWER SESSION

A member of the audience asked a question on how policy makers manage unrealistic public expectations of the government during disasters. Mr Boontham noted the importance of being open and clear with the public on government disaster plans at different levels of governance. Not only should these plans be coherent, but they should also be adapted according to the needs of local communities. The public should also be engaged throughout the process.

Digitalisation in the disaster management sector was another key issue of interest to the audience. While the benefits of digitalisation are widely recognised, associated problems such as digital divide can hamper the effectiveness of disaster response. Mr Nishiguchi noted that in Japan the biggest digital divide
can be found between the public and private sectors, with most local governments not well-equipped for the digitalisation process. Mr Benjamin Williams also highlighted Singapore as an example of a state with a super aging population who is having to deal with services becoming increasingly digitalised. He suggested young volunteers should be mobilised to support senior citizens to adapt to digital services.
THEMATIC SESSION: RISK GOVERNANCE AND INNOVATIVE TECHNOLOGY IN DISASTER MANAGEMENT

Speakers

Ms. Joanne Loh Poh Choo
Chief Technology Strategist, Esri Malaysia

Ms. Veronica Gabaldon
Executive Director, Philippine Disaster Resilience Foundation (PDRF)

Ms. Aisyah Gunung
Product Head, Atma Connect

Dr. David Lallemant
Head of Disaster Analytics for Society Lab at Nanyang Technological University and the Earth Observatory of Singapore

Moderator

Mr. Ling Young Ern
Deputy Commissioner, Future Technology & Public Safety, Singapore Civil Defence Force (SCDF)
The ability to transform a crisis into an opportunity is crucial for achieving resilience and recovery from disasters. Coming up with innovative solutions that emerge from a challenge necessitates a dynamic approach to understanding, reasoning, and addressing the underlying problem. This thematic discussion discussed the potential of technological convergence in disaster risk reduction, exploring how existing and emerging technologies such as artificial intelligence (AI) can be integrated to revolutionise disaster management capabilities—from empowering responders to building community resilience.

For Ms. Joanne Loh Poh Choo, technology was useful in bringing information together to form frameworks and manage systems to solve problems. For example, early warning systems can be used to forecast hazards, disseminate information when needed, model hazards to gauge future scenarios, and improve preparedness and response capabilities. However, while information can be gathered by the use of such technology, the challenge lies in sorting out usable and shareable data. In the case of artificial intelligence (AI), while it can be used to gather information, there is still a need for additional human confirmation. Ms Loh pointed out that the effectiveness of technology relied on its ease of use. After all, a particular piece of technology can only be considered to have worked if people are familiar with it or can actually use it. The rate of adoption is likely to be higher if it integrates easily into an existing system.

For Ms. Veronica Gabaldon, partnerships were key to enhancing disaster management. For example, the Philippine Disaster Resilience Foundation has bridged collaboration between member companies and public sector departments to design the most useful technology. It has also linked energy sectors with communities to provide sustainable energy. Ms Gabaldon noted that technology should lead to development gains for a community, not disrupt it or bring additional challenges. She highlighted that governments were still ultimately the lead on disaster management, and that this served as the impetus for other stakeholders to engage them as much as possible.

For Ms. Aisyah Gunung, a human-centered design process was key. By understanding what the target audience already uses, companies should adapt technologies to what works for them. It would be ineffective to force new technology on them that they’re unfamiliar with, or do not have an explicit need for. Ms Aisyah also noted the effectiveness of AI in the use of bridging algorithms to bring people together. However, she also highlighted that there was still a need for literacy training for these programmes. For example, machine learning takes cues from pre-existing anecdotes and behaviours so it must be given the ‘right habits’ to learn from. This will ensure that any data is reliable.

For Dr. David Lallemant, partnerships with academia were very important for stakeholders involved in disaster management. Such partnerships allow for joint collaboration on topics that might otherwise not receive sufficient attention.
or consideration due to time constraints. He also noted that there was no need to constantly reinvent the wheel due to the trend of coming up with new and innovative technologies as there already exists solutions and mechanisms that work. Dr Lallement also noted that in some cases successful disaster prevention operations may not receive as much publicity due in part heavily reduced impacts.

QUESTION AND ANSWER SESSION

One of the questions asked by the audience was on the barriers in adopting technological advancements in disaster management. Ms Gabaldon noted that a heavy top-down approach usually taken in technological advancements, which can sometimes lead to communities being overwhelmed by the optics without fully considering if that’s what they need, there should be community-up approach in which communities identify a need to be fulfilled, before looking for technology. Mr Lallemant agreed that technology should be used to fill in the needs of a community, rather than the community being reshaped to fit the available technology.

Ms Gunung also pointed out that communities largely desired returning to their previous ‘normal’ after disasters, rather than undergoing more upheaval. By working with what these communities already have rather than introducing something completely new, this not only builds trust with the community but also saves costs by utilising a pre-existing platform, with which they already have familiarity with. Ms Loh noted that partnerships could sometimes help with quick deployment of new technologies, and importantly, in familiarising local communities with it.
Professor Mely Caballero-Anthony highlighted some of the themes that emerged during SPDDM 2023 including the transboundary and increasingly complex nature of climate change, the use of technology in innovation and adaption, the increasing importance of early warning systems, better knowledge management practices and the need for partnerships in strengthening collaboration. With climate change leading to increasingly converging disasters in Southeast Asia, she noted the importance of technology in disaster management. Technology has increased our ability to adapt to disasters and improve the overall disaster management in the region as seen through the use of early warning systems. The need for early warning systems increases as disasters become for frequent. Professor Caballero-Anthony also highlighted the importance of various social groups in disaster management. In particular, she pointed out the importance of including the youth in disaster management practices. She also noted the need to look beyond the idea of women as merely a vulnerable group, and instead consider them as active agents in building disaster resilience. Professor Caballero-Anthony also emphasised the need to improve knowledge management practices including building partnerships exchanging information and sharing best practices with others in order to strengthen regional disaster management.
Mr Lee Yam Ming, the Executive Director of the ASEAN Coordinating Centre for Humanitarian Assistance on Disaster Management (AHA Centre), delivered the Closing Remarks of the SPDDM. In his remarks, he highlighted the need for ASEAN to be proactive in its approach as disasters in the region and globally continue to increase in frequency and severity. ASEAN must also engage with stakeholders from various sectors including the private sector to further build and enhance resilience in ASEAN. In particular, they need to develop disaster risk reduction strategies, strengthen early warning systems, build national and regional capacities for disaster management, and share best practices, in part with the use of technology. This is particularly important in the context of the shared interconnectedness and vulnerability of ASEAN to climate-change, and the disasters that it causes in the region.
ANNEX 1: BREAKDOWN OF PARTICIPANTS

PARTICIPANTS BY COUNTRY (TOTAL: 158)

PARTICIPANTS BY ORGANISATION (TOTAL: 158)
PARTICIPANTS BY SEX (TOTAL: 158)

- MALE: 69.60%
- FEMALE: 30.40%
ANNEX 2: SPDDM PROGRAMME

10:00 – 10:10  Welcome Remarks
   Mr. Eric Yap Wee Teck
   Commissioner, Singapore Civil Defence Force (SCDF)

10:10 – 10:20  Remarks by Embassy of Switzerland to Singapore

10:25 – 12:00  Keynote Discussion
   Building Resilience to Climate-Induced Disasters
   Speakers:
     1. Prof Winston Chow
        Associate Professor of Urban Climate and Lee Kong Chian Research Fellow, College of Integrative Studies,
        Singapore Management University
     2. Ms. Tiziana Bonapace
        Director of Information and Communication Technology and Disaster Risk Reduction Division, UNESCAP
   Moderator:
   Mr. Said Faisal
   Advisor to SIAP SIAGA, Former Executive Director of AHA Centre

12:00 – 13:00  Lunch

13:00 – 14:40  High-Level Panel Discussion
   Bridging the Gap: Enhancing Communication and Early Action for Proactive Disaster Management
   Speakers:
     1. Mr. Hiro Nishiguchi
        President, Japan Bosai Platform
     2. Mr. Boontham Lertsukekasem
        Director General, Department of Disaster Prevention and Mitigation (DDPM), Ministry of Interior of Thailand
     3. Mr. Benjamin William
        Secretary-General and Chief Executive Officer, Singapore Red Cross
   Moderator:
   Dr. Riyanti Djalante
   Head of Disaster Management and Humanitarian Assistance Division, ASEAN Secretariat

14:40 – 15:00  Teabreak
15:00 – 16:30

**Thematic Session**

**Risk Governance and Innovative Technology in Disaster Management**

**Speakers:**

1. Ms. Joanne Loh Poh Choo  
   Chief Technology Strategist, Esri Malaysia
2. Ms. Veronica Cabaldon  
   Executive Director, Philippine Disaster Resilience Foundation (PDRF)
3. Ms. Aisyah Gunung  
   Product Head, Atma Connect
4. Mr. David Lallemant  
   Head of Disaster Analytics for Society Lab at Nanyang Technological University and the Earth Observatory of Singapore

**Moderator:**

Mr. Ling Young Em  
Deputy Commissioner, Future Technology & Public Safety, Singapore Civil Defence Force (SCDF)

16:30 – 16:50

**Summary of Key Topics**

**Professor Mely Caballero-Anthony**  
Centre Head, Centre for Non-Traditional Security Studies, S. Rajaratnam School of International Studies, Nanyang Technological University, Singapore

16:50 – 17:00

**Closing Remarks by Executive Director of AHA Centre**

Mr. Lee Yam Ming  
Executive Director of the ASEAN Coordinating Centre for Humanitarian Assistance on disaster management (AHA Centre)

18:30 – 20:00

**ADMW Official Dinner**

Guest-of-Honour  
**Associate Professor Muhammad Faishal Ibrahim**  
Minister of State, Ministry of Home Affairs & Ministry of National Development
RSIS served as the knowledge partner for the ASEAN Strategic Policy Dialogue on Disaster Management 2021. The S. Rajaratnam School of International Studies (RSIS) is a global think tank and professional graduate school of international affairs at the Nanyang Technological University, Singapore. An autonomous school, RSIS' mission is to be a leading research and graduate teaching institution in strategic and international affairs in the Asia Pacific. With the core functions of research, graduate education, and networking, it produces research on Asia Pacific Security, Multilateralism and Regionalism, Conflict Studies, Non-traditional Security, Cybersecurity, Maritime Security and Terrorism Studies.

NTS Centre conducts research and produces policy-relevant analyses aimed at furthering awareness and building the capacity to address non-traditional security (NTS) issues and challenges in the Asia Pacific region and beyond. The Centre addresses knowledge gaps, facilitates discussions and analyses, engages policymakers, and contributes to building institutional capacity in Sustainable Security and Crises. The NTS Centre brings together myriad NTS stakeholders in regular workshops and roundtable discussions, as well as provides a networking platform for NTS research institutions in the Asia Pacific through the NTS-Asia Consortium.

For more details, please visit www.rsis.edu.sg and http://www.rsis.edu.sg/research/nts-centre. Join us at our social media channels at www.rsis.edu.sg/rsis-social-media-channels or scan the QR code.
ORGANISERS

ASEAN Secretariat

The ASEAN Secretariat was set up on 24 February 1976 by the Foreign Ministers of ASEAN. Its function is to provide for greater efficiency in the coordination of ASEAN organs and for more effective implementation of ASEAN projects and activities. While building a people-centred, people-oriented ASEAN Community that is globally respected, the ASEAN Secretariat’s mission includes, among others, facilitation and coordination with ASEAN stakeholders in realising the purposes and principles of ASEAN as reflected in its Charter. The ASEAN Secretariat is based in Jakarta, Indonesia.

The ASEAN Coordinating Centre for Humanitarian Assistance on disaster management (AHA Centre)

The AHA Centre was established on 17 November 2011 by the ASEAN member states through the signing of the ASEAN Agreement on the Establishment of the AHA Centre. It was established following the mandate of the ASEAN Agreement on Disaster Management and Emergency Response (AADMER) in order to facilitate cooperation and coordination among ASEAN member states and with international organisations such as the United Nations for disaster management and emergency response. The AHA Centre facilitates joint emergency preparedness and response. It also operationalises the regional coordination mechanism for emergency preparedness and response. The Centre is based in Jakarta, Indonesia.

Singapore Civil Defence Force (SCDF)

The Singapore Civil Defence Force (SCDF) is the national authority that provides fire-fighting, rescue, and emergency ambulance services in Singapore. SCDF is also responsible for mitigating hazardous materials incidents, as well as formulate, implement, and enforce regulation on fire safety and civil defence shelter matters. SCDF’s Ops Lionheart contingent is classified as a Heavy Urban Search and Rescue (USAR) team by INSARAG since 2008. SCDF is also the national focal point for ASEAN Committee on Disaster Management (ACDM).
Swiss Agency for Development and Cooperation (SDC)

The Swiss Humanitarian Aid is one of the four departments of the Swiss Agency for Development and Cooperation (SDC) and part of the Swiss Confederation. In Southeast Asia, Switzerland contributes to the implementation of the AADMER in the context of the ASEAN-Switzerland Sectoral Dialogue Partnership. In support of AADMER’s Practical Cooperation Area on Disaster Management and Humanitarian Assistance, the Swiss Humanitarian Aid provides technical and financial support for the ASEAN Strategic Policy Dialogue in Disaster Management (SPDDM) from 2018–2020.