

Enhancing International Relief Activities in Disaster Risk Management among APEC Economies

APEC Emergency Preparedness Working Group

June 2025



**Asia-Pacific
Economic Cooperation**



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I. BACKGROUND INFORMATION

Objectives of the workshop

Identify developments and impacts of disaster in the context of climate change. Examine how climate change influenced the frequency and intensity of disasters, affecting global temperature and precipitation patterns, and leading to more severe environmental events.

Share lessons learned on the mobilization and use of international support resources in disaster risk management activities. Discuss the integrated measures and holistic approaches necessary for efficient disaster risk management, especially in the context of the COVID-19 pandemic, which has introduced new challenges to disaster management.

Propose mechanisms to effectively mobilize resources for international supports. Suggest effective international coordination frameworks and resource mobilization strategies that align with strategy, delivery, capacity, and expertise to support disaster management efforts.

Expected outcomes

- Discussion on possibility of establishment of a joint mechanism for APEC economies to mobilize, use, and coordinate international support resources effectively.
- Enhanced understanding of the role of climate change in disaster risk management.
- Sharing of best practices and innovative solutions for resource mobilization and disaster risk management.
- Sharing of a strategic framework for international cooperation in disaster risk reduction efforts.

This workshop aims to foster collaboration and strengthen the collective response to disasters within the APEC region, ensuring that the most vulnerable communities receive timely and effective support to response to the impact of disasters, minimizing the damages.

II. DATE AND LOCATION

Date: 08:00-17:30 GMT+7, 12-13 December 2024

Location: Ho Chi Minh city, Viet Nam

Participants: Representatives from the relevant authorities of APEC economies, International Non-Governmental Organizations (INGOs), organizations, and relevant stakeholders.

III. WORKSHOP PROCEEDINGS

1. Welcoming and Opening Remarks

At the opening remarks, Ms. Doan Thi Tuyet Nga, Director of the Department of International Cooperation, Viet Nam Disaster and Dyke Management Authority emphasized that natural

disasters are becoming increasingly extreme, causing significant harm to human lives and property, and affecting socio-economic development. According to the United Nations, over the past 50 years, there have been more than 11,000 natural events resulting in the deaths of over 2 million people. Exactly three months ago, Typhoon Yagi swept through Viet Nam and many economies in the Southeast Asia area. The storm, with its heavy rain, landslides and floods caused the loss of more than 300 lives and an estimated economic damage of over USD3 billion.

The Disaster Risk Reduction Partnership (DRRP) was established in 2020 by the Ministry of Agriculture and Rural Development (Ministry of Agriculture and Environment nowadays), in coordination with international organizations, office of embassies operating in the field of disaster risk reduction. In 2024, during the urgent period following Typhoon Yagi, immediately after the call for emergency disaster relief assistance by the relevant authorities, the DRRP continuously organized meetings to discuss and propose international emergency relief for the severely affected people and localities. In just a short period of a few days, through the Ministry of Agriculture and Rural Development and the DRRP, more than 220 tons of relief goods and over USD18 million in cash were mobilized to urgently support those affected by the natural disasters. Recovery activities to overcome the consequences of these natural disasters are still ongoing.

These efforts highlighted the importance of building and maintaining an international cooperation mechanism, especially in emergency cases during natural disasters. The Viet Nam Disaster and Dyke Management Authority, the focal point of Viet Nam in the EPWG, coordinated with the APEC Secretariat to organize this workshop. It was noted that this event would be a valuable opportunity for delegates from APEC economies, relevant organizations, and research agencies to share knowledge and experience in implementing effective models, policies, and mechanisms for receiving, managing, and using international relief resources for emergency relief and recovery, to build a stronger APEC community against the impacts of natural disasters.

2. Session 1. Climate Change and Disaster Risk Reduction efforts among APEC Economies

Moderator: Mr. Nghiem Ba Hung – PEAPROS Consulting

Overview of the topic:

- Identify developments and impacts of disasters in the context of climate change among APEC economies.
- Discuss the impact of climate change on the frequency, intensity, and distribution of disasters.
- Share case studies and lessons learned from recent disaster events.

Presentations

a) Presentation 1: Water-related disasters: intensity, frequency, and impact, under the climate change context - Viet Nam

Speaker: Assoc. Prof. Trinh Quang Toan – Viet Nam Academy for Water Resources

Summary of the presentation:

The presentation shared and discussed the increasing severity and frequency of water-related disasters in Viet Nam due to a lot of effects, including climate change. It highlighted trends such as rising temperatures, increased precipitation, more frequent extreme weather events, and higher sea levels. The presentation also detailed the different types of natural disasters in Viet Nam, including floods, heat waves, and droughts, and their significant impacts on the population and economy. It emphasized the need for improved disaster management and adaptation strategies to mitigate these growing risks. The overall message is a call for action to address the vulnerabilities and enhance resilience against climate-induced disasters.

b) Presentation 2: Flood compound in Mekong Delta, situation and prevention measures

Speaker: Assoc. Prof. Nguyen Nghia Hung – Southern Institute for Water Resources Research (SIWRR)

Summary of the presentation:

The presentation "Compound Flooding in the Mekong Delta" addressed the severe impacts of flooding in this vulnerable region, emphasizing the necessity for effective disaster risk management strategies. It discussed various factors contributing to compound flooding, such as rising sea levels, increased rainfall, and storm surges, highlighting the significant threats to lives, livelihoods and the social-economic development. The Mekong Delta is identified as one of the most at-risk regions globally, necessitating international collaboration and enhanced relief activities to tackle these challenges. Key strategies and recommendations for improving resilience against compound flooding are outlined. The presentation called for actions to address vulnerabilities and enhance resilience in the Mekong Delta.

c) Presentation 3: Changing in Temperature Extremes in Viet Nam and Progressive Global Warming Levels from 1.5°C to 4°C

Speaker: Dr. Tran Anh Quan, Senior Lecturer – Hanoi University of Mining and Geology (HUMG)

The presentation examined changes in temperature extremes in Viet Nam under different global warming levels, from 1.5°C to 4°C, based on climate projections. It highlighted significant increases in extreme heat events, particularly in the northern and southern regions, with prolonged heatwaves and near year-round warm spells expected at higher warming

levels. The study emphasized the urgent need for adaptation strategies, as rising temperatures threatened to eliminate cold spells and drastically alter Viet Nam climate patterns.

d) Presentation 4: Beyond Survival: Protecting Our Children in the Face of Climate Change and Disasters

Speaker: Ly Phat Viet Linh – UNICEF

The presentation emphasized the severe impacts of climate change on children, particularly in Viet Nam, highlighting their heightened vulnerability due to physiological and social factors. It discussed rising extreme weather events, air pollution, malnutrition, and migration, all of which threatened children's health, education, and well-being. The presentation called for urgent action, including child-centered climate policies, improved risk assessment, and enhanced international relief efforts to protect children from climate-related risks.

Panel Discussions

Panelists:

- Mr. Nghiem Ba Hung – PEAPROS Consulting (Moderator)
- Assoc. Prof. Trinh Quang Toan - Viet Nam Academy of Water Resources (VAWR)
- Assoc. Prof. Nguyen Nghia Hung - Southern Institute of Water Resource Researches (SIWRR)
- Dr. Pham Hong Nga - Thuy Loi University (TLU)
- Dr. Tran Anh Quan - Hanoi University of Mining and Geology (HUMG)
- Mr. Ly Phat Viet Linh – UNICEF

Key notes:

Moderator: Explain why economic damage has been increasing while the fatality rate has been falling recently?

Assoc. Prof. Trinh Quang Toan shared about the situation over recent decades, economic damage from natural disasters had been on the rise while the fatality rate has been falling. This paradox can be attributed to several interrelated factors.

He claimed that the economic losses are increasing because of significant socio-economic development. As an economy like Viet Nam is developed, the value of infrastructure and property has surged. More high-value assets such as commercial buildings, residential areas, and industrial zones are now exposed to natural hazards, leading to higher economic losses when disasters strike. For example, Typhoon Yagi was estimated to result in over USD3 billion in damages to the economies in Southeast Asia area.

Mr. Ly Phat Viet Linh claimed that the decrease in the fatality rate can be attributed to advances in disaster preparedness and response systems. For instance, Viet Nam has implemented modern forecasting technologies, enabling faster and more accurate

dissemination of information, which allowed more effective disaster responses. In the 1990s, significant fatalities occurred due to the lack of early warning systems; for example, Typhoon Linda in 1997 resulted in a high death toll because the population was said to be unprepared for such events. Nowadays, it seems that enhanced early warning systems and better coordination mechanisms and communication strategies have substantially improved public awareness and timely evacuation procedures, thus reducing fatalities.

Moreover, the Viet Nam economy has established an efficient disaster prevention and control system from the central to local levels, including a sub-agency with functions and responsibilities working for international cooperation tasks. This proactive approach, combined with effective policies for raising community awareness and community-based disaster risk management, has played a crucial role in mitigating the human impact of natural disasters.

In summary, while the increased economic damage reflected the rising value of assets in disaster-prone areas, the declining fatality rate demonstrated the effectiveness of improved technologies, better preparedness, and proactive policies in safeguarding human lives against the impacts of natural disasters.

Ms. Dam Thi Hoa – VDDMA raised a question that in Mr. Ly Phat Viet Linh's presentation, UNICEF extensively focused on child vulnerability and using Typhoon Yagi as an example, what can UNICEF provide to reduce Typhoon Yagi impact on children?

Mr. Ly Phat Viet Linh then shared that it is firstly essential to understand the varied risks faced by different communities. For example, in Da Nang city, coastal residents face different risks compared to those in mountainous areas. Thus, recognizing that risk levels differ from community to community is crucial. Secondly, data collection, planning and sharing is also crucial. Effective planning requires data collection and understanding of the specific needs of children, including education, nutrition, and social protection. In the northern region, the population was severely affected by the impact of Typhoon Yagi. UNICEF supported the northern provinces during the emergency due to their pre-existing vulnerabilities. The mountainous areas have a high ethnic minority population with language barriers, and the high stunting rate among children can have long-term impacts on child development.

Recent reports, particularly post-disaster assessment reports, indicated that vulnerable groups are the most affected following natural disasters. Therefore, prevention, response, and recovery activities must be focused on these vulnerable groups across various sectors such as education and nutrition.

Moderator: How might variations in temperature extremes affect daily life in Viet Nam, including sectors such as agriculture, public health, and urban planning? And what proactive

measures can communities and policymakers implement to address the challenges associated with rising global warming levels?

Dr. Tran Anh Quan - HUMG: From a scientific perspective, it seemed that there are numerous climate change scenarios ranging from mild to severe cases. The future holds many uncertainties, as several economies have committed to reducing greenhouse gas emissions. However, these commitments might not be sustained if political or institutional shifts occur.

Climate change was a reality which is already affecting human lives. Therefore, it was necessary to prepare for the worst-case scenario, ensuring that we have the capacity to adapt to any climate-related changes.

He then mentioned that when it comes to preparedness, it was not solely the responsibility of policymakers, but it should involve the entire society. For instance, farmers could adopt adaptive measures such as implementing water-saving irrigation methods, adjusting crop structures, and utilizing drought- and water-resistant rice varieties. Additionally, it was also necessary to leverage technological advancements to promote climate change mitigation activities.

Community-driven solutions should be implemented as a foundation for long-term changes supported by policymakers. For policymakers, investment in infrastructure was crucial. This included disaster prevention projects, urban and rural drainage systems to enhance water discharge capacities, and most importantly early warning systems. These systems enabled citizens to receive timely alerts and to respond effectively.

Education and collaboration are keys to successfully reducing risks associated with disaster risk reduction (DRR) and climate change adaptation (CCA). It was essential for communities to actively participate in the planning process with the policymakers.

Ms. Anjanette Saguisag - UNICEF raised a problem about the increasing severity of natural disasters and climate change posing significant challenges. What are the social impacts caused by these extreme climatic phenomena? How are social services affected? The loss of income and economic stability directly impacted individuals and households, with particularly profound effects on women, children, and vulnerable communities.

Assoc. Prof. Nguyen Nghia Hung - SIWRR stated that the insights provided, including those by UNICEF, are highly valuable, particularly the relationship between risks, exposure, vulnerability and capacity. It was essential to enhance knowledge and awareness of natural disasters for all stakeholders. Multidisciplinary collaboration played a critical role in mitigating impacts. Governments, international organizations, researchers, and the private sector must work together to reduce the consequences of natural disasters and climate change.

He also mentioned if social sciences also have a vital part to play by conducting in-depth studies on the social impacts of natural disasters. Disasters often occurred in combination of disaster after disaster, which amplified their effects. Vulnerable groups, such as women, children, and impoverished communities are likely facing more challenges than the others and are likely the most affected. When disasters strike, individuals often prioritize safeguarding their assets and livelihoods, as these are their primary sources of economic security.

Ahmad Rama Aji NASUTION - Ministry of Foreign Affairs, Indonesia: What challenges do the Mekong region face in managing natural disasters and climate change, especially with accelerating land subsidence caused by drought and saltwater intrusion? How could water resource management, sustainable agriculture, and groundwater extraction policies address this issue effectively?

Assoc. Prof. Nguyen Nghia Hung - SIWRR mentioned that the Mekong region faced serious challenges with climate change and natural disasters. Groundwater levels were likely dropping by 6 meters annually due to unregulated extraction, contributing to land subsidence along with infrastructure development. Flooding from heavy rainfall and storm surges were common, and local communities lacked disaster response experience.

Hydropower projects in upstream areas have caused record-low water levels in the Mekong River, intensifying drought and saltwater intrusion. Addressing these issues required stricter groundwater regulations, sustainable infrastructure practices, better disaster preparedness for communities, and regional water management cooperation.

3. Session 2. Integrated Disaster Risk Management Approaches in APEC economies

Moderator: Larry Sutton - US Forest Service (USFS)

Overview of the topic: Share lessons learned on the mobilization and use of international support resources in disaster risk management activities.

Presentations

a) Presentation 1: Social protection in emergencies and recommendations for Viet Nam
Speaker: Anjanette Saguisag – UNICEF

The presentation discussed the role of social protection in emergencies and its importance in disaster risk management, particularly for children. It highlighted how humanitarian crises and climate change were increasing vulnerabilities, emphasizing that shock-responsive social protection (SRSP), including cash transfers, could help families cope with disasters without compromising children's rights. Key strategies such as horizontal expansion, piggybacking,

and alignment were presented as ways to enhance emergency response effectiveness. The presentation also outlined challenges, including the lack of a vulnerable household registry, limited coordination, and insufficient financial support, which hindered rapid disaster relief efforts. Recommendations focused on strengthening legal frameworks, improving financing mechanisms, enhancing coordination, and developing digital beneficiary data systems to build resilience and ensure a more effective response to future disasters.

b) Presentation 2: Mechanisms and Methods for Mobilizing Social Resources to Participate in Response and Recovery from Natural Disasters at the Local Level in Viet Nam

Speaker: MSc. Pham Thi Diep – VAWR

The presentation explored the mechanisms and methods for mobilizing social resources to support natural disaster response and recovery in Viet Nam. It outlined the legal framework, highlighting key laws and decrees that guided voluntary contributions from organizations and individuals. The discussion emphasized the need for clear procedures in mobilizing, receiving, and distributing disaster relief funds, ensuring transparency, fairness, and effectiveness. Additionally, it identified gaps in current regulations, particularly the lack of guidelines for resource mobilization during the disaster prevention phase, and suggested strengthening coordination among government agencies, NGOs, and local communities to enhance disaster resilience.

c) Presentation 3: A Decade of CORDEX SEA: Collaborative Climate Change Research Across Southeast Asia

Speaker: Dr. Trinh Tuan Long – VAWR

The presentation highlighted the vulnerability of Southeast Asia to climate change and the importance of strengthening international cooperation and information-sharing for disaster risk management. It showcased the CORDEX-SEA initiative, which provided high-resolution climate data to improve risk assessment, early warning systems, and policy decision-making, ultimately enhancing regional resilience against extreme climate events.

d) Presentation 4: Disaster Management System: Sharing from US experience

Speaker: Larry Sutton - US Forest Service

The presentation shared insights from the US Forest Service's disaster management system, emphasizing the importance of interagency coordination, mutual aid, and emergency operation centers (EOCs) in disaster response. It highlighted the "all disasters are local" approach, where local jurisdictions led response efforts with state and federal support. Key lessons included establishing strong relationships before emergencies, maintaining a common operating picture, and continuously improving disaster response through lessons learned.

Panel Discussion

Panelist:

- Larry Sutton - USFS
- Anjanette Saguisag - UNICEF
- MSc. Pham Thi Diep - VAWR
- Dr. Trinh Tuan Long – VAWR

Key points collected:

Moderator: In light of Super Typhoon Yagi and anticipating future storms, suggest one or two key actions that should be prioritized in your area of expertise to enhance preparedness?

Anjanette Saguisag - UNICEF: The speaker emphasized that preparedness as the key stage. They highlighted UNICEF's success in delivering cash assistance just two months after the typhoon, made possible by two years of groundwork on opening a suitable mechanism. This included setting up systems, negotiating contracts with financial service providers, assessing cash delivery mechanisms, and coordinating with partners. Establishing these structures in advance ensured an effective response when disasters strike.

The speaker stressed the critical importance of coordination before a disaster occurs, emphasizing that preparedness saved lives and enhanced cost efficiency. They shared that UNICEF's two-month response followed extensive internal preparations, including securing team commitment, and external coordination with the cash working group and other cash actors. This groundwork, done during calmer periods, also ensured readiness for future emergencies. The speaker likened preparedness to nurturing a crop, which efforts and time were needed to plant, grow, and eventually achieved the desired results.

Moderator: How to ensure that funds were used appropriately by local communities, and what measures could be implemented to maintain accountability?

Anjanette Saguisag - UNICEF: To ensure funds were used appropriately and to maintain accountability, it was critical to adopt a comprehensive approach. Studies, including global researches, demonstrated that recipients generally prioritized spending on basic needs such as food, home repairs, and education. This aligned with experiences following Typhoon Yagi, where cash assistance programs were closely monitored.

Key measures included contracting third-party monitors, such as consulting firms, to conduct baseline surveys and post-distribution monitoring. These assessments gathered data through interviews and sampling to determine how funds were utilized and whether they met intended

objectives. Payment verification processes also played an essential role, ensuring households received the correct amount and identifying any delays or discrepancies for resolution.

This systematic approach of covering cash delivery, monitoring, and follow-up ensured both the effectiveness of assistance and the accountability of humanitarian organizations in managing relief resources.

Moderator: How was the amount of cash assistance determined for each affected household?

Anjanette Saguisag - UNICEF: The amount of cash assistance for households was determined through a collaborative process within a cash working group, involving agencies such as FAO and CRS. This process begins with designing a Minimum Expenditure Basket (MEB), which assessed the monthly cost for a family to meet basic needs, including food, non-food items, and healthcare. The calculations were based on family sizes, such as three or four members, and consider any assistance received from other agencies. The agreed value then served as the standardized basis for cash support, which is adjusted based on family size.

Standardizing benefit levels promoted social cohesion, reducing the risk of conflict within communities. This approach required extensive preparation and coordination, including agreements on parameters and procedures. For example, in Viet Nam, this process evolved significantly from working with local service providers in a single province in 2017 to collaborating with a domestic provider across multiple provinces by year 2021. Memorandums of Understanding (MOUs) and Standard Operating Procedures (SOPs) were also established to institutionalize these practices, ensuring consistency in emergency responses. This systematic approach exemplifies the importance of preparedness and collaboration in delivering effective cash assistance.

Moderator: Please share about the cash working group and lessons learnt from the response to Typhoon Yagi?

Anjanette Saguisag - UNICEF: shared that organizations facilitated sharing lessons through regular cash working group meetings, where experiences and insights were exchanged. However, there is potential to expand this sharing beyond the cash working group, incorporating coordination with other sectors like WASH and education. This allowed for guidance on cash-based interventions and ensured systems were in place for effective implementation.

Continuous learning was emphasized, as reflecting on what worked and what did not was essential for improving models. For example, lessons from initial cash payouts could inform adjustments in subsequent distributions. Collecting lessons learned helped identify patterns and sustain successful practices while addressing areas for improvement.

Collaboration across organizations and economies was also critical. Sharing data, knowledge, and resources, such as climate research or weather forecasts, enhanced collective confidence and preparedness. By working together, organizations strengthened their ability to respond effectively to future challenges.

Moderator: What were the key lessons learned from the response to Typhoon Helene, which impacted on an unexpected mountainous area in North Carolina?

Larry Sutton - USFS: One major lesson learned from the response to Typhoon Helene was the significant challenge of accessing remote areas. Many people living in such locations chose to remain off the grid or in less accessible regions, which could complicate emergency response and rescuing efforts. These challenges were further exacerbated by unreliable or nonexistent communication systems, such as limited internet access and spotty cell service, which tended to fail during disasters.

Another crucial takeaway was the importance of conducting structured after-action reviews to continuously improve disaster response. Individual response teams, such as fire crews or emergency units, conducted daily assessments to identify what worked well and what could be improved for the next operational period. Additionally, the larger management team overseeing the incident conducted its own review after each phase, inviting interagency partners to participate in the process. This inclusive approach helped break down silos between agencies, fosters collaboration, and ensured a shared focus on serving affected communities rather than succumbing to organizational rivalries.

Long-term recovery from disasters, such as Typhoon Helene, was another critical consideration. Recovery often extended far beyond the immediate response phase, and this protracted process highlighted the need for sustained resources and planning. Moreover, the increasing frequency and intensity of disasters were concerning, as they outpaced the capacity to recover fully before the next disaster occurs.

In summary, key lessons included addressing the logistical difficulties of reaching remote areas, maintaining robust communication systems, fostering interagency cooperation, and implementing ongoing review processes for continual learning and improvement. These practices not only enhanced the effectiveness of disaster response but also supported long-term resilience in the face of increasingly frequent and severe natural disasters.

Moderator: Please provide concrete examples of mechanisms to effectively mobilize private sector resources for natural disaster prevention, response, and recovery?

Larry Sutton - USFS: Mobilizing private sector resources for disaster prevention, response, and recovery remained a significant challenge, but it was an area where strategic action could yield substantial benefits. It was still under observation that private sector contributions were often voluntary and indirect, rather than targeted directly to the victims or local communities impacted by disasters. For instance, some public fund for natural disaster prevention and control in some cases relied primarily on local village contributions, with minimal engagement from private entities.

To enhance mobilization from the private sector, collaboration and coordination among various stakeholders were essential. Effective engagement required mechanisms that align private sector interests with community needs, creating incentives for businesses to participate. For example, integrating disaster response as part of corporate social responsibility (CSR) initiatives could encourage businesses to contribute resources, expertise, or infrastructure to support affected areas.

Another valuable approach involved establishing clear frameworks for private sector involvement, such as public-private partnerships (PPPs). These partnerships could focus on resource-sharing, risk reduction, and recovery efforts, leveraging the strengths of both public institutions and private enterprises. For instance, a PPP might include agreements for businesses to supply logistics, technology, or financial assistance in exchange for recognition or tax incentives.

Coordination was also critical at various levels, from grassroots to domestic and even international contexts. A key challenge lies in ensuring that commitments translate into effective action. While many stakeholders' express willingness to participate, achieving cost-efficient and impactful collaboration required well-defined roles and accountability. For example, private sector actors could partner with emergency response centers to provide technological support, such as communication tools or data analysis capabilities, enhancing overall preparedness and response capacity.

Moderator: How could cross-sector data sharing be improved to promote early warning systems, overcome silos, and ensure stakeholders provide valid and useful data? Could you share specific examples, mechanisms, or protocols that ensured cooperation, commitment, and the effective use of data across economies in the region?

Dr. Trinh Tuan Long - VAWR: To address challenges in cross-sector data sharing and enhance early warning systems, adaptability and collaboration were crucial. Scientific data must be practical and accessible, as demonstrated through tools like data portals and interactive atlases, which provide critical variables for disaster simulations. In Viet Nam, partnerships between scientific and operational teams improved forecasting quality and technology. In terms of international and regional collaboration, by promoting transparency,

formal agreements, and shared benefits, organizations could overcome silos and ensured valid, actionable data for better decision-making and disaster response across regions.

Moderator: How could researchers and policymakers effectively prepare and empower local communities to build their capacity and respond actively during disasters, considering the complexity of service management and the need for stakeholder collaboration?

MSc. Pham Thi Diep - VAWR: To empower local communities and to enhance their capacity to respond effectively to disasters, collaboration between researchers, policymakers, NGOs, and local stakeholders was crucial. While traditional research often focused on academic outputs like journal publications, there was a growing emphasis on "research for development" to ensure that findings directly benefited communities and created tangible impacts on the ground.

Addressing gaps between knowledge and practice was a priority. For instance, in Viet Nam, although significant budgets are allocated to create resources like flood maps, these tools often failed to reach local authorities and communities who remained unaware of their existence. Bridging this gap requires ensuring that investments in knowledge flow into practical applications at the grassroots level, fostering awareness and accessibility.

Moreover, disaster preparedness was not solved by a single activity; it required joint efforts across various sectors and levels. With limited resources, prioritization became critical. Effective coordination helped allocate resources strategically, determining what actions to take first, what to implement next, and what to pursue in parallel. Events like workshops and community-driven initiatives were essential to fostering such coordination and improving collective response strategies.

Anjanette Saguisag - UNICEF discussed about to prepare and empower local communities for effective disaster response, coordination and proactive planning were important. The UN's cluster approach organized both preparedness and response, involving simulations and pre-disaster activities to build resilience. For example, clusters were activated in advance of a forecasted disaster, estimating impacts, pre-positioning supplies, and planning cash assistance.

Coordination mechanisms varied by economy, often co-led by UN agencies and government counterparts, or fully managed by one entity. Humanitarian appeals helped secure resources, as seen in UNICEF's cash transfer program supported by the United Kingdom economy. Transparency and accountability were vital throughout this process.

By fostering collaboration, tailoring coordination, and mobilizing resources early, researchers and policymakers could better equipped communities to respond actively and effectively to disasters.

Larry Sutton - USFS claimed that effective time management was critical in emergency situations, where time was limited and cannot be wasted. One simple yet impactful strategy was improving how meetings were conducted. Meetings should have strict time limits, clear purposes, and predefined agendas. A facilitator should guide the discussion, and only pre-identified agencies or speakers should present, ensuring relevance and efficiency. Instead of reading full reports, participants should focus on summarizing key information, forecasting potential developments, and addressing urgent needs, such as resource gaps and solutions. This streamlined approach ensured that meetings remained productive and action-oriented.

Additionally, every participant must understand their role and responsibility within the group. Clear expectations helped foster accountability and ensured that everyone contributed effectively to the emergency response efforts. While these measures may seem straightforward, they were essential for maximizing efficiency during critical situations.

4. Session 3: Resource Mobilization Strategies among APEC economies

Moderator: Nguyen Dang Nhat – Disaster Risk Reduction and Climate Change Expert

Overview of Topic:

- Propose mechanisms to effectively mobilize resources for international support.
- Suggest effective international coordination frameworks and resource mobilization strategies that aligned with strategy, delivery, capacity, and expertise to support disaster management efforts.

Presentations

a) Presentation 1: Collaborative Efforts through Disaster Risk Reduction Partnership in Viet Nam

Speaker: Pham Doan Khanh - Viet Nam Disaster and Dyke Management Authority (VDDMA)
The Disaster Risk Reduction Partnership (DRRP) was established on 12 October 2019, with 30 members, aiming to engage organizations and individuals in disaster risk reduction activities in Viet Nam. Typhoon Yagi, a Category 5 typhoon, struck Viet Nam on 7 September, causing 320 deaths, 25 missing, 1,978 injuries, and massive property damage. In response, the DRRP coordinated efforts by creating a group for real-time data sharing, holding meetings, and conducting rapid assessments. These actions facilitated the delivery of USD16.7 million

and over 220 tons of aid goods for the affected people in the economy. The Viet Nam Multi-Sectoral Assessment (VMSA) was also conducted to evaluate Typhoon Yagi's impacts and provided evidence-based recommendations for recovery. Its objectives included assessing socio-economic impacts, prioritizing recovery needs, enhancing disaster-risk management, and proposing policies for resilient recovery. The recovery effort emphasized a community-based approach, inclusivity, gender responsiveness, and protection principles. Recommendations were centered on diversifying livelihoods, enhancing services, promoting climate-smart agriculture, and supporting resilient infrastructure. Key strategies also involved updating policies, improving early warning systems, and aligning recovery plans with sustainable development goals. The DRRP's coordination ensured timely and efficient aid delivery without overlaps, despite the chaotic nature of the disaster. Lessons learned highlighted the importance of fast information sharing, regular data updates, and effective collaboration between government agencies and aid organizations.

b) Presentation 2: International experience on relief warehouses

Speaker: Nghiem Ba Hung - PEAPROS Consulting

The presentation discussed international experiences with relief warehouses, highlighting their critical role in disaster response. These humanitarian warehouses were strategically located near major transport routes, ensuring efficient deployment of aid before and after disasters. Common features included modern management technologies, large-scale funding from international partners, and transparent financial systems. Collaboration with providers and stakeholders optimized logistics and minimized waste during relief operations. Key examples included the AHA Centre, which operated warehouses in Malaysia; the Philippines; and Thailand to address ASEAN disaster needs, and UNICEF hubs in Copenhagen, Denmark and Dubai, the United Arab Emirates, equipped with advanced tools like robot cranes and drones. Oxfam Supply Centre in the United Kingdom and UNHRD hubs worldwide offered vital logistics support, free storage, and rapid deployment capabilities. Funding sources varied, with UNICEF relying on public (73%) and private (26%) contributions, while Oxfam used institutional fundraising and a CRM-based management system. Warehouses like UNICEF Copenhagen integrated automation and digital tools, optimizing stock movements and emergency responses. External partnerships with organizations like ASEAN domestic disaster management agencies, DHL services, and UNHRD enhanced efficiency and coordination.

c) Presentation 3: ASEAN Agreement on Disaster Management and Emergency Response

Speaker: Dam Thi Hoa - Viet Nam Disaster and Dyke Management Authority (VDDMA)

The presentation explained the ASEAN Agreement on Disaster Management and Emergency Response (AADMER) as a legal framework for regional collaboration in disaster risk management. It highlighted the role of the AHA Centre as the operational coordination body,

supporting ASEAN member economies with disaster response, resource mobilization, and information sharing. Key mechanisms such as SASOP, SG-AHAC, and DELSA were introduced to enhance preparedness, facilitate joint operations, and improve humanitarian coordination across the region. Ms. Hoa claimed that ASEAN is a good model in regional collaboration in emergency disaster relief activities and disaster risk management in general.

d) Presentation 4: A Boy Named David

Speaker: Nguyen Quang Minh – Samaritan’s Purse company

The speaker shared the story of David and Goliath as an analogy to highlight how small-scale disaster responses could build long-term disaster preparedness capacity. It emphasized the importance of trained personnel, prepositioned supplies, and strong partnerships, recommending that APEC economies engaged INGOs in localized disaster response efforts to enhance resilience and coordination.

e) Presentation 5: Indonesia’s experience of sending and receiving foreign aid

Speaker: Ahmad Rama Aji NASUTION - Ministry of Foreign Affairs, Indonesia

The presentation outlined Indonesia's comprehensive system for managing foreign aid during disaster and non-disaster scenarios, showcasing its efficiency, compliance, and collaboration. During disasters, key players like the Ministry of Foreign Affairs, the President, and BNPB (the central disaster management authority) coordinated aid, which included money, logistics, equipment, personnel, and animal units. Non-disaster aid involved detailed procedures such as restriction reviews, tax exemption approvals, and acceptance letters. Regulation No. 6 (2018) defined criteria for requesting international assistance, including casualty numbers, infrastructure damage, and socio-economic consequences. Aid was requested only when local and central governments could not manage disaster impacts, as seen during the 2018 Central Sulawesi earthquake and tsunami. The presentation highlighted Indonesia's role in providing humanitarian assistance abroad, with decisions made after consultations led by the Coordinating Ministry for Human Development and Cultural Affairs and final approval from the President. Comparisons between aid management during emergencies and routine periods emphasized Indonesia's adaptability. Practical examples, such as aid distribution processes, demonstrated the implementation of protocols.

Panel Discussion

Panelists:

- Mr. Pham Doan Khanh - VDDMA
- Mr. Nghiem Ba Hung - PEAPROS Consulting
- Ms. Dam Thi Hoa - VDDMA
- Mr. Nguyen Quang Minh – Samaritan’s Purse
- Ahmad Rama Aji NASUTION - Ministry of Foreign Affairs, Indonesia

Moderator: How has the Disaster Risk Reduction Partnership in Viet Nam improved resource mobilization for disaster management? What key mechanisms have proven effective in fostering collaboration among stakeholders?

Pham Doan Khanh - VDDMA shared that the Disaster Risk Reduction Partnership in Viet Nam had significantly enhanced resource mobilization by fostering collaboration among government agencies, humanitarian organizations, and the private sector. Key mechanisms included establishing multi-stakeholder platforms consisting of government disaster management agency and humanitarian relief organizations to align strategies and pool resources efficiently. Through immediate coordinated action plans and capacity-building programs, the partnership ensured timely resource allocation and streamlined disaster management efforts. Moreover, partnerships with financial institutions and the integration of community participation have been crucial in creating sustainable and impactful results.

Moderator: What lessons could be learned from international experiences with relief warehouses, and how could these be adapted to strengthen resource mobilization strategies in APEC economies?

Mr. Nghiem Ba Hung explained on international experience on relief warehouses, which showed that well-organized relief warehouses played a vital role in disaster response by ensuring the availability of essential supplies during emergencies. Lessons included the importance of pre-positioning goods in strategic locations, maintaining an updated inventory management system, and fostering public-private partnerships to ensure supply chain efficiency. In the APEC context, adapting these practices involved regional coordination, leveraging technology for better inventory tracking, and building capacity for rapid distribution to affected areas. These efforts could significantly improve resource mobilization and enhance disaster preparedness.

Moderator: How did the ASEAN Agreement on Disaster Management and Emergency Response (AADMER) facilitate international resource mobilization, and what were the key challenges in its implementation?

Ms. Dam Thi Hoa - VDDMA shared that AADMER provided a robust framework for international resource mobilization by establishing standard operating procedures, encouraging information sharing, and promoting regional cooperation among ASEAN members. It facilitated joint training exercises, strengthened disaster response mechanisms, and enhanced access to financial and technical support. However, challenges remained, such as ensuring effective coordination among member states, aligning the economy and regional strategies, and addressing capacity gaps in certain areas. Overcoming these challenges required stronger political commitment and enhanced cross-border partnerships.

Moderator: How to enhance the importance of resource mobilization in disaster resilience, particularly in addressing vulnerable groups?

Nguyen Quang Minh - Samaritan's Purse emphasized a story named "A Boy Named David" which underscored the critical need for targeted resource mobilization to support vulnerable groups, such as children, in disaster resilience efforts. It highlighted the role of effective partnerships in providing access to education, healthcare, and psychological support during and after disasters. By mobilizing resources through collaborative initiatives, the program showcased the importance of addressing specific needs within communities and empowering individuals to rebuild their lives with dignity and hope.

Moderator: What are Indonesia's best practices in coordinating foreign aid during disasters, and how could these practices inform resource mobilization strategies across APEC economies?

Mr. Ahmad Rama Aji NASUTION - Ministry of Foreign Affairs, Indonesia shared that Indonesia's experience highlighted the importance of establishing clear protocols for receiving and distributing foreign aid, which ensured efficiency and transparency. Best practices included the development of a centralized coordination body, streamlining communication channels with donor economies, and integrating foreign aid into domestically disaster response frameworks. These practices could guide APEC economies by demonstrating the value of proactive planning, fostering trust with international partners, and aligning foreign aid with local needs to maximize its impact.

5. Session 4: Best Practices and Future Directions for APEC disaster management

Moderator: Dr. Trinh Quang Toan - Viet Nam Academy of Water Resources

Overview of Topic: Share successful models and best practices from various regions, discuss future directions, and develop actionable plans for enhancing disaster resilience and climate change adaptation

Presentations

a) Presentation 1: Best practices: Supporting collaborative platform, learning and coordination of Cash and Voucher Assistance across sectors in Viet Nam

Speaker: Ms. Nguyen Thi Hien Thi - Catholic Relief Services (CRS)

She highlighted best practices in Cash and Voucher Assistance (CVA) for disaster response in Viet Nam, focusing on experiences from Typhoon Damrey (2017) and the Central Flood (2020). It emphasized the importance of multi-sector collaboration, financial service provider (FSP) partnerships, and digital tools to enhance the efficiency of cash-based interventions.

Key lessons included the need for evidence-based decision-making, standardized transfer values, and stronger coordination among governments, NGOs, and private sectors. The presentation called for scaling up CVA programs, strengthening disaster preparedness frameworks, and integrating cash assistance into the economy disaster response systems.

b) Presentation 2: Lesson learns in promoting Anticipatory Action Project in Viet Nam: Ways forwards

Speaker: Nguyen Thi Thanh Van - UN Food and Agriculture Organization (FAO)

The presentation highlighted Anticipatory Action (AA) in disaster risk management, emphasizing early warning systems, pre-arranged financing, and proactive measures to protect vulnerable communities before disasters strike. It discussed FAO's role in implementing AA across the Asia-Pacific, with a focus on Viet Nam, where protocols had been developed for drought, floods, tropical storms, and heatwaves. Lessons learned from past disasters, such as Typhoon Noru, illustrated the impact of cash transfers and preparedness measures in reducing food insecurity and livelihood losses. The presentation called for stronger government leadership, improved coordination, and integration of AA into disaster management frameworks to enhance resilience and response effectiveness.

c) Presentation 3: Climate Resilient Houses: Innovations and community engagement in Viet Nam

Speaker: Mr. Nguyen Dang Nhat – Disaster Risk Reduction/Climate Change Expert

The presentation focused on climate-resilient housing innovations in Viet Nam, emphasizing structural improvements, local engagement, and data-driven monitoring to withstand storms and floods. By implementing the "3 Hard" principles (hard foundation, hard frame, hard roof) and ensuring strong structural anchoring, these houses provided better protection for the vulnerable communities.

d) Presentation 4: Enhancing children's resilience through Safe school models and Child-led initiatives

Speaker: Nguyen Thi Thuy Duong - Save the children

The presentation discussed enhancing children's resilience to disasters through the Safe School Model and child-led initiatives. It highlighted the severe impact of climate change on children, emphasizing their vulnerability while recognizing them as key agents of change. The Safe School Model focused on protecting students and teachers, minimizing learning disruptions, and building disaster preparedness through risk assessments, school safety plans, and capacity-building activities. It was necessary to have stronger investment in child-centered disaster risk reduction, early warning systems, and greater involvement of children in climate policy-making.

e) Presentation 5: How to help people know, think, and act based on disaster risk information - From Japan's experiences

Speaker: Mr. Suzuki Takashi - Japan International Cooperation Agency (JICA) Expert

The presentation focused on enhancing public awareness and preparedness using disaster risk information, drawing lessons from Japan's experiences. It introduced tools such as risk maps, hazard maps, and early warning systems, which helped communities identify threats and took preventive actions. Interactive methods, including the DRR card game and "My Timeline" planning tool, were highlighted as effective ways to teach disaster preparedness. The presentation emphasized the importance of accessible, user-friendly risk communication strategies to ensure communities know, think, and act before disasters strike.

Plenary Discussions

Moderator: Mr. Suzuki Takashi - JICA Expert

Panelist:

- Ms. Nguyen Thi Hien Thi - CRS
- Ms. Nguyen Thi Thanh Van - FAO
- Mr. Nguyen Dang Nhat – DRR/CC Expert
- Ms. Nguyen Thi Thuy Duong - Save the children

Moderator: How to incorporate disaster-resilient features into housing designs, and in what ways do you engage women in the design process?

Mr. Nguyen Dang Nhat – DRR/CC Expert claimed that disaster-resilient housing design must prioritize inclusivity and participation from all stakeholders and groups, especially women. Guidelines on promoting the role of women were crucial, as women often played a central role in family preparedness and response during disasters. Mothers, for instance, are pivotal in supporting younger children, particularly during rapid-onset disasters like cyclones or dam breaks, where risks are heightened.

Inclusive design implementation should also involve children, recognizing their diverse needs across age groups. The Safe School Model in Viet Nam emphasized the importance of addressing specific risks faced by female students and teachers, ensuring their active participation and safety. Additionally, individuals with disabilities must be also considered in disaster-resilient designs to create equitable solutions.

For effective disaster preparedness, community engagement and government support were essential. Forecasting systems could guide preventive measures, such as ensuring children stay home during predictable events like typhoons. However, swift and intensive disasters required robust community awareness programs and responsive infrastructure to mitigate

risks. This holistic approach ensured that housing designs and broader disaster-response systems catered to the unique needs of women, children, and vulnerable groups.

Moderator: What facilities should be considered to accommodate the needs of children of different age groups, and how to ensure equal accessibility for both females and males?

Ms. Nguyen Thi Thuy Duong - Save the Children: Facilities for children must cater to their varying needs across age groups, as children of different ages required different support and methodologies for meaningful participation. For younger children, family and caregiver support were crucial, and methods such as observing their actions and reactions could be used to ensure that they are engaged. Older children, on the other hand, were more capable of active participation and leadership, and strategies should focus on equipping them with skills and knowledge to act independently in the absence of caregivers.

The Safe School Model implementation in Viet Nam exemplified a multi-layered approach, involving not only children but also caregivers, communities, and other stakeholders. It ensured that children are at the center of the design while incorporating support systems that prepared them for disaster scenarios. This holistic approach encouraged collaboration and awareness among all involved parties.

Additionally, women played a vital role in the design and implementation process. Women's Unions in Viet Nam often act as key beneficiaries and stakeholders, representing their communities to ensure the designs meet specific local needs. They also monitored the entire process, from design to execution, ensuring transparency and effectiveness. Gender-sensitive approaches, such as involving women in decision-making and allowing them to tailor designs based on their area's context, further strengthening the inclusivity and success of these initiatives.

By integrating children's and women's unique needs and perspectives, these facilities could provide equitable and comprehensive support, ensuring all individuals had access and the ability to benefit effectively.

Moderator: What should be considered the key achievements of the collaborative cash voucher program over the past few months or years, particularly following the Yagi storm? As a follow-up, what should be the priorities moving forward, and plans to engage private donors in a more structured manner, given the current lack of coordination in private donor assistance?

Ms. Nguyen Thi Thanh Van – FAO shared that the collaborative cash voucher program has achieved significant milestones in recent years, especially after Typhoon Yagi. Within the cash working group, strong engagement with the government, private sector (particularly Viet Nam Post), and humanitarian agencies had been a cornerstone of its success. A key achievement

was the establishment of a pre-framework agreement with Viet Nam Post, including the first-ever common Standard Operating Procedures (SOPs) for anticipatory actions, emergency responses, and recovery efforts against natural disaster incidents. This institutionalized approach has enhanced efficiency, timeliness, and transparency, ensuring broad coverage across all area of the economy - a remarkable improvement from just local engagement five years ago. Collective advocacy efforts, shared assessments, and leadership collaboration among humanitarian agencies had been critical in solidifying Viet Nam Post's role as a formal policy partner for delivering postal services.

Looking ahead, the primary focus was on continuous improvement through evaluations, such as lessons learned from Typhoon Yagi. Emphasis will be placed on refining preparedness measures and ensuring better coordination for future disasters. Additionally, plans were underway to engage private donors in a more structured manner. The goal was to move away from the current lack of coordination in private donor assistance by fostering partnerships that aligned with established frameworks, ensuring more effective and organized support for disaster response and recovery.

Mr. Dao Phi Hung (USFS): Regarding the cash voucher program, how to address price fluctuations during emergencies, such as those seen during the 2020 central flooding?

For the new anticipatory action initiative in Viet Nam as well as in the region, how to integrate awareness-raising activities to ensure both the public and leaders better understand and accept the concept? Additionally, in the context of disaster response, how can coordination at lower levels - such as between community responders and relevant government departments - be improved to avoid complexity and ensure clarity on roles and leadership?

In terms of innovative approaches, please share more about retrofitting initiatives in mountainous areas. Are there any documents or guidance from international partners such as Japan International Cooperation Agency (JICA) or Ministry of Land, Infrastructure, Transportation and Tourism (MLIT) for example, that could be shared to support similar programs? Also, regarding school safety initiatives, particularly drills, how were they conducted practically in Viet Nam and regional economies, and was there potential for expanding the use of VR (virtual reality) games in disaster education to enhance learning and preparedness?

Ms. Nguyen Hien Thi – CRS shared that for the market assessment and price monitoring, fluctuations in item prices, such as an increase in meat prices and a reduction in others like vegetables or oil, are factored into the Minimum Expenditure Basket (MEB) calculation. In the MEB, 70% is allocated for food, with the remaining 30% for other essentials. Additionally, a 10% contingency is included to accommodate price variations. If market price increases exceed 10%, it is important to reassess and adjust the transfer value accordingly. However, if the increase remains within the 10% threshold, the existing transfer value is maintained. In the

CRS relief activities during Typhoon Yagi, as price changes stayed within this range, it continued with the same transfer value during implementation.

Ms. Nguyen Thi Thanh Van – FAO discussed that the integration and promotion of Anticipatory Actions (AA) in Viet Nam and the region has seen substantial progress, with strong efforts by the leaders. For instance, last year, a significant statement on strengthening anticipatory action in disaster management in ASEAN region was issued, and earlier this year, a platform was organized by the economy to raise awareness of AI applications among the private sector and other organizations. Additionally, AI early action was highlighted during Disaster Reduction Day, reflecting its prioritization.

At the community level, AA has been incorporated into CBDRM (Community-Based Disaster Risk Management) training programs and piloted in various projects. With increased funding, more training on AA integration into CBDRM will be organized to enhance disaster preparedness. Despite these achievements, there was recognition that further efforts were required. Capturing lessons learned, gathering evidence, and sharing these insights with stakeholders remain critical tasks. The Ministry of Agriculture and Rural Development (MARD) and the Viet Nam Disaster and Dyke Management Authority (VDDMA) have been key partners in advancing AI integration, demonstrating strong support for pushing forward these initiatives. The collaboration aimed to ensure ongoing progress and sustainable implementation across all levels in the economy.

Mr. Suzuki Takashi - JICA Expert responded to Mr. Dao Phi Hung - USFS that was AR, standing for augmented reality. Augmented meant the combination of the actual reality and digital or technology, which was a kind of the combination of the reality and the digital world. However, the scenario should be based on the risk simulation. For instance, in a flooding incident, it should be calculated based on the simulation or the forecast of the rainfall. The scientific data should be offered when a scenario is formulated. For example, in the case of the Typhoon Yagi in September 2024, there were inundation in many areas, including the capital. It was necessary for those areas to record the inundation levels in order to understand the situation and the causes of inundation. After that, they are crucial materials for preparing inundating scenario in the future, as well as for researching activities.

Moderator: Please elaborate on your experience in implementing the communication strategy mentioned? Specifically, what achievements have been realized as a result of adopting this new approach?

Mr. Suzuki Takashi - JICA Expert shared on the case of Japan that the communication strategy emphasized not just providing information but also encouraging individuals to think and act based on that information, which was vital for driving meaningful change. This approach stemmed from personal experience for a long time. For instance, as an official

engineer at Ministry of Land, Infrastructure, Transportation and Tourism (MLIT) in Japan, he worked on creating hazard maps for a river. While publishing the maps was a crucial first step, he realized it wasn't sufficient to effectively engage communities. To address this, he collaborated with local municipalities to organize workshops where residents could walk through their communities using the hazard maps. This hands-on approach helped the people better understand potential risks and prepared for real-life scenarios. Such activities underscored the importance of localized and interactive communication tools in fostering awareness and action.

This experience highlighted that simply presenting data or maps was insufficient. Engaging communities through practical, relatable activities creates a more impactful communication strategy, ensuring that information is translated into meaningful preparedness and resilience.

Summary of Session 4: The focus moving forward was to align with best practices and to ensure that future directions were clearly defined. It was critical to align the disaster risk reduction goals while incorporating recommendations to improve planning for the short, medium, and long term. Ownership by counterpart agencies remained a key factor in the successful implementation and sustainability of projects, particularly in maintaining the AA approach beyond the project cycle.

Additionally, the collaborative platform for financial service providers has laid a strong foundation. There were opportunities to expand its scope by integrating standardized data, tools, and Standard Operation Procedures (SOPs), which would be essential for future cooperation and development. By maintaining focus and fostering collaboration, the next steps could effectively be built on these achievements.

In addition to providing information, it is essential to encourage actionable thinking, which could be challenging. A practical method involved embracing a cycle of trial and error - identifying problems, addressing them, and continuously improving. Sharing lessons learned from this process fostered collective growth and effectiveness. This approach remained pivotal as it is the global goal to create a safer, more resilient future for children and communities against the impact of natural disasters.

IV. WORKSHOP SUMMARY

In this workshop, it was discussed on various aspects of emergency preparedness and disaster risk reduction, with a particular focus on international relief activities in emergency disaster risk management. Representatives from government agencies, international organizations, and research institutions were said to have exchanged insights on best practices, lessons learned, and strategies for strengthening disaster resilience at the economy and also regional level,

impressing with the model of Disaster Risk Reduction Partnership in Viet Nam and ASEAN cooperation on emergency disaster risk management.

Key discussions revolved around international coordination mechanisms, the role of humanitarian organizations, and the mobilization of resources for disaster-affected regions. Participants reportedly emphasized the need for streamlined procedures in cross-border disaster response, stressing the importance of clear communication channels, standardized aid distribution frameworks, and pre-established and future agreements between economies to facilitate rapid relief efforts against the impact of natural disasters.

Speakers were noted to have shared case studies on international emergency aid deployments, showcasing successful collaboration between the economies, NGOs, and intergovernmental agencies in delivering humanitarian assistance. However, challenges such as logistical constraints, funding limitations, and the need for better coordination among relief actors are still ongoing. It was suggested that public-private partnerships and technology-driven solutions, such as AI-powered disaster mapping and real-time data sharing, could enhance the effectiveness of international relief operations.

The workshop concluded with several action items, including enhancing knowledge-sharing platforms for international disaster relief coordination, especially in the regional level such as APEC where economies are prone to natural disasters, strengthening policy frameworks to support rapid response, and fostering partnerships to build more resilient and cooperative disaster management systems.

Annex 1: WORKSHOP AGENDA

DAY 1	08h30-17h30 - 12 December 2024
08:00-08:30	Registration
08:30-08:35	Opening Remarks
08:35-08:40	Photo session
08:35-12:00	Session 1: Climate Change and Disaster Risk Reduction efforts among APEC Economies
Overview of Topic:	<ul style="list-style-type: none"> Identify developments and impacts of disasters in the context of climate change among APEC economies. Discuss the impact of climate change on the frequency, intensity, and distribution of disasters. Share case studies and lessons learned from recent disaster events
Presentations	<ul style="list-style-type: none"> Assoc. Prof. Trinh Quang Toan-VAWR: Water-related disasters: intensity, frequency, and impact, under the climate change context – Viet Nam Assoc. Prof. Nguyen Nghia Hùng -SIWRR: Flood compound in the Mekong Delta, situation and prevention measures. Dr. Pham Hong Nga- TLU: Integrated Approach to Flood Risk Analysis - A case study in Vu Gia – Thu Bon Floodplain Area, Central Viet Nam Dr. Tran Anh Quan-HUMG: Changes in Temperature Extremes in Viet Nam at Progressive Global Warming Levels from 1.5°C to 4°C Ly Phat Viet Linh – UNICEF: Beyond Survival: Protecting Our Children in the Face of Climate change and Disasters."
Tea Break	
<i>Moderator</i> Nghiem Ba Hung	Plenary discussion
Lunch break	
13:30-17:30	Session 2: Integrated Disaster Risk Management Approaches in APEC economies
Overview of Topic	<ul style="list-style-type: none"> Share lessons learned on the mobilization and use of international support resources in disaster risk management activities.
Presentations	<ul style="list-style-type: none"> Anjanette Saguisag -UNICEF: Social protection in emergencies and recommendations for Viet Nam MSc. Pham Thi Diep -VAWR: Mechanisms and Methods for Mobilizing Social Resources to Participate in Response and Recovery from Natural Disasters at the Local Level in Viet Nam.

	<ul style="list-style-type: none"> • Dr. Trinh Tuan Long-VAWR: A Decade of CORDEX SEA: Collaborative Climate change Research Across Southeast Asia • Larry Sutton USFS: Disaster Management System: Sharing from US experience
15:00-15:15	Break
Moderator Larry Sutton	Plenary discussion
	Recap from Day 1

DAY 2	09h00-17h30 - 13 December, 2024
08:00-12:00	Session 3: Resource Mobilization Strategies among APEC economies
Overview of Topic:	<ul style="list-style-type: none"> • Propose mechanisms to effectively mobilize resources for international support. • Suggest effective international coordination frameworks and resource mobilization strategies that align with strategy, delivery, capacity, and expertise to support disaster management efforts
Presentations	<ul style="list-style-type: none"> • Pham Doan Khanh - VDDMA: Collaborative Efforts through Disaster Risk Reduction Partnership in Viet Nam • Nghiem Ba Hung: International experience on relief warehouses • Dam Thi Hoa - VDDMA: ASEAN Agreement on Disaster Management and Emergency Response • Nguyen Quang Minh –SP: A Boy Named David • Ahmad Rama Aji NASUTION - Ministry of Foreign Affairs, Indonesia: Indonesia’s experience of sending and receiving foreign aid
Break	
Moderator Mr. Nguyen Dang Nhat	Plenary discussion
11:30 - 13:30 Lunch break	
13:30-17:30	Session 4: Best Practices and Future Directions for APEC disaster management
Overview of Topic:	<ul style="list-style-type: none"> • Share successful models and best practices from various regions, discuss future directions, and develop actionable plans for enhancing disaster resilience and climate change adaptation
	<ul style="list-style-type: none"> • Nguyen Thi Hien Thi - CRS: Best practices: Supporting collaborative platform, learning and coordination of Cash and Voucher Assistance across sectors in Viet Nam

	<ul style="list-style-type: none"> • Nguyen Thi Thanh Van - FAO: Lesson learns in promoting Anticipatory Action Project in Viet Nam: Ways forwards • Nguyen Dang Nhat – DRR/CC Expert: Climate Resilient Houses Innovations and community engagement in Viet Nam • Save the children: Enhancing children's resilience through Safe school models and Child-led initiatives • Mr. Suzuki Takashi - JICA Expert, VDDMA: How to help people know, think, and act based on disaster risk information - From Japan's experiences
15:00-15:15	Break
15:15-17:00 <i>Moderator</i> Mr Trinh Quang Toan	Plenary discussion
17:00 17:15	Recap of Day 2
17:15-17:30	Closing remark

The materials of the project EPWG 201 2023A “**Enhancing International Relief Activities in Disaster Risk Management among APEC Economies**” can be found at:

[https://drive.google.com/drive/folders/1IZtJps6CxnxbACGGU20Fe18vV2yF-o0D?usp=drive link](https://drive.google.com/drive/folders/1IZtJps6CxnxbACGGU20Fe18vV2yF-o0D?usp=drive_link)

Annex 2: RESEARCH AND BACKGROUND PAPER

I. KEY CONCEPTS

Build back better: The use of the recovery, rehabilitation and reconstruction phases after a disaster to increase the resilience of economies and communities through integrating disaster risk reduction measures into the restoration of physical infrastructure and societal systems, and into the revitalization of livelihoods, economies and the environment.

Capacity: The combination of all the strengths, attributes and resources available within an organization, community or society to manage and reduce disaster risks and strengthen resilience.

Capacity assessment is the process by which the capacity of a group, organization or society is reviewed against desired goals, where existing capacities were identified for maintenance or strengthening and capacity gaps were identified for further action.

Disaster: A serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more of the following: human, material, economic and environmental losses and impacts.

Emergency was sometimes used interchangeably with the term disaster, as, for example, in the context of biological and technological hazards or health emergencies, which, however, could also relate to hazardous events that did not result in the serious disruption of the functioning of a community or society.

Disaster damage occurs during and immediately after the disaster. This is usually measured in physical units (e.g., square meters of housing, kilometres of roads, etc.), and described the total or partial destruction of physical assets, the disruption of basic services and damages to sources of livelihood in the affected area.

Disaster impact was the total effect, including negative effects (e.g., economic losses) and positive effects (e.g., economic gains), of a hazardous event or a disaster. The term included economic, human and environmental impacts, and may include death, injuries, disease and other negative effects on human physical, mental and social well-being.

Disaster Risk: The potential loss of life, injury, or destroyed or damaged assets which could occur to a system, society or a community in a specific period of time, determined probabilistically as a function of hazard, exposure, vulnerability and capacity.

Disaster risk assessment: A qualitative or quantitative approach to determine the nature and extent of disaster risk by analysing potential hazards and evaluating existing conditions of exposure and vulnerability that together could harm people, property, services, livelihoods and the environment on which they depended.

Disaster risk management was the application of disaster risk reduction policies and strategies to prevent new disaster risk, reduce existing disaster risk and manage residual risk, contributing to the strengthening of resilience and reduction of disaster losses.

Reconstruction: The medium and long-term rebuilding and sustainable restoration of resilient critical infrastructures, services, housing, facilities and livelihoods required for the full functioning of a community or a society affected by a disaster, aligning with the principles of sustainable development and “build back better”, to avoid or reduce future disaster risk.

Recovery: The restoring or improving of livelihoods and health, as well as economic, physical, social, cultural and environmental assets, systems and activities, of a disaster-affected community or society, aligning with the principles of sustainable development and “build back better”, to avoid or reduce future disaster risk.

Rehabilitation: The restoration of basic services and facilities for the functioning of a community or a society affected by a disaster.

II. BACKGROUND INFORMATION

Title: Enhancing International Relief Activities in Disaster Risk Management among APEC Economies

Under the context of climate change, disaster was increasing in terms of frequency and intensity, causing great loss to the economy, people’s lives and properties. Viet Nam, like other economies, was gradually shifting from disaster response to disaster preparedness. In recent years, the Economy has implemented several measures to enhance the Disaster Risk Management (DRM) capacity such as prioritize DRM in domestic policies, apply DRR considerations on every single development sectors, and make prior investments for Disaster Risk Reduction (DRR). However, with the increasing severity of disaster, the relief operations have revealed shortcomings such as ineffective crowd funding, complicated procedures for aid receipt, duplication of supports, unsuitable for the beneficiary needs, etc.

In Viet Nam, the shortcomings were mainly due to the lack of close coordination between economy agencies, international partners and affected community in need. Realizing this problem, in October 2019, the Minister of Agriculture and Rural Development (MARD) signed Decision No. 3922 to establish a Disaster Risk Reduction Partnership (DRRP) with the participation of 20 international organizations and related ministries. The Partner was chaired by Deputy Minister of MARD and co-chaired by the Director of Asia Development Bank (ADB) in Viet Nam. Since its inception, the Disaster Risk Reduction Partnership had achieved many remarkable achievements in relief activities, including the historical flooding in 2020 when the total funding from international organization was more than USD25 million, significantly reducing the tremendous impacts of the flooding for the affected citizens.

Purpose of the Workshop:

- Identify developments and impacts of disaster in the context of climate change. Examine how climate change influenced the frequency and intensity of disasters, affecting global temperature and precipitation patterns, and leading to more severe environmental events.
- Shared lessons learned on the mobilization and use of international support resources in disaster risk management activities. Discuss the integrated measures and holistic approaches necessary for efficient disaster risk management, especially in the context of new challenges to disaster management.
- Propose mechanisms to effectively mobilize resources for international supports. Suggest effective international coordination frameworks and resource mobilization strategies that align with strategy, delivery, capacity, and expertise to support disaster management efforts.

Workshop Details:

- Duration: 2 days
- Date: October 2024
- Venue: Ho Chi Minh City, Viet Nam
- Participants: Representatives from the Governments of APEC economies, International Non-Governmental Organizations (INGOs), organizations, and relevant stakeholders.

Expected Outcomes:

- Discussion on establishment of a joint mechanism for APEC economies to mobilize, use, and coordinate international support resources effectively.
- Enhanced understanding of the role of climate change in disaster risk management.
- Shared best practices and innovative solutions for resource mobilization and disaster risk management.
- Discussion on development of a strategic framework for international cooperation in disaster risk reduction efforts.

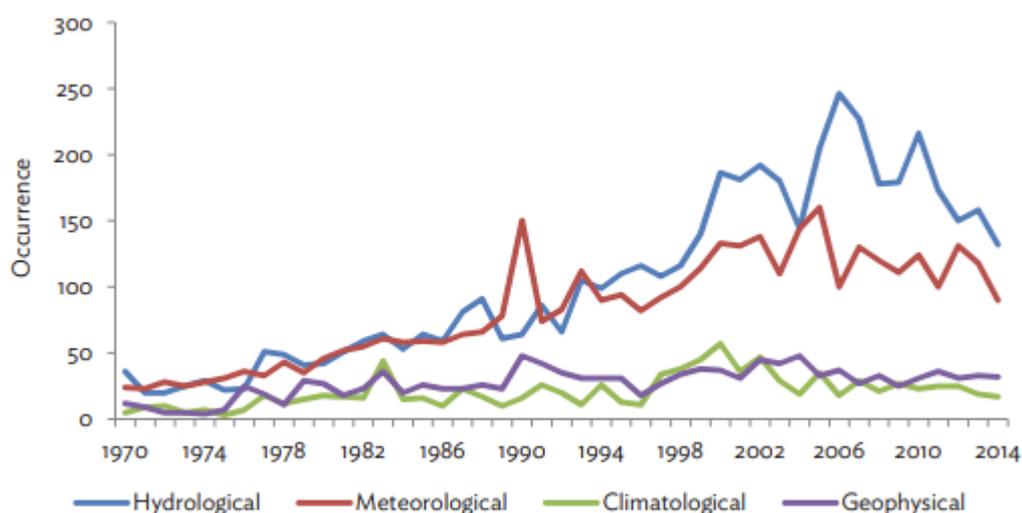
This workshop aimed to foster collaboration and strengthen the collective response to disasters within the APEC region, ensuring that the most vulnerable communities received timely and effective support.

Context

Climate change was an existential threat for humanity. APEC economies were disproportionately affected by, and contributed to, climate change. Due to their location and

geographic diversity, APEC economies were exposed to climate change, and suffered from more than 70% of global natural disasters. Some effects of climate change were (1) Higher Sea levels, extreme rain, and droughts could make land economically unproductive; (2) Higher temperatures reduced both agricultural yields and labor productivity; and (3) Flooding could amplify health risks from water-borne diseases. If climate policy remained business-as-usual, resulting in an estimated temperature increase of 3.2°C, the region could expect up to 18.3% GDP loss within the century¹.

Under the context of climate change, the frequency of natural disasters recorded in the Emergency Events Database (EM-DAT) in the past four decades has increased almost three-fold, from over 1,300 events in 1975-1984 to over 3,900 in 2005-2014 (Figure 1). The number of hydrological and meteorological events increased sharply during this period, with the annual number of Category 5 storms tripling between 1980 and 2008. Although the causal relationship between climate change and natural disasters was not fully understood, it seemed that the frequency of climate-related natural disasters was rising.



Source: Authors' estimates based on data from the Emergency Event Database of the Centre for Research on the Epidemiology of Disasters. <http://www.emdat.be> (accessed 5 March 2015).

Figure 1: Global frequency of Natural disasters by types (1970-2014)

Global damage from natural disasters had been steadily increasing, reaching about USD142 billion annually in the last 10-year period (2005-2014), a steep increase from USD36 billion a year two decades ago (1985-1994)². According to a World Bank estimation, APEC economies have been incurring disaster-related losses of over USD100 billion every year for the last ten years.

¹ Based on the November 2021 APEC Regional Trends Analysis by the APEC Policy Support Unit

² ADB, 2015 Global Increase in Climate related Disasters

Most APEC economies are situated along the Pacific Ring of Fire, where strong earthquakes, tsunamis, and volcanic eruptions posed constant threats. The region was also the world's most frequented by tropical cyclone formations, including yearly occurrences of Category 5 cyclones, or super typhoons. Furthermore, the Asia-Pacific region was subjected to temperature changes in the Pacific Ocean, resulting in the El Niño and La Niña phenomena. All these conditions could be further exacerbated by climate change. Catastrophes in the region, such as the 2004 Indian Ocean Tsunami, the 2008 earthquake in China's Sichuan Province, the 2010 earthquake in Chile, and the 2011 earthquakes in New Zealand and Japan. These are critical reminders of the importance of APEC's emergency preparedness work. As the leading agency in DRM, the Emergency Preparedness Working Group (EPWG) has improved coordination efforts within APEC economies, by fostering research and collaboration, sharing knowledge, lessons learned and best practices in the field of emergency management. The group enhanced cooperation among members and sought integration of best-practice emergency and natural disaster preparedness. In addition, the **Sendai Framework for Disaster Risk Reduction 2015-2030** emphasized international cooperation to achieve its goals by 2030. It sought out to protect development gains from the risk of disasters, safeguarding lives, livelihoods, and assets across economies and communities.

With this rationale, one of the key measures that was initiated by Viet Nam is the Enhancing International Relief Activities in Disaster Risk Management. International relief activities played a crucial role in mitigating disaster impacts. When disasters strike, international relief organizations provide immediate assistance, which includes search and rescue operations, medical aid, food, water, and shelter. The swift response helped reduce casualties and prevented further damage. This initiative as a topic of EPWG, will be a chance to share APEC member economies' knowledge and experiences on the matter of mobilization international resources for relief activities in DRM among the APEC members' agencies, authorities, and related international organizations and partners. By providing recommendations to effectively utilize the international supports, it would help the APEC economies enhance the resilient capacity to natural disasters and climate change, contributing to ensuring the sustainable development of the region. By the end, member economies, particularly developing economies, and participating delegations would have at their disposal a set of best practices and recommendations for improving capacity and strengthen resilience to disasters and climate change for vulnerable communities.

Existing mechanism and challenges

As mentioned in the APEC Disaster Risk Reduction Framework, there are 4 main pillars including: (1) Prevention and Mitigation; (2) Preparedness; (3) Response and (4) Rehabilitation

and build back better. The relief activities were considered most likely to be included under the response phase. In this phase, it focused on engaging stakeholders of the affected economies in operational interventions immediately after a disaster. It involved the identification and assessment of natural disaster impacts to the economy and marketplace following the disaster and the implementation of response programs, such as but not limited to the provision and replenishment of lost purchasing power to affected consumers, procurement of relief goods and services from business and people closest to the disaster area, and provision of immediate needs through market-based solutions so that economic recovery is stimulated while immediate relief is provided. It also covered clearing of bottlenecks in supply chain to get emergency goods in and out or businesses back online.

Regarding the regional cooperation among APEC economies, APEC has issued the “APEC Principles on disaster response and cooperation”. The principles emphasized that APEC members are expecting to do more thorough information sharing, experiences exchanging, capacity building and other means to get this region better prepared for disaster. APEC economies also promoted the joint efforts focusing on risk-informed development strategies, improved monitoring and early warning system that were in line with the UN initiative “early warning for all”.

While APEC economies’ mechanisms play a crucial role in disaster relief and cooperation, they encountered several challenges in effectively mobilizing and coordinating resources. First, the diverse nature of APEC economies, ranging from highly developed to less developed, posed complexities. Coordinating efforts across this spectrum requires tailored approaches. Second, bureaucratic processes and decision-making within an economy or an organization of economies could lead to delays during emergencies. Third, logistical constraints, including geographical distances and transportation limitations, hindered rapid resource deployment. Fourth, inconsistent data sharing practices and lack of standardization impeded effective coordination. Harmonizing data collection was crucial. Fifth, language and cultural barriers, for example across economies, affect communication during crises. Sixth, financial constraints and competing priorities impacted resource availability. Finally, political considerations sometimes overshadow humanitarian needs. Addressing these challenges necessitates sustained efforts, improved communication, and adaptive strategies to enhance disaster response and resource coordination within APEC economies.

III. Case STUDIES from APEC economies

1. Viet Nam

Context

On 13 October 2020, the Government of Viet Nam released a call for emergency relief and support following four tropical cyclones and the Inter Tropical Convergence Zone which combined had caused severe and widespread flooding, landslides, storm surge and strong winds since 6 October. As of 28 October 2020, 214 people have reportedly been killed or were missing, according to the Viet Nam Disaster and Dyke Management Authority (VDDMA). An estimated 7.7 million people lived in areas affected by flooding caused by the multiple storms, with some 1.5 million people in nine provinces directly affected and approximately 380,000 houses flooded, damaged or destroyed. Of those people directly affected by the current disasters, about 753,000 were women and girls, 134,000 were children under five, and 143,000 were over 65 years old. On the morning of 11 October 2020, Tropical Storm Linfa (Storm No. 6) made landfall in Quang Nam and Quang Ngai provinces in central Viet Nam, resulting in 150 to 300 mm of rain. This was followed on 14 October 2020 by Tropical Storm Nangka (Storm No. 7) which made landfall in northern Viet Nam but also brought a further 150 mm of rain to the still flooded provinces of central Viet Nam. On 16 October 2020, tropical depression INVEST 94W in the East Sea weakened into a low-pressure area and made landfall in the central provinces and was subsequently followed by Tropical Storm Saudel (Storm No. 8) which made landfall in Quang Binh and Quang Tri provinces on 25 October 2020. On 28 October 2020, Tropical Cyclone Molave (Storm No. 9) made landfall in approximately the same area as Tropical Storm Linfa, with up to 700 mm of rain reported in Nghe An and Ha Tinh provinces and up to 400 mm of rain in Quang Binh and Quang Tri provinces. Between 5 and 20 October 2020, VDDMA reported that many areas in central Viet Nam recorded a total rainfall of more than 2,400 mm, and in some locations, flood waters exceeded the previous historical high recorded in 1979 and 1999.



Figure 2: An aerial picture shows houses destroyed and submerged in flood waters caused by typhoon in Quang Binh province, Viet Nam on 27 October 2020

As of 29 October 2020, nine provinces have been affected by the cumulative impacts of the multiple storms and heavy rains. These are, Ha Tinh, Quang Binh, Quang Nam, Quang Ngai, Quang Tri, Thua Thien Hue, Nghe An, Binh Dinh and Kon Tum provinces, whereas, Ha Tinh, Quang Binh, Quang Ngai, Quang Tri and Thua Thien Hue were the most severely affected provinces.

Following Tropical Cyclone Molave, more than 88,000 houses and 50 schools had their roofs blown off, and about 375,000 people were evacuated to evacuation centres. Those in the evacuation centres are amongst the most vulnerable having had their houses damaged or destroyed and having lost key household items in the floods. Many of the evacuation centres were overcrowded, do not have access to sufficient basic facilities such as water and sanitation, and health care, and lack appropriate management needed to prevent the spread of COVID-19 and to mitigate protection risks especially for women and children. As well as damage to houses, about 30,000 hectares of agricultural land were damaged (including rice, other crops, and aquatic products) and more than 2 million cattle and poultry were killed. This was likely to have severe impacts on food security and livelihoods, especially for those people who were already experiencing adverse economic impacts due to COVID-19. Further, more than 360 schools were flooded and damaged, with detrimental impacts on children's ability to continued access to education.

At this time, the delivery of assistance was hampered by extensive damage to public transportation infrastructure. VDDMA reported that more than 165 km of domestical highway, 140 km of local roads and three bridges were heavily damaged. Rescue teams were accessing affected areas by boat to deliver relief items and to evacuate vulnerable people, prioritizing children, people with disabilities and elderly people. The area's most severely affected by flooding were also those same provinces which experienced a second wave of COVID-19 cases in July and August 2020. Following the outbreak of the second wave of COVID-19, a further thirty days of lockdown measures were implemented from 28 July to 05 September 2020, with adverse socio-economic impacts for the region which already recorded higher than domestical average multidimensional poverty rates. As a consequence of COVID-19 related measures, the most vulnerable people had already had their coping capacities eroded prior to this current disaster and were thus in in more acute need of immediate assistance to help them manage the current compound crisis.

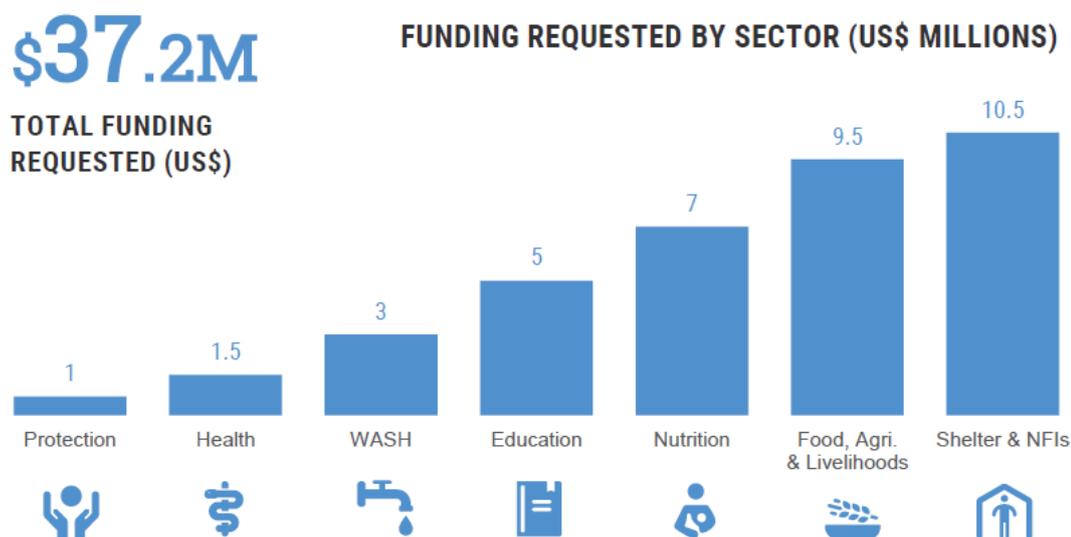
From 20 to 23 October 2020, joint Government-UN-NGO assessments were undertaken in Quang Binh, Quang Tri, Thua Thien Hue, Quang Nam, and Quang Ngai provinces. Key findings from the assessments included the need for emergency food assistance for 177,000 of the most vulnerable people, restoration of agricultural land, safe access to clean water and sanitation facilities including in health centres and schools, the provision of dignity kits for women and girls, provision of education supplies and alternative learning solutions to ensure

continuity of learning, support for those people evacuated from their homes, repairs for damaged houses, replacement of household items, health support especially maternal and child health, risk communication activities, provision of micro nutrients and continuation of nutrition activities to prevent an increase in rates of malnutrition. Viet Nam requested that all relief activities to target the most vulnerable people, including poor, near poor, people with disabilities, female-headed households and elderly people.

Government-led response

The National Steering Committee for Natural Disaster Prevention and Control was regularly conducting coordination meetings and sending mission teams to the affected provinces to provide guidance and conduct rapid assessments. The Government then mobilized the military and vehicles for search and rescue missions, evacuated people at risk or affected by floods, and provided immediate food assistance to flood-affected people. The strategic objectives of the response activities using the international relief supports were:

The Ministry of Agriculture and Rural Development released a call for emergency relief and support and convened a meeting with Disaster Risk Reduction Partnership members on 19 October to discuss and coordinate international relief assistance. Initial requests for assistance included food, search and rescue equipment, and water and sanitation assistance. During a meeting of the Disaster Management Group (DMG) on 27 October 2020, the Government further expanded on the request for assistance including the need for shelter repairs, support for evacuation centres, food assistance, livelihoods restoration support especially for those working in the agricultural sector, nutrition assistance, water and sanitation items for households, schools and health centres, emergency education supplies, and psychosocial support.



As of 27 October 2020, USD3.5 million value of goods was provided in support of the Government-led response. In addition, international organizations, including UN agencies, NGOs and the Red Cross were providing critical relief items including home repair kits, kitchen sets, food, household and relief kits, 600,000 Aquatabs and 120,000 water purification packets and multi-purpose cash. The AHA Centre was mobilizing the Disaster Emergency Logistics System for ASEAN (DELSA) regional stockpile in Subang, Malaysia, including 1,000 home repair kits and 1,300 kitchen sets delivered to Thua Thien Hue and Quang Tri provinces. Another USD20 million was then committed to support the disaster response and recovery through different mechanism and stakeholders.

Response Strategy

The emergency relief aimed to target the needs of the most vulnerable 177,000 flood-affected people, based on an analysis of those individuals with pre-existing vulnerabilities prior to the disaster. The response plan would ensure that the acute needs of the most vulnerable households were met, including women and girls, older persons, people with disabilities and children. Interventions would be gender sensitized, including access to safe evacuation conditions that adequately addressed the needs of women and girls, while enhancing preparedness for future disasters. Given the ongoing COVID-19 pandemic, specific considerations were given to ensure social distancing and other Government COVID-prevention measures during the implementation of relief activities, to prevent potential spread of COVID-19. The provision of unconditional cash transfers/multipurpose cash grants, took into consideration specific needs, protection of the most vulnerable groups, including women, children, the elderly, people with disabilities, and ethnic minorities while also applying Guidance for Cash and Voucher Assistance (CVA) for COVID-19.

The response would ensure that community members in the affected areas could access information on humanitarian services, feedback to aid agencies (including the attitudes of the responders) in a timely manner and their voices were used to inform decisions. The response utilized the existing inter-agency community engagement mechanisms that had been established for the COVID-19 operations led by WHO under Risk Communication and Community Engagement coordination group. Aid agencies would adjust the communication and engagement activities based on the channels used and trusted by the communities including vulnerable sectors. Community needs and preferences on aid in this response were regularly monitored through a simple information management system and corrective actions were addressed as appropriate.

2. The Republic of Korea

The Republic of Korea had issued the “Overseas Emergency Relief Act” No. 20320, which was enacted on 10 October 2007, as the basis legal document for providing rapid rescue of human lives and relief to disaster-affected economies when overseas disasters occur, by prescribing the matters necessary for overseas emergency relief, such as dispatch of emergency relief teams, provision of emergency relief supplies, and support for interim recovery from disasters to affected economies. It was defined that “overseas emergency relief” meant all activities of providing emergency support to affected economies at governmental level, such as mitigation of or recovery from damage caused by overseas disasters, rescue of human lives, or medical relief work.

According to this act, overseas emergency relief shall include the following activities:

- Dispatch of overseas emergency relief teams;
- Provision of relief supplies and equipment, including medical facilities;
- Cash support;
- Healthcare activities;
- Transportation support;
- Interim disaster recovery;
- Other matters prescribed by Presidential Decree.

Establishment of Basic Measures for Overseas Emergency Relief

The Minister of Foreign Affairs of the Republic of Korea shall establish basic measures for overseas emergency relief, including any of the following matters, every two years to prepare for overseas disasters based on the type, scale, and nature of disasters, subject to deliberation by the public-private joint council for overseas emergency relief:

1. Organization of an overseas emergency relief team;
2. Scouting, nurturing, and training overseas emergency relief personnel;
3. Stockpiling, storage, maintenance, inspection, etc. of relief supplies and equipment, including medical facilities;
4. Establishment of a system for rapid mobilization and transportation of relief personnel and supplies;
5. Securing resources necessary for overseas emergency relief;
6. Establishment of a cooperative system with private emergency relief organizations;
7. International cooperation with respect to overseas emergency relief;

8. Other matters prescribed by Presidential Decree in connection with overseas emergency relief, such as establishment of a system of cooperation among central administrative agencies.

Experiences of overseas relief support for natural disasters

Since the establishment of the above act, the Republic of Korea has implemented many overseas emergency relief activities for affected economies in the world. Some of the highlighted activities included:

1. Sichuan Earthquake in China - 2008: A Korea Disaster Relief Team (KDRT) including 44 personnels was sent to support the search and rescuing activities in 07 days.
2. Typhoon Haiyan in the Philippines - 2013: In about a month since the Typhoon Haiyan struck the Philippines, 127 KDRT personnels of the Republic of Korea were sent to support the relief activities and search and rescuing for the affected areas in the Philippines.
3. Historical Flooding in the Central Region of Viet Nam - 2020: Through the Ministry of Foreign Affairs and the Embassy in Viet Nam, The Republic of Korea sent a package USD300,000 in cash in order to support the economy and the people to overcome the serious consequences of prolonged flooding in the central region of Viet Nam.

3. Malaysia

Background

Southeast Asia was widely recognized as the most disaster-prone region in the world, due to its geographical location along major tectonic fault lines, extensive coastlines, and frequent exposure to extreme weather patterns. According to the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), over 45% of global natural disasters between 2000 and 2022 occurred in the Asia-Pacific region, with Southeast Asia bearing a significant share of the impacts.

The region experiences an average of one disaster every two weeks - affecting millions of people annually and causing billions in economic losses. Among these disasters, earthquakes are among the most destructive, often triggering secondary hazards such as landslides and tsunamis, which contributed to widespread loss of life and long-term humanitarian crises. With varying levels of seismic risk, infrastructure resilience, and disaster response capacity across economies, Southeast Asia - particularly ASEAN Members - faces unique and complex challenges in managing natural disasters.

One of the most recent and severe seismic events in the region occurred at 1.20pm on 28 March 2025, when a powerful 7.7 magnitude earthquake with a depth of 10km struck about

19km northwest of Mandalay City, Myanmar. At 1.32pm, an aftershock with a magnitude of 6.4 with a depth of 10km occurred about 18.8km south of Sagaing Town, Myanmar. This earthquake, along with subsequent aftershocks, had a profound impact not only within Myanmar but also across neighboring economies.

Impact

Mandalay and surrounding regions experienced profound destruction due to the earthquake's intensity. The shallow depth of the tremor amplified its effects, resulting in severe structural damage, widespread fatalities, and a humanitarian crisis. The ASEAN Coordinating Centre for Humanitarian Assistance on disaster management (AHA Centre) report on 4 April 2025, indicated that the earthquake led to the collapse of numerous buildings, including residential homes, schools, temples, and vital infrastructure. The human cost was staggering, with more than 3,000 people confirmed dead and thousands more injured.

Table 1: Summary of the overall impact on Myanmar as of 4 April 2025³.

Casualties	Damages
Deaths: 3,354 people lost their lives.	Houses: A total of 41,232 homes were affected. Of these, 4,992 houses were completely destroyed, while the rest suffered partial damage.
Injuries: 4,508 people were reported injured.	Key bridges, such as the Old Sagaing Bridge and the Dotehtawadi Bridge on the Yangon-Mandalay Expressway, were severely damaged.
Missing: 220 people remained missing.	Parts of the Yangon-Mandalay Expressway were also affected, causing road closures that disrupted travel.
	Fire and liquefaction have been reported in several affected areas.

³ ASEAN Secretariat, Weekly Update by the Secretary-General of ASEAN to the ASEAN Foreign Ministers on ASEAN Responses to the Earthquake in Myanmar: 30 March – 4 April 2025 (Jakarta: ASEAN Secretariat, 2025).

Casualties	Damages
	Communication and electricity lines have been extensively disrupted, further exacerbating the humanitarian crisis.

The scale of the disaster in Mandalay and surrounding areas required immediate government intervention. Areas like Sagaing Town, Magway City, Shan State, Nay Pyi Taw City, and Bago City faced particular challenges. In response, Myanmar's National Disaster Management Committee (NDMC) declared a state of emergency across these regions.

This declaration enabled the government to access emergency resources more quickly and mobilized both domestic and international aid. Myanmar had actively sought assistance from the ASEAN community and international partners to meet the immediate needs of the affected population, focusing on shelter, food, medical supplies, and logistical support.



Figure 1: A collapsed temple in Myanmar from the earthquake⁴.

⁴ "Here's what we know so far about the Myanmar earthquake that's killed over 1,000 people: The powerful earthquake was of 7.7 magnitude according to the United States Geological Survey," *SBS News*, March 29, 2025, <https://www.sbs.com.au/news/article/myanmar-earthquake-kills-over-140-people-with-death-toll-likely-to-rise/7ehuj14tf>.

In addition to the domestic impact, the earthquake's tremors reached neighboring economies as far as Bangkok, Thailand, and southwestern China⁵. In Thailand, tremors affected 63 provinces, leading to significant damage. As of 4 April 2025, 22 fatalities and 36 injuries were reported in Bangkok, with thousands of buildings, schools, and infrastructure affected. While the situation in Thailand remains severe, the government had stated that it is within their capacity to manage recovery efforts, and no external assistance has been requested, with essential public utilities and transportation restored within a few days.



Figure 2: A tower block under construction in Bangkok collapsed from the earthquake⁶.

Regional Response

In response to the devastation, ASEAN mechanism and Member economies demonstrated a swift and coordinated response, showcasing the region's capacity for collective disaster management and emergency response in line with the *One ASEAN, One Response* vision. Immediately after the earthquake, the AHA Centre elevated its Emergency Operations Centre (EOC) alert level to RED and conducted its first EOC briefing to coordinate an effective response to the evolving situation. The AHA Centre maintained close coordination with the EOCs of Myanmar and Thailand, as well as with assisting ASEAN Member economies and partners, to ensure a unified and effective disaster response.

To support initial assessments, the AHA Centre requested the activation of Sentinel Asia and the Space Faculty for satellite imagery analysis. In addition, the International Charter on Space

⁵ Jack Burgess & Rachel Hagan, "Myanmar earthquake: What we know," *British Broadcasting Corporation*, April 1, 2025, <https://www.bbc.com/news/articles/crlxlxd7882o>.

⁶ "Moment skyscraper under construction collapses in Bangkok after earthquake: Video," *The Guardian*, March 28, 2025, <https://www.theguardian.com/world/video/2025/mar/28/moment-skyscraper-under-construction-collapses-in-bangkok-after-earthquake-video>.

and Major Disasters was activated by the United Nations Satellite Centre (UNOSAT), and a request was submitted to MapAction for Geographic Information System (GIS) support to enhance situational awareness and response planning.

On the evening of 29 March 2025, the AHA Centre's Executive Director, AHA Centre's Director of Operations, and the AHA Centre In-Country Liaison Team (ICLT), arrived in Nay Pyi Taw to coordinate closely with Myanmar's Department of Disaster Management (DDM) and facilitated regional disaster response efforts. Furthermore, the AHA Centre coordinated the deployment of ASEAN Emergency Response and Assessment Team (ASEAN-ERAT) members from Brunei Darussalam; Indonesia; Malaysia; the Philippines, Singapore; and Viet Nam to support field-level operations. It also mobilised relief items from the Disaster Emergency Logistics System for ASEAN (DELSA) regional warehouse in Subang, Malaysia.

Malaysia's Response

Upon receiving the earthquake alert through the National Disaster Command Centre (NDCC), Malaysia responded swiftly and decisively to Myanmar's request for international assistance. Guided by NADMA Directive No. 1⁷, Malaysia mobilised both governmental and non-governmental resources to coordinate a comprehensive and effective response. The coordination was led by the National Disaster Management Agency (NADMA), in close collaboration with the Ministry of Foreign Affairs and other key stakeholders.

Malaysia's disaster monitoring system - including the Disaster Geospatial Information System (DGIM) and alerts from MetMalaysia - provided timely situational awareness, enabling proactive planning and preparation ahead of deployment. Within 24 hours of the earthquake, Malaysia convened an Interagency Coordination Meeting, bringing together key partners such as the Malaysian Red Crescent Society, MERCY Malaysia, and regional Red Cross societies to streamline aid delivery.

On 30 March 2025, the Special Malaysia Disaster Assistance and Rescue Team (SMART) was deployed to Myanmar aboard two Royal Malaysian Air Force (RMAF) A400M aircrafts. Codenamed MAS-01, the mission consisted of 50 SMART officers and personnel, supported by 33 tonnes of equipment, vehicles, and logistical support. Assigned to the Sagaing region by DDM Myanmar, MAS-01 was the sole Urban Search and Rescue (USAR) team operating in that sector. To ensure self-sufficiency and operational independence for up to 14 days, the team was equipped with a Base of Operations (BoO), one 4x4 vehicle, two trucks (3-tonne and 5-tonne), and essential daily supplies brought from Malaysia.

⁷ NADMA Directive No. 1: Policy and Mechanism of National Disaster Management serves as the primary reference for all government agencies in managing disaster-related matters in Malaysia.

MAS-01 operated for a total of nine days, from 30 March to 7 April 2025. During this period, the team successfully located and retrieved 11 victims. Remarkably, one adult male was found alive after being buried for six days, while the remaining ten were deceased. The team concluded its mission following DDM Myanmar's announcement of a transition from the response phase to the recovery phase, effective 4 April 2025 - signaling the end of the search for survivors and the start of large-scale debris clearance using heavy machinery. MAS-01 safely returned to Malaysia on 7 April 2025 aboard two RMAF A400M aircrafts.

Despite careful planning and rapid mobilisation, the Malaysian team encountered several operational challenges during the deployment, including:

- i. Extreme heat, with temperatures reaching up to 40°C during peak hours, creating difficult conditions for both search and rescue efforts and logistical operations.
- ii. Lack of basic utilities, including clean water, electricity, and telecommunications, which hampered coordination and delayed aid delivery to affected communities.
- iii. Damaged road networks, especially in rural and severely affected areas, which delayed access to remote locations where assistance was most urgently needed.
- iv. Limited access to reliable and verified data to guide Search and Rescue (SAR) operations. The lack of accurate information in the early hours of the disaster complicated decision-making and resource deployment on the ground.

In addition to the SMART team's deployment, a total of 30 tonnes of essential supplies - donated by NGOs under NADMA's Partner Network and the AHA Centre - were delivered to Myanmar on 7 April 2025. The aid was transported via two RMAF A400M aircraft from Subang Airbase to Nay Pyi Taw Airport. The donated items included:

- i. Ready-to-eat (RTE) meals.
- ii. Medicines.
- iii. Medical supplies such as cotton, arm bandages, and cervical collars.
- iv. Blankets.
- v. Tarpaulins.
- vi. Kitchen kits.
- vii. Sleeping bags.
- viii. Hygiene kits.
- ix. Tents.
- x. Infant formula.

- xi. Portable solar lights.

Diplomatic and Operational Leadership

Malaysia's humanitarian diplomacy and regional leadership were clearly demonstrated on 30 March 2025, when it chaired a Special Emergency Meeting of ASEAN Foreign Ministers⁸. The meeting served to consolidate the latest information, review the collective response, and ensure that efforts were focused on the most urgent needs. During the meeting, Malaysia pledged MYR10 million (USD2.25 million) in humanitarian assistance, joining other ASEAN member economies and international partners in delivering critical support. This collaborative approach highlights the importance of regional cooperation in disaster management, with ASEAN acting as a united front in addressing the challenges posed by the crisis.

Further underscoring this commitment, Malaysia's Minister of Foreign Affairs, Dato' Seri Utama Haji Mohamad bin Haji Hasan, in his capacity as Chair of the ASEAN Foreign Ministers' Meeting, conducted a humanitarian mission to Nay Pyi Taw, Myanmar on 28 March 2025. He was joined by his Thai counterpart, H.E. Maris Sangiamposa, as a demonstration of ASEAN solidarity and a reaffirmation of the region's commitment to support urgent humanitarian and recovery efforts in Myanmar.

Malaysia has worked closely with the AHA Centre to ensure that its response efforts were well-coordinated, efficient, and aligned with the *One ASEAN, One Response* vision.

Key ASEAN-related contributions by Malaysia during the Myanmar earthquake response included:

- i. Deployment of ASEAN-ERAT members: Three Malaysian ERAT members were deployed to support rapid needs assessments, information management, and coordination with Myanmar authorities.
- ii. Mobilisation of relief items from the DELSA warehouse: Malaysia facilitated the deployment of essential supplies - including shelter materials, hygiene kits, and food items - from the DELSA warehouse in Subang. These supplies were delivered promptly to Myanmar with support from the AHA Centre.

This close collaboration demonstrates Malaysia's continued commitment to regional disaster response mechanisms and its leadership role in strengthening ASEAN's collective capacity to respond effectively to large-scale emergencies.

Conclusion

⁸ "ASEAN Adakan Mesyuarat Khas Tergempar Bincang Kesan Gempa Bumi Di Myanmar Dan Thailand," *Bernama*, March 30, 2025, <https://asean.bernama.com/news-bm.php?id=2407768>.

Malaysia's response to the Myanmar earthquake underscored the value of institutional preparedness, multi-agency coordination, and integrated logistics systems. These capabilities - refined through years of experience and sustained investment in disaster risk management - offer valuable lessons that are transferable across APEC economies. Key takeaways included:

- i. The importance of integrated early warning systems and unified command structures.
- ii. The value of strong collaboration between public, private, and civil society sectors.
- iii. The impact of prepositioned supplies and logistical preparedness on response efficiency.
- iv. The need for swift and coordinated diplomatic engagement in humanitarian crises.
- v. The importance of anticipating and adapting to operational challenges in high-pressure environments.

4. The Philippines

PHILIPPINES INTER-AGENCY HUMANITARIAN CONTINGENT (PIAHC) IN THE REPUBLIC OF TÜRKIYE

On 6 February 2023, at 4:17 AM, a magnitude 7.8 earthquake occurred near Gaziantep City in Southern Türkiye. This was the strongest earthquake recorded in the economy since 1939. Around nine hours later, a magnitude 7.6 earthquake occurred in Ekinozu City, Türkiye only about 70 kilometers from the first earthquake. These earthquakes were also felt in the Syrian Arab Republic. Various intensities have been reported across Türkiye and Syria. Aftershocks with varying magnitudes have also been recorded. According to the Disaster and Emergency Management Authority (AFAD) of Türkiye, a total of 9,136 aftershocks have occurred since 6 February 2023. The Government of Türkiye issued a Level 4 alarm calling for international assistance.

Both the death toll and the structural damage rose as many of the structures in the impacted areas were weak and collapsed as a result of the extra damage. The lack of heavy machines to remove rubble and winter weather conditions have significantly complicated the search and rescue operations in the affected areas.

The Philippine Inter-Agency Humanitarian Contingent (PIAHC) was deployed to Turkey with 82 members from various agencies, including the Office of Civil Defense, Department of National Defense (DND-OCD), Department of Health (DOH), 505th Search and Rescue Group (SRG) of the Philippine Air Force, 525th Engineer Combat Battalion (ECBn) of the Philippine Army, Metro Manila Development Authority (MMDA), and Subic Bay Metropolitan Authority (SBMA). The PIAHC departed Manila on 8 February 2023 and arrived in Istanbul on 9 February 2023.



Operations:

- **Urban Search and Rescue (USAR):** The USAR team assessed 36 collapsed buildings and successfully retrieved six cadavers during their mission in Adiyaman City.
- **Medical Assistance:** The emergency medical assistance team provided care to 1,022 patients, addressing ambulatory cases and facilitating referrals for hospitalization.
- **Relief Distribution:** The Philippine provided 11,205 blankets, 5,000 bonnets, and 420 pairs of gloves to earthquake victims.

The PIAHC concluded its operations on 24 February 2023, and returned to the Philippines on 28 February 2023. Upon their return, the National Disaster Risk Reduction and Management Council (NDRRMC) recognized the team's exemplary service. The PIAHC's efforts exemplify the Philippines' commitment to international humanitarian assistance and highlight the capabilities of its disaster response teams.

THE PHILIPPINES HUMANITARIAN MISSIONS TO CENTRAL SULAWESI, INDONESIA

In 2018, the Philippines sent two (2) humanitarian missions to Indonesia in response to the magnitude 7.4 earthquake and tsunami that struck Central Sulawesi, Indonesia.

The humanitarian missions are consistent with the "ASEAN Declaration on One ASEAN One Response: ASEAN Responding to Disasters as One in the Region and Outside the Region," which was adopted at the 28th ASEAN Summit in Vientiane in 2016. The declaration is based on the principle of harnessing the individual and collective strengths of different sectors and stakeholders in ASEAN to effectively respond to disasters inside and outside the region.

The NDRRMC spearheaded the two (2) Philippine Humanitarian Missions to Sulawesi, Indonesia, in which the PH mission teams traveled to Palu and Balikpapan, Indonesia, both in

October 2018, to turn over the assistance to the ASEAN Coordinating Assistance Center for Humanitarian Assistance on Disaster Management (AHA Centre) and the Indonesian National Disaster Management Authority.

The two (2) missions, comprised of eight (8) NDRRMC personnel for the first mission and twenty-three (23) personnel for the second mission, delivered 200 family tents and 5,000 sleeping kits from the Department of Social Welfare and Development (DSWD) and six (6) units of water filtration units with generator sets from the Office of Civil Defense (OCD), for a total of USD200,000 in assistance. Furthermore, the economy donated USD300,000 through the AHA Centre. Three ASEAN-ERAT members from the Philippines were also sent to help with the response efforts. Finally, the Armed Forces of the Philippines (AFP) provided airlift support with its C-130 aircraft.

The response efforts for the victims of the Central Sulawesi Earthquake demonstrated the Philippines' changing and emerging role in the ASEAN region, from a mere recipient of assistance to an assisting member. The Philippines had their hands full responding to Typhoon Ompong (Mangkhut) victims at the time, but also reached out and shared their expertise and resources with a neighbor who was also there for them when they needed it.

POLICY AND MECHANISMS FOR INTERNATIONAL RELIEF ACTIVITIES

Managing international aid during disasters requires a well-structured system to ensure efficiency, transparency, and compliance with domestic laws. The Enhanced Philippines International Humanitarian Assistance (PIHA) Guidelines provide a structured framework for the efficient coordination, regulation, and management of international humanitarian assistance in the Philippines. The guidelines were developed to ensure that foreign aid - whether financial, in-kind, or in the form of relief workers - is effectively received, processed, and distributed during disaster response and recovery operations. It addressed concerns regarding transparency, accountability, and compliance with domestic laws while streamlining procedures for faster and more effective relief efforts.

One of the key provisions of the guidelines was the establishment of the Philippines International Humanitarian Assistance Cluster (PIHAC), led by the Department of Foreign Affairs (DFA), which acted as the primary coordinating body for all forms of international assistance. The PIHAC is further divided into three sub-clusters:

- Financial Donations Sub-cluster (Leads: Department of Finance (DOF) and Department of Budget and Management [DBM]);
- International Relief Works Sub-cluster (Leads: Department of Health (DOH), Department of National Defense (DND) through the Armed Forces of the Philippines [AFP]);

- In-Kind Donations Sub-cluster (Lead: Department of Social Welfare and Development [DSWD]).

The Financial Donations Sub-cluster was responsible for managing monetary contributions, the International Relief Workers Sub-cluster ensured proper accreditation, conduct, and regulation of foreign humanitarian personnel and the In-Kind Donations Sub-cluster was tasked with overseeing the processing, storage, and distribution of non-monetary aid such as food, medical supplies, and equipment. Through these sub-clusters, the PIHAC ensured that all international aid followed strict policies regarding acceptance, monitoring, and utilization, preventing misuse and inefficiencies.

To further enhance coordination, the guidelines mandated the establishment of the Philippine International Humanitarian Assistance Reception Center (PIHARC), a "One-Stop-Shop" facility at designated entry points such as airports and seaports. This reception center was crucial in streamlining the entry and clearance process for international humanitarian assistance, involving key government agencies such as the Department of Foreign Affairs (DFA), Bureau of Customs (BOC), Bureau of Immigration (BI), and other relevant institutions. The PIHARC helped expedite the processing of incoming aid while ensuring compliance with the domestic regulations, avoiding unnecessary delays in disaster response operations.

Another important aspect of the Enhanced PIHA Guidelines was the structured activation and termination of international humanitarian assistance. The PIHAC determined the necessity of international aid based on the scale and severity of a disaster. If necessary, the Office of the President formally requests assistance. Once the situation stabilizes and the economy can independently manage relief and recovery efforts, the termination of international humanitarian assistance was also formally declared. This structured approach prevents the excessive reliance on foreign aid while ensuring that international assistance is mobilized only when truly needed.

Regulatory compliance and coordination were central to the guidelines, requiring that all international humanitarian aid adhered to the Philippines laws and procedures. The DFA served as the primary channel for receiving and facilitating offers of assistance. This ensured that all incoming aid was properly coordinated and aligned with domestic policies, minimizing logistical and legal complications.

Transparency and accountability were reinforced through strict monitoring and reporting requirements. Agencies authorized to receive donations must publicly disclose information about received aid, including the sources, amounts, and utilization of financial and in-kind contributions. The PIHAC consolidated reports on deployed international relief workers and the use of donated resources, ensuring that all aid were properly accounted for and utilized efficiently.

Additionally, the memorandum outlined the roles of various government agencies in the management of international humanitarian assistance. The Armed Forces of the Philippines (AFP) was responsible for coordinating security and logistical support for incoming aid missions, while the Bureau of Customs (BOC) ensured the expedited processing of donated goods and equipment. The Bureau of Immigration (BI) facilitated the smooth entry of international relief workers by providing appropriate visas and documentation, and the Department of Health (DOH) oversees medical-related aid to ensure compliance with the domestic health standards. Meanwhile, the Department of Social Welfare and Development (DSWD) played a key role in managing and distributing in-kind donations, ensuring that assistance reaches affected communities in a timely and organized manner.

Overall, the Enhanced PIHA Guidelines served as a comprehensive framework for managing international humanitarian assistance in the Philippines. By streamlining procedures, ensuring regulatory compliance, and enhancing coordination among government agencies and international partners, the memorandum strengthened the economy's disaster response and recovery efforts. It reinforced the principles of efficiency, transparency, and accountability, ensuring that international aid effectively supported affected communities while upholding domestic sovereignty and disaster management protocols.

IV. EXPECTED OUTCOMES AND DELIVERABLES

Viet Nam was one of the most affected economies to natural disaster and climate change in APEC region. With long-standing experience in emergency response including the relief operation, it was necessary to share with and learn from other economies in the region and globally. These are some expected topics that could be shared as outcomes and deliverables in this project's workshop:

- Identify developments and impacts of disasters: Participants would discuss the effects of disasters in the context of climate change.
- Share lessons learned: Insights would be shared regarding the mobilization and utilization of international support resources in disaster risk management activities.
- Propose effective mechanisms: The workshop would explore mechanisms to efficiently mobilize resources for international assistance.

V. CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

As we navigate the complex landscape of climate change and its impact on natural disasters, effective international relief activities in disaster risk management would be an essential strategy to safeguard vulnerable communities. The upcoming workshop, “Enhancing International Relief Activities in Disaster Risk Management among APEC Economies,” holds immense promise in advancing our collective efforts.

5.1 Recommendations

To enhance the effectiveness of mobilizing resources for international support among APEC economies, consider the following recommendations:

Strengthen Multilateral Partnerships:

- Foster collaboration among APEC economies, international organizations, and private sectors. Jointly developed frameworks for resource allocation, risk assessment, and disaster response.
- EPWG would be the platform within APEC to facilitate information sharing, coordination, and resource pooling. Through the workshop, lessons learned, and experiences sharing would be made among economy members to enhance the resilient capacity as well as strong partnership.

Capacity Building and Knowledge Sharing:

- Invest in training programs for disaster management professionals, emergency responders, and community leaders. Enhance their skills in resource mobilization, risk assessment, and early warning systems.
- Share best practices, case studies, and lessons learned across economies. Create a repository of successful resource mobilization models.

Financial Innovations and Instruments:

- Explore innovative financing mechanisms, such as catastrophe bonds, resilience bonds, and insurance-linked securities. These could attract private capital for disaster response and recovery.
- Develop regional funds or facilities specifically for disaster relief and climate adaptation. Encourage contributions from both public and private sources.

Advocate and Raise Public Awareness:

- Highlight the importance of resource mobilization for disaster risk reduction. Engage civil society, academia, and media in advocating for sustainable funding.
- Share success stories where international support has a significant impact, emphasizing the value of collective actions.

Enhance Private Sector Engagement:

- Encourage private sector to invest in disaster risk reduction and climate actions.
- Promote public-private partnerships to leverage corporate expertise, technology, and financial resources.

Pre-positioning supply

By implementing these strategies, APEC economies could strengthen their ability to mobilize resources effectively, ensuring timely and coordinated responses to disasters and climate challenges.