

# The ASEAN



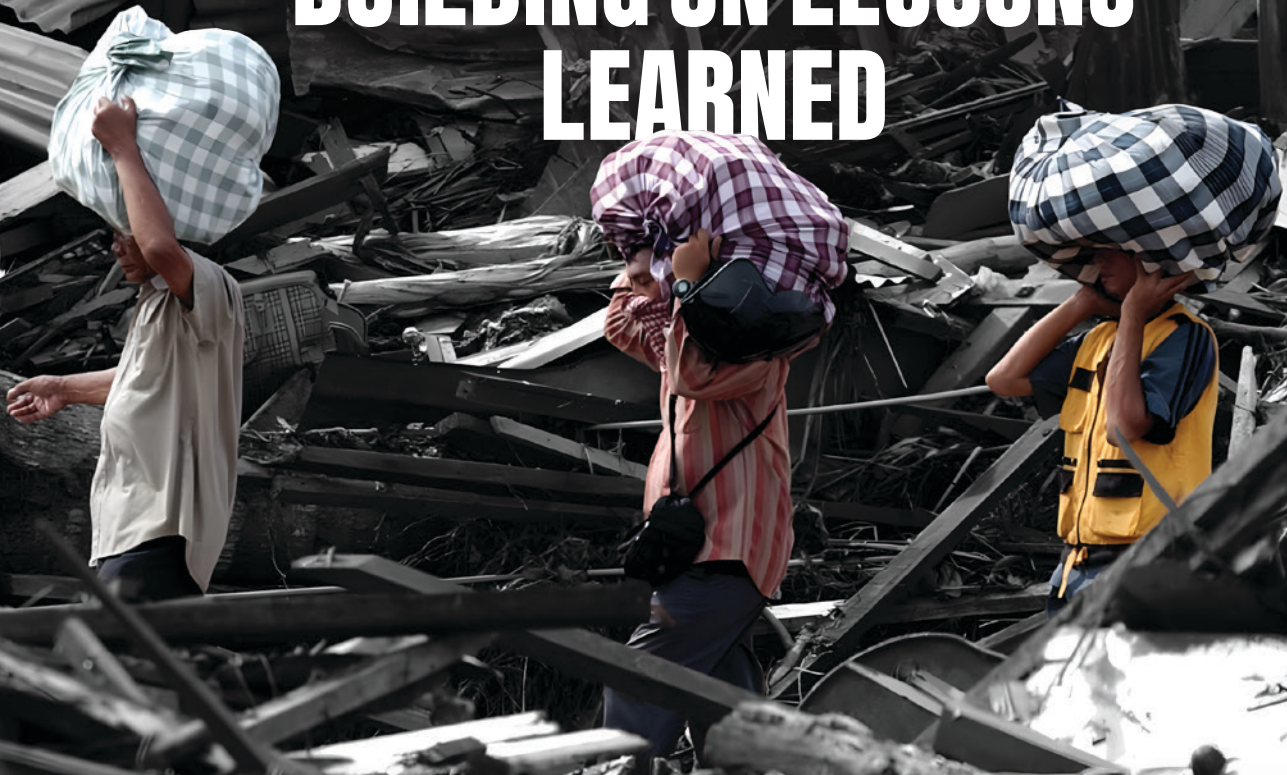
one vision  
one identity  
one community

**SPECIAL EDITION**  
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20 YEARS AFTER THE INDIAN OCEAN TSUNAMI

Part 1

## BUILDING ON LESSONS LEARNED



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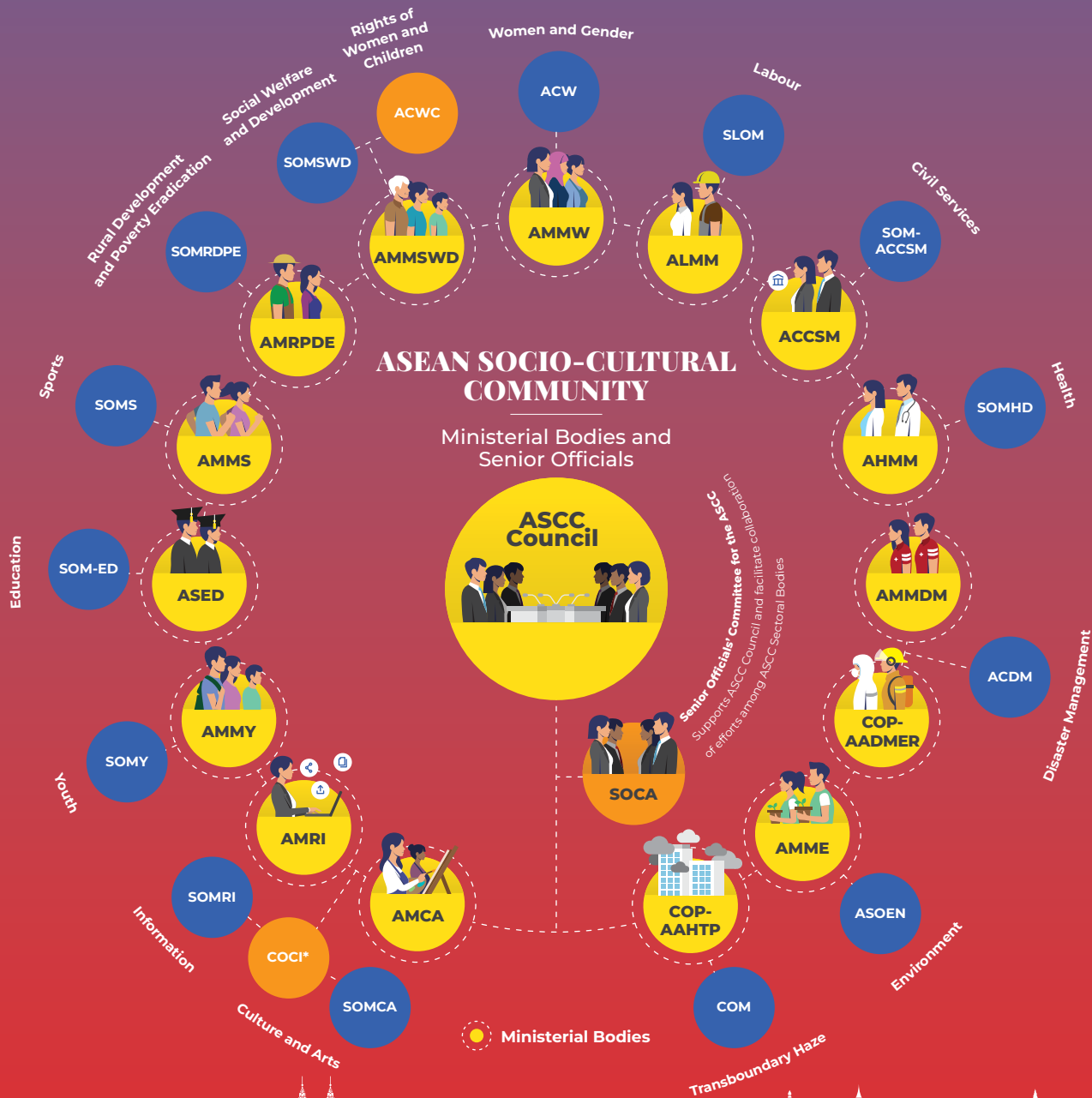


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**THE INSIDE VIEW**  
Milestones in ASEAN  
Disaster Management

**VIEWPOINT**  
Secretary-General of ASEAN,  
Dr. Kao Kim Hourn

**CONVERSATIONS**  
From Aceh: Stories of  
Survival and Resilience



**AMRI:** ASEAN Ministers Responsible for Information

**AMCA:** ASEAN Ministers Responsible for Culture and Arts

**AMMY:** ASEAN Ministerial Meeting on Youth

**ASED:** ASEAN Education Ministers Meeting

**AMMS:** ASEAN Ministerial Meeting on Sports

**AMRPDE:** ASEAN Ministers on Rural Development and Poverty Eradication

**AMMSWD:** ASEAN Ministerial Meeting on Social Welfare and Development

**AMMW:** ASEAN Ministerial Meeting on Women

**ALMM:** ASEAN Labour Ministers Meeting

**ACCSM:** ASEAN Cooperation on Civil Service Matters

**AHMM:** ASEAN Health Ministers Meeting

**AMMDM:** ASEAN Ministerial Meeting on Disaster Management

**COP to AADMER:** Conference of the Parties to the ASEAN Agreement on Disaster Management and Emergency Response

**AMME:** ASEAN Ministerial Meeting on Environment

**COP to AATHP:** Conference of the Parties to the ASEAN Agreement on Transboundary Haze Pollution

**SOMCA:** Senior Officials Meeting on Culture and Arts

**COCI:** The ASEAN Committee for Culture and Information

**SOMRI:** Senior Officials Meeting Responsible for Information

**SOMY:** Senior Officials Meeting on Youth

**SOMED:** Senior Officials Meeting on Education

**SOMS:** Senior Officials Meeting on Sports

**SOMRDPE:** Senior Officials Meeting on Rural Development and Poverty Eradication

**SOMSWD:** Senior Officials Meeting on Social Welfare and Development

**ACWC:** ASEAN Commission on the Promotion and Protection of the Rights of Women and Children

**ACW:** ASEAN Committee on Women

**SOM-ACCSM:** Senior Officials Meeting on ASEAN Cooperation on Civil Service Matters

**SOMHD:** Senior Officials Meeting on Health Development

**ASOEN:** ASEAN Senior Officials on the Environment

**COM to AATHP:** Committee under the Conference of Parties to the ASEAN Agreement on Transboundary Haze Pollution

\* takes guidance from and reports to both AMCA and AMRI

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**Viewpoint**

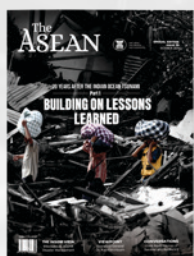
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**Cover**

Survivors carry their belongings and walk through the debris from the earthquake and tsunami in the Lamjamee area, Banda Aceh, Aceh, on 2 January 2005. [TEMPO/Hariyanto; 20050102]

# Note from the Editorial Team

On December 26, 2004, a devastating 9.1-magnitude earthquake struck Indonesia's Aceh province in North Sumatra, triggering a catastrophic tsunami that swept across coastal regions of the Indian Ocean. The disaster claimed over a quarter of a million lives, displaced millions, and caused billions of dollars in damages. The global response was swift and unprecedented, with aid pouring in from around the world.

This year marks the 20th anniversary of the Indian Ocean Tsunami. ASEAN will honor the occasion with remembrance events, high-level discussions, and initiatives aimed at further strengthening regional disaster resilience.

The ASEAN also presents a two-part special series reflecting on the progress made in regional disaster management since that fateful day.

## Part One: Building on Lessons Learned

Part one explores how the 2004 disaster transformed ASEAN's approach to disaster management. ASEAN Secretary-General Dr. Kao Kim Hourn discusses how the tragedy influenced the creation of crucial regional policies and cooperation. AMMDM Chair and Brunei Darussalam's Minister of Home Affairs, Dato Seri Setia Awang Haji Ahmaddin bin Haji Abdul Rahman highlights ASEAN's commitment to regional disaster readiness.

Tsunami survivors share their stories of loss, resilience, and recovery, offering powerful testimonies about how they rebuilt their lives while keeping the memories of loved ones alive. Their resilience is a testament to the human spirit and a source of inspiration for us all.

The ASEAN Secretariat's Disaster Management and Humanitarian Assistance Division outlines how the region's disaster preparedness has evolved, focusing on the lessons learned from 2004.

Key initiatives discussed include implementing advanced early warning systems, investing in cutting-edge technologies to issue timely alerts, and promoting community-based disaster preparedness. By empowering local communities to play active roles in disaster planning and response, ASEAN has made

significant strides toward more inclusive disaster management, reassuring us of the progress made in this crucial area.

## Part Two: The Path Towards Sustainable Resilience

The second part of the series focuses on ASEAN's ongoing efforts to fortify resilience in the face of natural disasters. In the years following the tsunami, regional cooperation has intensified, with ASEAN Member States working closely with international partners to improve disaster management capabilities.

Experts weigh in on improving disaster risk communication, ensuring inclusivity for vulnerable populations, and leveraging scientific innovation and technological advancements to mitigate disaster risks. The path toward sustainable resilience requires continuous adaptation to emerging threats and long-term investment in infrastructure and preparedness.

Cyclone Yagi, which swept through the Philippines, Vietnam, and Thailand in September, is a stark reminder of the region's enduring vulnerability to natural disasters and climate risks. The increased frequency and intensity of extreme weather events underscore ASEAN Member States' challenges in mitigating climate change impacts. While the region's disaster response mechanisms have improved significantly, the destructive force of such events emphasises the ongoing need for investment in disaster preparedness, early warning systems, and resilient infrastructure.

In October, ASEAN commemorates ASEAN Disaster Management Day (8 October) and International Disaster Risk Reduction Day (13 October), reaffirming the region's commitment to protecting populations and reducing the devastating impact of future natural disasters. As ASEAN faces evolving threats, the focus remains on building a more resilient and disaster-ready future.

Deputy Secretary-General of ASEAN for the ASEAN Socio-Cultural Community Ekkaphab Phanthavong ends his tenure on 11 October 2024. In this issue, he provides insights on building resilience in ASEAN and shares his final perspectives from his tenure on the future of the ASEAN Socio-Cultural Community.

## ASEAN COMMEMORATIVE EVENTS 20TH ANNIVERSARY OF THE INDIAN OCEAN TSUNAMI

### SEPTEMBER

*11-14 September 2024  
Jakarta, Indonesia*

- 3rd Asia Disaster Management and Civil Protection Expo and Conference
- 2nd Global Forum for Sustainable Resilience 2024
- ASEAN High-Level Dialogue on the Occasion of the 20th Commemoration of the Indian Ocean Tsunami

### OCTOBER

*22-25 October 2024  
Bandar Seri Begawan, Brunei  
Darussalam*

- 12th ASEAN Ministerial Meeting on Disaster Management (AMMDM) and 13th Meeting of the Conference of Parties (COP) to the AADMER
- Launching of the ASEAN Ministerial Statement on the Commemoration of the 20th Anniversary of the Indian Ocean Tsunami and the ASEAN Ministerial Declaration on Building a Resilient ASEAN through Inclusive and Sustainable Disaster Recovery
- Commemoration of the ASEAN Day for Disaster Management (ADDM) and International Day for Disaster Risk Reduction (IDRR)

### NOVEMBER

*5 November 2024  
Pulau Pinang, Malaysia*

- Indian Ocean Tsunami Commemorative Event: Rebuilding Livelihood: Building Back Better in the Aftermath of Indian Ocean Tsunami (in conjunction with the World Tsunami Awareness Day)

### DECEMBER

*26-27 December 2024  
Phang Nga, Phuket, Thailand*

- 20 Years on Reimagining Tourism for a More Resilient Thailand



INTERVIEW

# Secretary-General of ASEAN, Dr. Kao Kim Hourn,

## ON THE ASEAN COMMEMORATION OF THE 20TH ANNIVERSARY OF THE INDIAN OCEAN TSUNAMI

**Twenty years ago, on 26 December 2004, the Indian Ocean Tsunami devastated Aceh, Indonesia and several other countries in Southeast Asia, including Malaysia and Thailand. What actions did ASEAN take in responding to this catastrophic disaster?**

Following the Indian Ocean Tsunami disaster, the ASEAN Leaders had an urgent meeting in Jakarta on 6 January 2005 to show solidarity and commitment to help the affected countries. They issued the **Declaration on Action to Strengthen Emergency Relief, Rehabilitation, Reconstruction, and Prevention in the Aftermath of the Earthquake and Tsunami Disaster of 26 December 2004**, which outlined collective concrete measures in responding to the impact of the tsunami and in preventing future similar tragedies. Among others, the idea of a regional ASEAN humanitarian centre and a regional instrument on disaster management and emergency response was conceived.

Following the ASEAN Leaders' guidance, the **ASEAN Agreement on Disaster Management and Emergency Response (AADMER)** was developed and signed by ASEAN Foreign Ministers in July 2005 and entered into force in 2009. The agreement aims to achieve a substantial reduction of disaster losses in lives and in the social, economic, and environmental assets in the

region, through cooperation in developing and implementing measures, such as risk identification and monitoring, early warning systems, standby arrangements for disaster relief and emergency response, exchange of information and technology, and the provision of mutual assistance.

AADMER has facilitated enhanced collaboration among ASEAN Member States in response to devastating disasters, including post-Cyclone Nargis in Myanmar in 2008 and Typhoon Haiyan in the Philippines in 2013. In both instances, ASEAN coordinated pledging conferences to aid the affected countries, bringing together partners and potential donors to bolster relief and recovery initiatives. Additionally, ASEAN, through the **ASEAN Coordinating Centre for Humanitarian Assistance on disaster management (AHA Centre)**, developed the ASEAN Disaster Monitoring and Response System (DMRS) for near real-time disaster monitoring across the region. These advancements underscore ASEAN's commitment and determination to effectively implement AADMER. Through collaboration under AADMER, ASEAN Member States were also encouraged to develop early warning for disasters, including tsunamis.

I would like to stress that, in parallel with the regional efforts, ASEAN Member States also provided immediate help bilaterally to the affected countries after

the Indian Ocean Tsunami. For example, Brunei Darussalam deployed a medical team from its Royal Armed Forces to Aceh, Indonesia, and provided financial aid for recovery efforts. Cambodia sent financial assistance to Indonesia and Thailand. Malaysia, despite experiencing its own losses, sent its Special Malaysian Rescue Team (SMART) and medical teams to Indonesia. Additionally, Malaysia allowed two of its airports to be used as staging areas for relief items going to Aceh. Singapore sent its military, civilian rescue teams, medical teams, provided financial aid, and deployed its assets to support relief operations in Indonesia and Thailand. Other countries also provided financial aid and resources to support relief operations in the affected countries.

**The Indian Ocean Tsunami provided an important lesson and impetus for ASEAN to enhance disaster management mechanisms in the region. What are the key learnings from that catastrophic event?**

There are several important lessons and driving forces for ASEAN to improve the disaster management mechanism in the region. **Firstly**, the crucial takeaway from this catastrophic event is the importance of having a comprehensive early warning system (EWS) to offer timely alerts and enable swift evacuation. Technology advancement can play an important role

here. Since then, many countries in the region have developed their end-to-end EWS utilising multiple channels, including TV, radio, short messaging services, and other devices. **Secondly**, the importance of developing resilient communities through public education campaigns focusing on disaster risk reduction and preparedness. This is exemplified, among others, by the efforts of the Governments of Indonesia and Thailand, respectively, in implementing tsunami awareness-raising programmes for coastal communities and school children in tsunami-prone areas. **Thirdly**, the event demonstrated that disasters do not respect borders, showcasing the shared vulnerabilities among communities and emphasising the importance of knowledge sharing, partnership building, international cooperation, and mutual assistance during crises. **Fourth**, an emphasis on strengthening disaster preparedness and response frameworks at both the national and regional levels. This includes the development of the Standard Operating Procedure for Regional Standby Arrangements and Coordination of Joint Disaster Relief and Emergency Response Operations (SASOP), which identifies and allocates assets and capacities of ASEAN Member States for potential use in disaster relief and emergency response as well as procedures for mobilisation for ASEAN joint disaster response.

**Concerning the increasing frequency and scale of disasters in the ASEAN region and their damaging impacts in recent years, what actions has ASEAN taken in enhancing disaster management mechanisms in the region? Are there any programmes and strategic plans in place for disaster risk reduction and resilience building?**

To further strengthen our readiness and capacity to address evolving and complex disaster risks, ASEAN continues to implement and improve the series of AADMER work programmes. The current AADMER Work Programme is the third 5-year iteration, covering the period of 2021-2025, which is also aligned with relevant global agreements, including the Sendai Framework for Disaster Risk Reduction 2015-2030 (SFDRR), the Paris Agreement on Climate Change, and 2030 Agenda on Sustainable Development, among others.

Through the implementation of the AADMER Work Programme, the regional mechanisms, including the AHA Centre, have grown stronger over the years, better equipped with several key tools

and instruments, such as the Disaster Risk and Monitoring System, Emergency Operation Centre, Disaster Emergency Logistics System for ASEAN or DELSA, and the ASEAN Emergency Response and Assessment Team or ASEAN-ERAT.

In addition, the institutional capacities of ASEAN Member States to monitor, prevent, mitigate, respond to and recover have also been strengthened through several capacity-building initiatives, such as the AHA Centre Executive Programme, AHA Centre Executive Leadership in Emergency and Disaster Management for ASEAN Programme, Disaster Risk Management Capacity Building Programme, localisation of ASEAN-ERAT, and Senior Executive Programme on Disaster Management.

ASEAN is also committed to reducing disaster and climate risks to achieve sustainable development through implementing the ASEAN Leaders' Declaration on Sustainable Resilience.

I have to highlight that, among others, the **Bandar Seri Begawan Declaration on the Strategic and Holistic Initiative to Link ASEAN Responses to Emergencies and Disasters (ASEAN SHIELD)** is significant because it is promoting a whole-of-ASEAN approach in disaster management, and improving disaster financing in the region. Through the revised financial rules of the ADMER Fund, the public and private sectors can contribute to ASEAN disaster response and recovery activities. Furthermore, the ASEAN SHIELD also strengthens the role of the ASEAN Humanitarian Assistance Coordinator (AHAC) to facilitate the region's timely and expeditious response to emergencies in a strategic, coordinated and holistic manner.

As ASEAN has strengthened the capacity and confidence in its collective response, the region is committed to responding as "One" under the **ASEAN Declaration on One ASEAN One Response: ASEAN Responding to Disasters as One Inside the Region and Outside the Region**, and hopefully one day in the future, ASEAN will realise its vision to become a global leader in disaster management and emergency response.

**To build regional disaster resilience, ASEAN has also engaged with various international partners and stakeholders. How important are partnerships for ASEAN in achieving this objective?**

Partnerships are vital for ASEAN in building regional resilience. Collaborating with international partners and stakeholders

allows ASEAN to leverage diverse expertise, resources, and technologies that are essential for enhancing disaster monitoring and analysis, preparedness, response, and recovery efforts. These partnerships facilitate knowledge sharing and capacity building, enabling ASEAN Member States to adopt best practices and innovative approaches in disaster management.

Engaging with our dialogue, sectoral dialogue and development partners, as well as international organisations, such as the United Nations and the Red Cross and Red Crescent (RCRC) movement, has been instrumental in fostering a holistic and integrated approach to disaster risk reduction. For example, the ASEAN and the United Nations have developed the ASEAN-UN Joint Strategic Plan of Action on Disaster Management. The Memorandum of Understanding (MOU) between ASEAN and the International Federation of the Red Cross (IFRC) on the Strengthening of Community Resilience in Southeast Asia was signed in 2022 to signify the cooperation between the RCRC and ASEAN in the strengthening of community resilience at regional, national and local levels in the ASEAN region.

Furthermore, partnerships with non-governmental organisations, academia, the private sector, and the people play a crucial role. During the emergency response operations to the earthquake and tsunami in Palu in 2018, ASEAN received contributions from the public to build houses in the new ASEAN village there. These stakeholders bring unique perspectives and capabilities that complement governmental efforts, such as community-based disaster risk reduction programs, research and innovation in disaster resilience, and mobilisation of resources for emergency response.

This demonstrates the importance of partnership for ASEAN in building a people-centred, people-oriented and resilient community.

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*This interview was conducted by the ASEAN Coordinating Centre for Humanitarian Assistance on disaster management (AHA Centre) on 19 July 2024 at the ASEAN Secretariat. Edited versions of the interview were shown during the commemorative events of the 20th Indian Ocean Tsunami Anniversary.*

# Dato Seri Setia Awang Haji Ahmaddin bin Haji Abdul Rahman

Minister of Home Affairs,  
Brunei Darussalam

Chair of the ASEAN Ministerial  
Meeting on Disaster  
Management (AMMDM)

Dato Seri Setia Awang Haji Ahmaddin bin Haji Abdul Rahman reflects on the region's collective shock and grief over the 2004 Indian Ocean Tsunami, and how the response chartered the course of ASEAN cooperation in disaster management. Two decades hence, ASEAN has cemented its capacity for coordinated and effective disaster management. As Chair of the AMMDM, Brunei Darussalam aims to further step up regional efforts and focus on "Building a Resilient ASEAN through Inclusive and Sustainable Disaster Recovery."

**Brunei Darussalam was among the ASEAN Member States that launched a humanitarian response to the Indian Ocean Tsunami. Could you elaborate on the role that Brunei Darussalam played as part of ASEAN Member States' response to the tsunami?**

As the Chair of the ASEAN Ministerial Meeting on Disaster Management, it is with great honour that I mark the 20th anniversary of the Indian Ocean Tsunami during Brunei Darussalam's Chairmanship.

This commemorative video serves as a poignant remembrance of all those affected by the Indian Ocean Tsunami, as a tribute to the many individuals and organisations that contributed to the response and recovery efforts twenty years ago.

The 2004 Indian Ocean Tsunami was undoubtedly a catastrophic event that underscores the importance of regional cooperation. In the aftermath of this tragedy, ASEAN demonstrated remarkable solidarity and a swift response. The immediate mobilisation of search and rescue teams, medical personnel, and relief supplies from all ASEAN Member States showcased the region's commitment to humanitarian assistance. This was a testament to the dedication and professionalism of the teams deployed at that time.

Brunei Darussalam was deeply affected by the suffering of our ASEAN neighbours. In the spirit of ASEAN solidarity, Brunei Darussalam played a significant role in the collective response to the Indian Ocean Tsunami on 26 December 2004. Our nation extended a helping hand by providing immediate aid to those in need. Through the Sultan Haji Hassanal Bolkiah Foundation, Brunei further contributed to the construction of 70 houses, along with a mosque for 500 worshippers, an orphanage, a religious school, and a health centre.

His Majesty The Sultan and Yang Di-Pertuan of Brunei Darussalam demonstrated Brunei's unwavering commitment to regional solidarity by visiting the tsunami-affected region. His unwavering leadership and compassion have been instrumental in guiding our efforts.

The devastating impact of the 2004 Indian Ocean Tsunami serves as a stark reminder of the unpredictable nature of disasters and their potential to disrupt lives on a massive scale. The swift and coordinated response from ASEAN Member States during this crisis exemplifies the region's strength and solidarity in times of adversity. Without a doubt, the legacy of their work, as well as the professionalism and dedication displayed by those involved, continues to inspire and guide our disaster management strategies today.

This tragic event underscored the imperative to continuously enhance our preparedness, response capabilities, and resilience to future disasters.

**What lessons were learned from the tsunami response that have been applied to improve ASEAN's disaster management framework?**

The 2004 Indian Ocean Tsunami was a significant wake-up call for ASEAN, exposing substantial gaps in regional disaster management systems. The key lessons learned from this catastrophe have been instrumental in shaping ASEAN's disaster response framework.

Since the Indian Ocean Tsunami, ASEAN has made remarkable progress in disaster management and regional cooperation. The region has developed robust mechanisms and frameworks to better coordinate disaster response and humanitarian assistance, ensuring a more resilient and prepared ASEAN, with no one left behind.

Continuous improvement and adaptation remain essential to address the evolving challenges posed by natural disasters. The urgent need for robust regional mechanisms, enhanced coordination, capacity building, and effective monitoring systems to expedite disaster response has never been more apparent.

Today, ASEAN is proud to have the ASEAN Agreement on Disaster Management and Emergency Response (AADMER), the world's first and only legally binding agreement that serves as a comprehensive framework for coordination in all aspects of disaster management.

There are also other key mechanisms, such as the ASEAN Emergency Response and Assessment Team (ASEAN-ERAT), the Disaster Emergency Logistics System for ASEAN (DELSA), ASEAN standby arrangements, and the ASEAN Disaster Monitoring and Response System (DMRS), among others.

Furthermore, the establishment of the ASEAN Coordinating Centre for Humanitarian Assistance on disaster management (AHA Centre) was a pivotal moment, signifying ASEAN's commitment to enhancing its response capabilities.

In Brunei Darussalam, the Indian Ocean Tsunami and the AADMER served as crucial catalysts for significant advancements in disaster management. The subsequent enactment of the Disaster Management Order 2006 provided the legal and institutional framework for a robust response system.

At its core, the National Disaster Council was established to orchestrate a strategic and unified approach to disaster management. Meanwhile, the National Disaster Management Centre was tasked with operationalising disaster prevention and mitigation, preparedness, response, and recovery efforts, while also supporting the region's overall efforts in disaster risk reduction.

These mechanisms all serve to increase the speed, scale, and solidarity of ASEAN's response, embodying the spirit of "One ASEAN, One Response."

It is through such collective efforts that we can build a more resilient ASEAN, capable of overcoming the many challenges that come our way.

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*The ASEAN Strategic Policy Dialogue on Disaster Management (SPDDM) is an annual strategic flagship event of the disaster management sector hosted by Singapore since 2015 and co-organised by Singapore Civil Defence Force (SCDF), the ASEAN Secretariat and the ASEAN Coordinating Centre for Humanitarian Assistance on disaster management (AHA Centre).*



# INDIAN OCEAN TSUNAMI STORY BY THE NUMBERS

## The 2004 Indian Ocean Tsunami is the most catastrophic on record

A mosque surrounded by tsunami debris in Lhok Nga, Aceh Besar, Aceh (4/1/2005)

Data from the Centre for Research on the Epidemiology of Disasters, United Nations Office for Disaster Risk Reduction, and Indonesia National Disaster Management Authority show the scale of destruction brought about by the tsunami.



The **9.1 magnitude**

Great Sumatra-Andaman Earthquake on 26 December 2004 triggered the Indian Ocean Tsunami.



**Indonesia**

suffered the greatest loss and damage, with



**173,741**  
confirmed  
dead



**635,384**  
people  
displaced



**4.9 billion**  
US dollars in  
damages

In Aceh Province, the most affected area, the tsunami reached a height of **30 meters** (100 feet) and travelled over **4 kilometres** (2.5 miles) inland.



Close to **230,000**

people were **killed** from the 14 countries around the Indian Ocean, including non-residents and tourists from dozens of other countries.

Other ASEAN countries affected by the tsunami:



It swept across **14 countries,**

including Bangladesh, India, **Indonesia**, Kenya, **Malaysia**, Maldives, **Myanmar**, Seychelles, Somalia, South Africa, Sri Lanka, Tanzania, **Thailand**, and Yemen.



**Thailand**

**8,345** people dead, **67,007** people affected, **1 billion US dollars** in damages



**Malaysia**

**80** people dead, **5,063** people affected, **500 million US dollars** in damages



**Myanmar**

**71** people dead, **15,700** people affected, **500 million US dollars** in damages



The Philippines, Singapore, and Viet Nam each lost citizens to the tsunami



About **2.43 million** people were affected (i.e. injured, displaced, and in need of aid).

Sources:

Indonesia National Disaster Management Authority (Badan Nasional Penanggulangan Bencana or BNPB)

Centre for Research on the Epidemiology of Disasters (CRED). (n.d.). EM-DAT: The International Disaster Database. <https://public.emdat.be/data>

United Nations Office for Disaster Risk Reduction (UNDRR). (2010.). Synthesis Report on Ten ASEAN Countries Disaster Risks Assessment. [https://www.unisdr.org/files/18872\\_asean.pdf](https://www.unisdr.org/files/18872_asean.pdf)



It caused an economic loss of **10 billion US dollars**

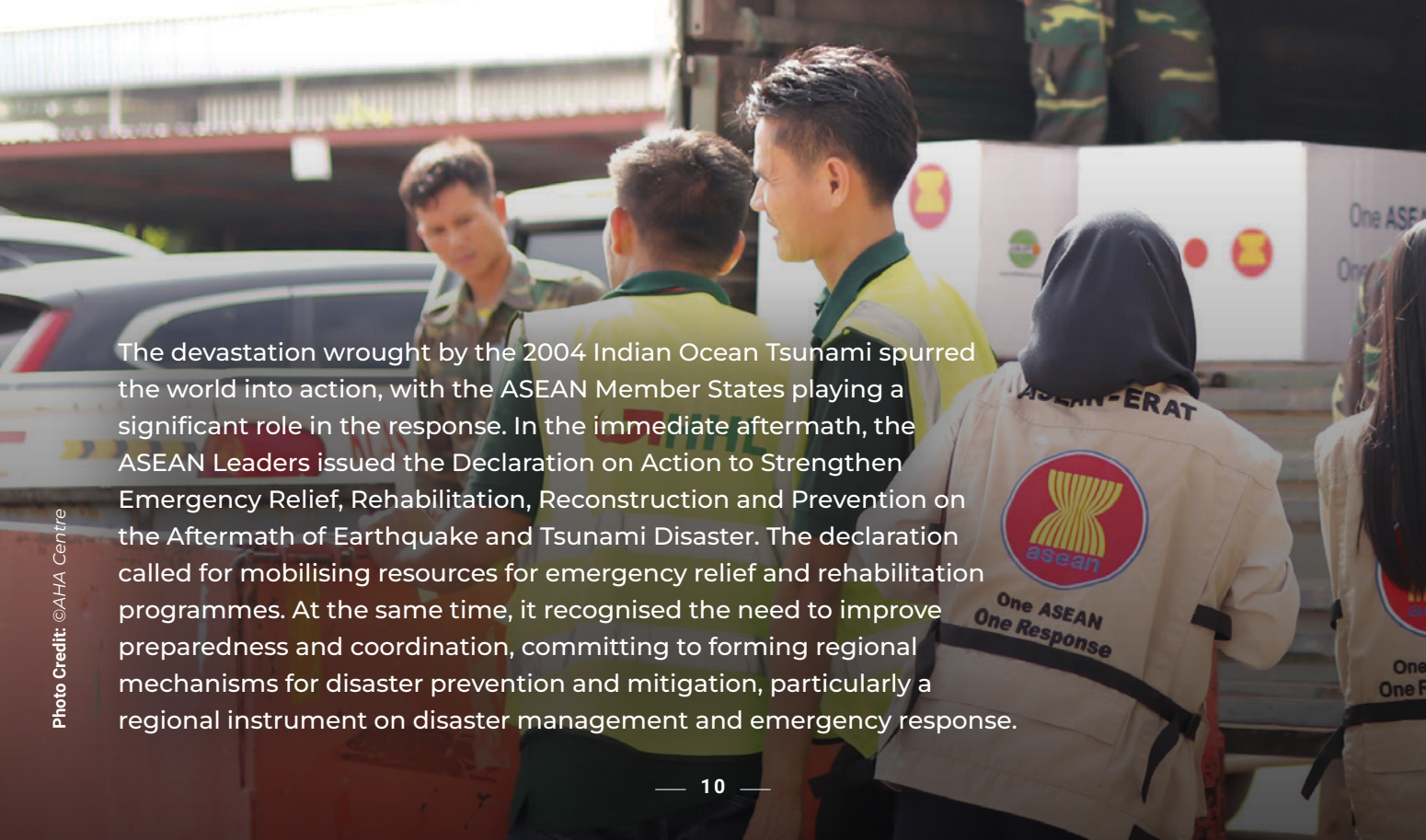
# ASEAN'S STRENGTHENED DISASTER PREPAREDNESS AND RESPONSE FRAMEWORK



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The devastation wrought by the 2004 Indian Ocean Tsunami spurred the world into action, with the ASEAN Member States playing a significant role in the response. In the immediate aftermath, the ASEAN Leaders issued the Declaration on Action to Strengthen Emergency Relief, Rehabilitation, Reconstruction and Prevention on the Aftermath of Earthquake and Tsunami Disaster. The declaration called for mobilising resources for emergency relief and rehabilitation programmes. At the same time, it recognised the need to improve preparedness and coordination, committing to forming regional mechanisms for disaster prevention and mitigation, particularly a regional instrument on disaster management and emergency response.

In July 2005, seven months after the tsunami, the ASEAN Foreign Ministers signed the **ASEAN Agreement on Disaster Management and Emergency Response (AADMER)**. The AADMER became the blueprint for “coordination, technical assistance, and resource mobilisation in all aspects of disaster management.”

In line with the provisions of the AADMER, the ASEAN Ministerial Meeting on Disaster Management (AMMDM) and the ASEAN Committee in Disaster Management (ACDM) established the ASEAN Coordinating Centre for Humanitarian Assistance on disaster management (AHA Centre) in 2011 as the operational engine of AADMER.

The AHA Centre adheres to the principle of “One ASEAN One Response: ASEAN Responding to Disasters as One in the Region and Outside the Region.” In disaster situations, the AHA Centre taps the ASEAN Emergency Response and Assessment Team (ASEAN-ERAT), a quick response team that can support affected ASEAN Member States. The centre also maintains a regional stockpile of goods under the Disaster Emergency Logistics System for ASEAN (DELSA), which can be distributed rapidly in emergencies. The centre has adopted the Standard Operating Procedure for Regional Standby Arrangements and Coordination of Joint Disaster Relief and Emergency Response Operations (SASOP) as the primary protocol in disaster response.

Building the capacity of ASEAN Member States’ national disaster management organisations is also a priority of the AMMDM and ACDM. The AHA Centre is implementing the AHA Centre Executive Programme, an intensive training course aimed at enhancing the “participants’ knowledge, skills and behaviours as humanitarian experts, multi-stakeholder collaborators, result-oriented managers, and effective leaders.”

These initiatives have resulted in better preparedness and speedier response times, minimising the loss of life, property, and resources. ASEAN’s role has come to be recognised globally. The 2024 World Risk Poll noted that while Southeast Asia is one of the most disaster-prone regions in the world, its population are much “more prepared to face disasters” and “feel a greater sense of agency in being able to protect themselves.” This is mainly credited to ASEAN’s “heavy regional focus on responding to natural hazards.”

In 2021, the Bandar Seri Begawan Declaration on the Strategic and Holistic Initiative to Link ASEAN Responses to Emergencies and Disasters (ASEAN SHIELD) called for the promotion of greater cross-pillar and cross-sectoral cooperation and coordination to better prepare for, address and recover from emergencies and disasters affecting the Southeast Asian region effectively and holistically, to better protect the ASEAN Community from the detrimental impacts of these challenges, and to minimise further disruptions to the lives and livelihoods of the peoples of ASEAN. It also called for a review of the Terms of Reference of the Secretary-General of ASEAN as the ASEAN Humanitarian Assistance Coordinator, in which the ASEAN Leaders at the 14th ASEAN Summit in 2009 “agreed to entrust the ASEAN Secretary-General to serve as ASEAN’s humanitarian assistance coordinator which can be activated any time at the request of the affected Member State in the event of a major disaster, whether it be a natural disaster or a pandemic.”

In 2023, the ASEAN Leaders adopted the ASEAN Declaration on Sustainable Resilience to enhance collaboration in strengthening climate and disaster resilience for sustainable development. It serves as the enabling framework that aligns ASEAN key initiatives with the Sendai Framework for Disaster Risk Reduction (SFDRR), the Sustainable Development Goals (SDGs), the United Nations Framework Convention on Climate Change (UNFCCC), the Paris Agreement and the Asia-Pacific Action Plan 2021-2024. This year, the AMMDM adopted the **Declaration on Building a Resilient ASEAN through Inclusive and Sustainable Disaster Recovery**. This declaration commits to strengthening the capacity of ASEAN Member States to recover from disasters by, among others, exploring innovative financing for post-disaster recovery activities. ASEAN also commemorates the 20th anniversary of the Indian Ocean Tsunami, hosted in Brunei Darussalam, Indonesia, Malaysia, and Thailand.

In light of the escalating risks and challenges posed by disasters in the ASEAN region, the ASEAN Vision 2025 on Disaster Management underscores the imperative for ASEAN to be the global leader in disaster management. To achieve this, the region must prioritise efforts to prevent, respond to, mitigate the risks of, and foster sustainable resilience within its communities.

Deployment of the AHA Centre's In-Country Liaison Team (ICLT) to support communities affected by Typhoon Yagi

# MILESTONES IN ASEAN DISASTER MANAGEMENT

## October 1971

The First Meeting of Experts for the Establishment of ASEAN Combined Operation Against Natural Disasters was held in Indonesia.

## 2003

ASEAN Committee on Disaster Management (ACDM) was established to foster regional cooperation in addressing disasters. It is composed of national disaster management organisations from each ASEAN Member State.



## December 2004

The landmark inaugural gathering of the ASEAN Ministerial Meeting on Disaster Management was held on 7 December.



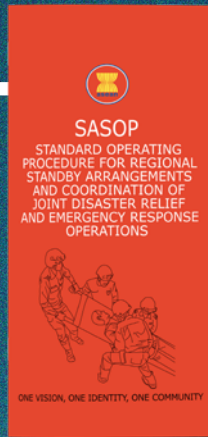
Photo Credit: ©Vietnam Disaster and Dyke Management Authority

## 26 December 2004

The Indian Ocean Earthquake and Tsunami killed close to 230,000 people and affected millions more. It is considered one of modern history's most devastating disasters.



Photo Credit: ©ASEAN Secretariat



## March 2008

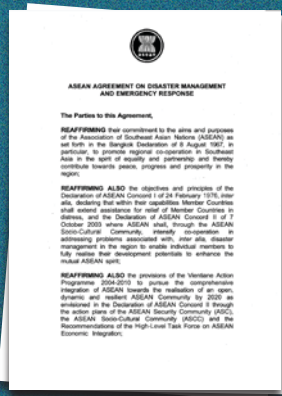
ACDM adopted the Standard Operating Procedure for Regional Standby Arrangements and Coordination of Joint Disaster Relief and Emergency Response Operations (SASOP), which includes forming an ASEAN Rapid Assessment Team.

## May 2008

ACDM activated the SASOP and deployed the ASEAN Response and Assessment Team (renamed ASEAN Emergency Rapid Assessment Team or ASEAN-ERAT) for the first time to assist in the wake of Cyclone Nargis in Myanmar.

## July 2005

ASEAN Leaders signed the ASEAN Agreement on Disaster Management and Emergency Response (AADMER).

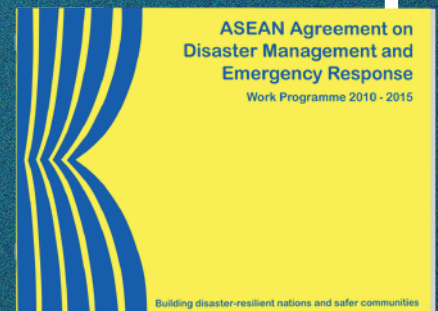


## December 2009

AADMER entered into force.

## March 2010

ACDM adopted the AADMER Work Programme 2010-2015 at its 15th Meeting, including the following priorities: establishment of the ASEAN Coordinating Centre for Humanitarian Assistance on disaster management (AHA Centre), the Disaster Emergency Logistics System for ASEAN (DELSA), and a fully functional ASEAN-ERAT.



## January 2005

ASEAN Leaders held a special meeting and issued the Declaration on Action to Strengthen Emergency Relief, Rehabilitation, Reconstruction, and Prevention on the Aftermath of Earthquake and Tsunami Disaster of 26 December 2004.

## November 2011

AHA Centre was established as the main operational engine for AADMER. The ACDM members serve as AHA Centre's governing board.



Photo Credit: ©AHA Centre

### March 2012

The ASEAN Disaster Management and Emergency Relief Fund (ADMER Fund) was set up as a facility to support disaster relief operations.

### 2013

The management responsibility of ASEAN-ERAT was handed over from Singapore to the AHA Centre. Singapore initially provided support for developing deployment guidelines and conducting initial ASEAN-ERAT induction courses. ASEAN-ERAT was renamed from “ASEAN Emergency Rapid Assessment Team” to “Emergency Response and Assessment Team” to emphasise its role in delivering aid to Member States.

### December 2012

DELSA was officially launched with the support of the government of Japan to provide a regional stockpile of relief items and build the capacity of ASEAN Member States’ disaster management organisations.



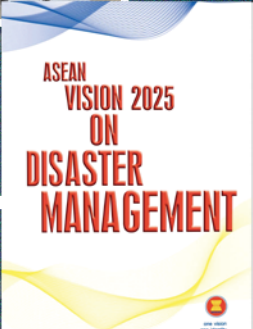
Photo Credit: ©AHA Centre

### November-December 2012

AHA Centre carried out its first-ever humanitarian response on the ground, following a 6.8 magnitude earthquake in Mandalay and Sagaing regions of Myanmar and Typhoon Bopha in the Philippines. The ADMER Fund was also first mobilised.

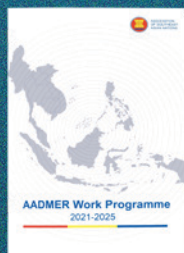


Photo Credit: ©AHA Centre



### December 2020

ACDM launched the AADMER Work Programme 2021-2025.



### 2019

The inaugural ASEAN Risk Monitor and Disaster Management Review (ARMOR) was launched.

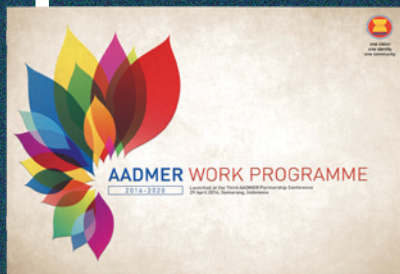


### September 2016

ASEAN Leaders signed the Declaration on One ASEAN One Response: ASEAN Responding to Disasters as One in the Region and Outside the Region.

### April 2016

ACDM launched the AADMER Work Programme 2016-2020.



### December 2015

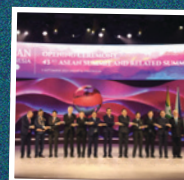
The ASEAN Ministerial Meeting on Disaster Management endorsed the ASEAN Vision on Disaster Management 2025, which aimed to build on ASEAN’s achievements and provide the direction needed for ASEAN to become a global leader in disaster management and emergency response.

### 2021

- ASEAN Leaders issued the Bandar Seri Begawan Declaration on the Strategic and Holistic Initiative to Link ASEAN Responses to Emergencies and Disasters (ASEAN SHIELD), a whole-of-ASEAN approach in disaster management
- The ASEAN Disaster Resilience Platform was established

### May 2022

- Indonesia hosted the Global Platform in Disaster Risk Reduction in Bali



### September 2023

- The ASEAN Leaders adopted the Declaration on Sustainable Resilience as an enabling framework to enhance collaboration in strengthening climate and disaster resilience for sustainable development by aligning key initiatives related to the implementation of the Sendai Framework for Disaster Risk Reduction, the SDGs and the Paris Agreement at the national and local levels
- 20th Commemoration of the ACDM



### October 2024

- ASEAN Ministerial Declaration on Building a Resilient ASEAN through Inclusive and Sustainable Disaster Recovery
- ASEAN Ministerial Statement on the Commemoration of the 20th Anniversary of Indian Ocean Tsunami
- ASEAN Commemoration of the 20th Year of the Indian Ocean Tsunami in Indonesia, Brunei Darussalam, Malaysia, and Thailand
- The Philippines to host the Asia-Pacific Ministerial Conference on Disaster Risk Reduction

Sources:

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Permanent housing for tsunami victims in Aceh  
 Besar, Aceh, Wednesday, 14 November 2014

# INDIAN OCEAN TSUNAMI FINANCING RECOVERY AND RECONSTRUCTION

According to the *Joint Evaluation of the International Response to the Indian Ocean Tsunami: Synthesis Report*, the financial response to the tsunami was the largest and fastest international response to a natural disaster on record. The synthesis report was prepared by the Tsunami Evaluation Coalition (TEC), a multi-agency group composed of UN agencies, such as FAO, OCHA, UNDP, UNICEF and WHO; Red Cross and other international NGOs, such as Care International UK, All India Disaster Mitigation Institute, and World Vision International; donor agencies, such as Danish International Development Agency (DANIDA), Swiss Agency for Development and Cooperation (SDC), Swedish International Development Cooperation Agency (SIDA), and Japan International Cooperation Agency (JICA)/Ministry of Foreign Affairs; and research institutes, such as Active Learning Network for Accountability and Performance (ALNAP) and Groupe Urgence-Réhabilitation-Développement (URD).

Donor governments had different priorities when it came to tsunami aid, with some allocating more funds for humanitarian relief over reconstruction:

Donor	Tsunami relief aid (%)	Tsunami reconstruction aid (%)
USA (USAID)	16	84
Spain	16	84
Germany	30	70
Sweden	36	64
EC	41	59
Denmark (pledges)	47	53
Australia	49	51
UK	54	46
Netherlands	83	17
Japan	83	17
Canada (CIDA)	87	13
Ireland	100	0



At least **13.5 billion US dollars\*** were either donated or pledged for emergency relief and reconstruction. Of this amount, **44% came from governments, 41% from private sources, and 15% from international financial institutions** as follows:

**OECD/Development Assistance Committee (DAC) governments**  
**5.3 billion US dollars**

**Pledged by multilateral development banks**  
**2.1 billion US dollars**

**Non-DAC governments**  
**593 million US dollars**

**Private donations to the Red Cross**  
**1.78 billion US dollars**

**Private donations to NGOs**  
**3.2 billion US dollars**

**Private donations to UN**  
**494 million US dollars**



The majority of the **5.5 billion US dollars** of total private donations came from the general public, exceeding the total amount committed by DAC donors. Most of the funds were allocated to the worst affected countries as follows:

<b>Indonesia</b>	<b>Sri Lanka</b>	<b>India</b>
<b>37.2%</b>	<b>23.5%</b>	<b>13.2%</b>
<b>Maldives</b>	<b>Thailand</b>	<b>Unspecified</b>
<b>2.5%</b>	<b>0.7%</b>	<b>22.7%</b>

In terms of sectoral allocation, data from 7 institutional donors show that most of the aid went to food and non-food items (e.g., blankets, water containers, hygiene kits), health, and water and sanitation.

	Australia	Denmark	ECHO**	Germany	Ireland	UK	US
Food and non-food	36	8	20	26	18	14	23
Health	22	14	10	12	6	11	14
Water and sanitation	0	21	20	0	2	13	20
Shelter	8	4	7	7	2	1	14
Initial rehabilitation	0	0	4	12	24	14	17
Preparedness	0	0	0	27	3	0	0
Coordination	25	4	3	1	6	34	0
Multisector	0	43	7	0	32	5	0
Others	9	6	29	15	7	8	12
<b>Total (%)</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

\*The amount excludes the following: private donations in countries not covered by the Tsunami Evaluation Coalition (TEC) funding studies; private remittances and projects; private donations in the affected countries; cash and in-kind donations from within affected communities; and spending pledges by the governments of the affected countries.

\*\*European Commission Humanitarian aid Office

Source: Tsunami Evaluation Coalition. (2006). *Joint evaluation of the international response to the Indian Ocean Tsunami: Synthesis report*. [https://www.undp.org/sites/g/files/zskgke326/files/migration/in/joint\\_evaluation\\_of\\_the\\_international\\_response\\_to\\_the\\_indian\\_ocean\\_tsunami.pdf](https://www.undp.org/sites/g/files/zskgke326/files/migration/in/joint_evaluation_of_the_international_response_to_the_indian_ocean_tsunami.pdf)

# ACEH, INDONESIA

# THE DAY THE EARTH SHOOK A Story of Tragedy and Resilience

A ship was thrown ashore after the tsunami in Banda Aceh, Aceh, on 26 December 2004



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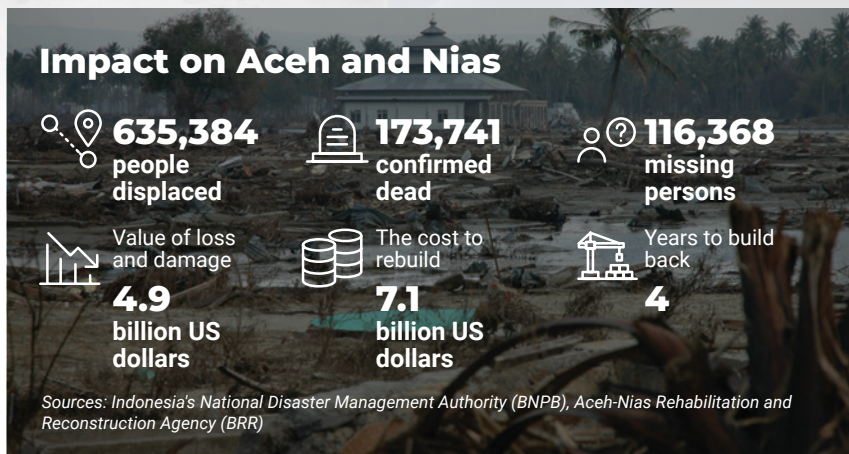
Shortly before 8 a.m. of 26 December 2004, a 9.1 magnitude earthquake, one of the most powerful in recorded history, shook the ground in Aceh, North Sumatra, Indonesia. Residents rushed out of homes and buildings; some fled for safety and to higher grounds. People on the coast saw the waters recede, but most of them were unaware of the impending disaster that would wipe out whole villages and take away so many lives.

Less than thirty minutes later, tsunami waves as high as 51 metres came crashing into Aceh's coasts and caused flooding up to 5 kilometres inland. 800 kilometres of Aceh's coastline were affected.

Within hours, the deadly waves devastated several coastal areas in Thailand, Malaysia, Myanmar, Sri Lanka, India, and other countries across the Indian Ocean. Like in Indonesia, residents and tourists near the shores were oblivious to the tsunami coming from Sumatra.

The reach and impact make it one of the most devastating disasters in modern history, underscoring the urgent need for coordinated disaster management on a global scale.

Indonesia was the worst hit, causing Aceh province and its people unimaginable loss and grief. Just three months after the Indian Ocean tsunami, a magnitude 7.7 quake and tsunami hit Nias island off the coast of Sumatra, causing even more deaths and devastation.



## Response and recovery from ground zero

In Aceh, recovery efforts began almost immediately, with international aid pouring into the region. Volunteers around Indonesia and the world came together to help with search and rescue operations, provide medical assistance, and distribute food and supplies.

A total of 7.2 billion US dollars was pledged to Aceh's recovery and reconstruction by the Indonesian government and about 900 bilateral and multilateral donors and non-governmental organisations. It became one of the most extensive humanitarian efforts in recent history, demonstrating the power of collective action in times of crisis.

Then President Susilo Bambang Yudhoyono recognised the need for efficient and effective coordination to help Aceh and Nias build back better. On 16 April 2005, Yudhoyono created the Aceh-Nias Rehabilitation and Reconstruction Agency (Badan Rehabilitasi dan Rekonstruksi or BRR). The ministerial-level agency's mandate was to implement rehabilitation and reconstruction projects financed by the government of Indonesia and to coordinate projects funded by external donors. The President appointed an experienced bureaucrat and former Energy and Mines Minister Kuntoro Mangkusobroto as Head of the BRR.

One of the agency's main tasks was to ensure projects were planned and implemented effectively to meet the needs



Indonesian President Susilo Bambang Yudhoyono (left) and members of his cabinet at the Special ASEAN Leaders' Meeting on the Aftermath of the Earthquake and Tsunami in Jakarta (6/1/2005)



BRR Chief Kuntoro Mangkusobroto (2nd from right) and his deputies, including Said Faisal (7th from right), on Sabang island in Aceh (7/8/2005)

Photo Credit: ©ASEAN Secretariat

of beneficiaries. Said Faisal, a native of Aceh, left his finance job to serve as one of BRR's deputies. He said the agency had to hit the ground running. "When we were inaugurated by the President on Sunday night, Tuesday night, we flew to Banda Aceh." He adds, "We became famous (for) what we call building a ship while you are sailing and facing the storm, and you must reach (the) destination. That's the game."

The BRR's tasks seemed impossible, but with Mangkusobroto's able leadership, the agency's vision and mission were clear. "In a crisis, the most important question is 'who is in charge?' and that has to be one organisation. So, the clarity of who is in charge, who has the full authority to coordinate and execute is very, very important," explained Said.

Rebuilding the affected areas was a process, with funds and assistance from multiple donors and organisations. Still, BRR had the authority to make decisions on implementing the master plan, approval of project proposals, matching donor funds with high priority projects, facilitation between agencies, fund disbursement and project monitoring and evaluation.

Said stressed that "everything about Aceh had to be decided in Aceh, not Jakarta." With this governance and efficiency, new homes, schools, and infrastructure were constructed, and efforts were made to restore the livelihoods of those who had lost everything.

Also crucial was the BRR's commitment to transparency and accountability, which helped build trust with affected communities and donors. A database with information on funds, proposals, procurement, and project monitoring was available to the public. Said Faisal stressed that, "we must remember, Aceh was a place that was destroyed by the tsunami at that time and has endured thirty two years of conflict. What is the most expensive commodity in a conflict area? (it's) trust." BRR was the first government agency to have an autonomous and independent anti-corruption unit. The BRR also involved local communities in planning and implementing recovery projects, which helped ensure that their needs were met.

After four years, 6.7 billion US dollars or 93 per cent of the pledged funds were committed. The BRR reported these achievements:

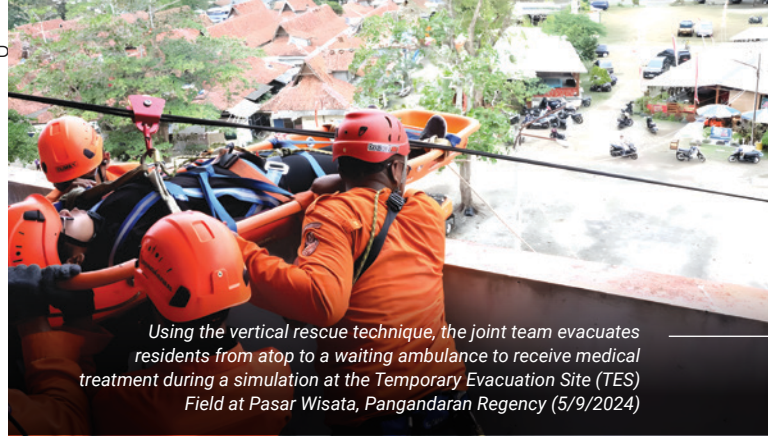


Photo Credit: ©Aceh-Nias Rehabilitation and Reconstruction Agency (BRR)





Head of Indonesia's National Disaster Management Authority, Lt. Gen. Suharyanto, at the 2nd Global Forum for Sustainable Resilience (GFSR) opening ceremony in Jakarta (11/9/2024)



Using the vertical rescue technique, the joint team evacuates residents from atop to a waiting ambulance to receive medical treatment during a simulation at the Temporary Evacuation Site (TES) Field at Pasar Wisata, Pangandaran Regency (5/9/2024)

Photo Credit: ©Indonesia National Disaster Management Authority (BNPB)

Said went on to serve as the first Executive Director of the ASEAN Centre for Humanitarian Assistance (AHA Centre) on disaster management. Several other officials of the BRR joined him, sharing their expertise and experience with the ASEAN and the AHA Centre.

## Indonesia's disaster management, 20 years on

The 2004 tsunami in Aceh was a turning point for disaster management in Indonesia and since then, a significant of progress has been made.

"Indonesia has recorded nearly 1,400 disasters as of September 2024," according to Lt. Gen. Suharyanto, Head of Indonesia's National Disaster Management Authority (BNPB). Speaking at the opening of the 2nd Global Forum for Sustainable Resilience (GFSR), Gen. Suharyanto said that most of these natural disasters were hydrometeorological, including floods, landslides, and droughts, and were triggered by climate change and human activities.

"This figure represents a 52 per cent increase from the previous year, driven by climate change, urbanisation, and changes in land use. However, we are fortunate to see a significant decrease in the impact of these disasters, particularly in terms of casualties and infrastructure damage. Fatalities, including deaths, missing persons, and injuries, dropped by 36 per cent in 2023 compared to 2022. Similarly, infrastructure damage decreased by 63 per cent in 2023 compared to 2022."

"While we may not be able to reduce the number of disasters significantly, we can certainly optimise our prevention and mitigation efforts to minimise their impact on human lives and property," he added.

Gen. Suharyanto also highlighted the importance of technology exhibitions and conferences that promote the sharing of information and best practices. He emphasised that such events are concrete steps towards building a robust disaster management system. "This system is not



only capable of responding when disasters occur but also focuses on risk mitigation and preparedness," he said.

To mark the 20th anniversary of the Indian Ocean Tsunami, BNPB hosted the forum and an ASEAN high-level dialogue from 11-12 September 2024 in Jakarta, gathering participants from various sectors and countries to showcase technological innovations and solutions for disaster management and to facilitate discussions on strategies for building sustainable resilience in the face of increasing natural disasters. These events were held alongside the Asia Disaster Management and Civil Protection Expo and Conference (ADEXCO).

In May 2022, the 7th Global Platform for Disaster Risk Reduction (GPDRR) released the Bali Resilience Agenda, which calls for integrating disaster risk reduction into development and finance policies, prioritising investment in disaster risk reduction, addressing the climate emergency through disaster risk reduction measures, adopting a participatory and human rights-based approach, and ensuring everyone has access to early warning systems.

As the host of the GPDRR, Indonesian President Joko Widodo asked the

international community to work together more in disaster risk management. He suggested working together towards sustainable resilience based on four principles: strengthened risk-reduction culture and education, investment in science, technology, and innovation, climate and disaster-resilient infrastructure, and implementation of global commitments.

Resilience was a crucial factor in the recovery process post-Aceh tsunami. Communities united to support one another, and individuals found strength in their shared experiences. The disaster was devastating but also served as a testament to the human spirit and the power of resilience.

Associate Editor Joanne B. Agbisit contributed to this report.

This article is based on the 2nd GSRF and ASEAN high-level panel discussions, and information provided by Dr. Raditya Jati, Deputy Minister System and Strategy, Indonesian National Disaster Management Authority and Mr. Said Faisal, former Deputy Head of the Aceh-Nias Reconstruction and Rehabilitation Agency.

Sources: Aceh-Nias Rehabilitation and Reconstruction Agency (BRR), Indonesia's National Disaster Management Authority (BNPB), United States Geological Survey (USGS), National Aeronautics and Space Administration (NASA), National Oceanic and Atmospheric Administration (NOAA)

Photo Credit: © Press, Media, and Information Bureau of the Indonesian Presidential Secretariat

# TSUNAMI WAKE-UP CALL BUILDING A PATH TO SUSTAINABLE RESILIENCE



**Raditya Jati, PhD**  
Deputy Minister of System and Strategy  
National Disaster Management Authority of Indonesia

*Reconstruction of the road in Lhok Nga, Aceh Besar, Aceh (2009)*

**O**n December 26, 2004, a massive tsunami struck fourteen nations across the Indian Ocean, leaving a trail of devastation and forever altering the lives of millions. Triggered by a 9.1 magnitude earthquake, this disaster claimed more than a quarter of a million lives. Countries like Indonesia, Thailand, Sri Lanka, and India bore the brunt, with Indonesia suffering the highest toll—173,741 confirmed deaths and 116,368 missing persons. Aceh, on the northern tip of Sumatra, saw waves up to 30 meters high, destroying homes and displacing nearly half a million people.

The tragedy sent shockwaves around the world. It left behind immense financial losses—around 4.9 billion US dollars—and sparked a global conversation about disaster preparedness. In response, just one month later, world leaders convened at the UN's World Conference on Disaster Reduction. The outcome was the Hyogo Framework for Action, which shifted the focus from simply responding to disasters to preventing them by reducing risks.

For Indonesia, a country prone to natural disasters, the 2004 tsunami was a wake-up call. Located at the meeting point of three major tectonic plates, Indonesia is highly vulnerable to earthquakes, floods, tsunamis, and volcanic eruptions. With over 150 million people living in earthquake-prone areas and millions more exposed to floods, landslides, and volcanic risks, disaster management became a national priority.

In 2007, the country passed a comprehensive disaster management

law that laid the groundwork for improved disaster preparedness, response, and recovery. This legislation, alongside various presidential decrees and policies issued by the National Disaster Management Agency (BNPB), marked a turning point in Indonesia's approach to disasters.

Today, Indonesia's disaster management system is one of the most robust in the region. All 34 provinces and over 90 per cent of districts have established local disaster management agencies, and the country has made significant investments in emergency operations centres, logistics, and technology. Additionally, immediate funding mechanisms have been set up, including a 4-trillion-US-dollar emergency response fund, to ensure quick mobilisation of resources when disaster strikes.

Looking ahead, Indonesia's 25-year Disaster Management Master Plan (2015–2045) provides a clear roadmap for strengthening disaster resilience across the country. This plan emphasises collaboration between national and local governments, NGOs, and the private sector to ensure comprehensive and effective disaster management.

The 2004 tsunami was not just a tragedy for Indonesia; it was a global event that demonstrated the interconnected nature of our world. Countries across the Indian Ocean region were affected, and in the years since, nations have recognised the need for greater cooperation in disaster management. In 2023, during the ASEAN

Summit, Member States reaffirmed their commitment to sustainable resilience, ensuring that tragedies like the 2004 tsunami will never take us by surprise again.

Governments are committed to building disaster resilience, addressing climate change, and creating sustainable development pathways. However, their societal, political, and economic choices do not always reflect these commitments. Many disaster events are interlinked, caused by peoples' individual or collective behaviours, and have interconnected root causes.

There is a need for strategic, integrated, and synergised solutions that combine policies and strategies addressing the root causes of these challenges while anticipating future ones. "Sustainable resilience" offers a systemic risk governance approach that will tackle present and future systemic risks. This approach combines efforts to address the root causes of these challenges while also anticipating future ones.

By fostering inter-ministerial and multi-sector cooperation, this approach ensures that efforts in one area—such as climate action or disaster resilience—are aligned with and support broader sustainable development goals. This kind of collaboration is essential for creating long-term resilience, enhancing policy coherence, and optimising resource use to achieve global targets.

Central to this commitment is the concept of Sustainable Resilience—a proactive approach to disaster risk

Five key elements that serve as main pillars of sustainable resilience, putting people at the centre



**Governance**

Strengthening institutional capacity and culture, regulation, policies, and systems, and synergy across government institutions, local governments, and non-governmental stakeholders



**Investment**

Building climate- and disaster-resilient infrastructure for sustainable development



**People**

Resilience is local and contextual, the overarching design of sustainable resilience must be people centred



**Science and Technology**

The role of science and technology in providing scientific evidence and solution for policy formulation, problem solving and decision making



**Infrastructure**

Investing in resilience through a combination of government and non-government investment, as well as alternative financial instruments

reduction that goes beyond recovery and focuses on long-term preparedness. Championed at the Global Platform for Disaster Risk Reduction 2022 and reinforced by ASEAN leaders, this concept is built on four pillars: (1) strengthened risk-reduction culture and education; (2) investment in science, technology, and innovation; (3) climate and disaster-resilient infrastructure; and (4) implementation of global commitments.

Sustainable resilience is about strengthening climate and disaster resilience for sustainable development. Indonesia is committed to implementing global agendas and targets, including the implementation of the Sendai Framework Disaster Risk Reduction (SFDRR) and the achievement of the Sustainable Development Goals (SDGs).

However, building sustainable resilience is not just about making technical advances or investing in infrastructure. It's about people. Communities are at the heart of disaster preparedness, response, and recovery. It is why ASEAN's approach to resilience emphasises the importance of community engagement, inclusive governance, and capacity-building. Local voices and knowledge play a crucial role in shaping strategies that are contextually relevant and effective.

Adopted from the Leaders' Declaration on Sustainable Resilience, ASEAN emphasises placing local communities at the heart of development efforts, leveraging their unique cultural insights and wisdom as the first line

of defense against emerging risks. Recognising that "resilience is local," ASEAN envisions becoming a global leader in disaster management by fostering collaboration, innovation, and a people-centred approach. This strategy aims to enhance the region's capacity to prevent, prepare for, respond to, and recover from disasters while contributing to sustainable development, climate change adaptation, and resilience. Ultimately, ASEAN seeks to strengthen multilateral cooperation in disaster management and empower communities under the sustainable resilience framework.

The five key elements framework that serve as the main pillars of sustainable resilience, with a focus on putting people at the centre, are community engagement, inclusive governance, integrated approaches, capacity building, and data-driven decision-making. Resilience is local and contextual; therefore, the overarching design of sustainable resilience must prioritise a people-centred approach to address the unique needs and vulnerabilities of communities effectively. This perspective ensures that resilience strategies are not only relevant but also inclusive, actively involving local voices in the decision-making process.

Disasters like the 2004 tsunami also highlight the importance of integrated, multi-sectoral approaches to addressing climate change and sustainable development. Sustainable resilience offers a framework for governments, businesses, and civil society to work

together on common goals, such as those outlined in the SFDRR and the SDGs.

To truly build a resilient future, policies must be aligned across sectors. Climate change, disaster resilience, and sustainable development are deeply interconnected, and addressing these challenges requires coherent and harmonised actions. By fostering cooperation between ministries, institutions, and communities, Indonesia and ASEAN are working to create a future where resilience is not just a goal—it is an ongoing journey.

In conclusion, the lessons learned from the 2004 tsunami have shaped not only Indonesia's disaster management strategies but have also influenced global frameworks for disaster risk reduction. Through sustainable resilience, we can ensure that communities are not only prepared for disasters but are also equipped to adapt and thrive in the face of future challenges.

As we commemorate the lives lost two decades ago, we also look forward to reaffirming our commitment to building a safer, more resilient world for future generations. Together, we can ensure that the next time disaster strikes, we will be ready—not just to respond but to withstand, recover, and grow stronger.

# Tsunami 101

## Tsunami basics

A tsunami is a series of waves caused by disturbances near or below the ocean. This disturbance can be:



### An earthquake

with a magnitude of at least 6.5, occurring within 70 km from the Earth's surface and causing vertical movement of the seabed



### A landslide

along the shore or underwater displacing large amounts of water



### A volcanic eruption

occurs either by physical explosion or by the collapse of a volcano's slope



### An asteroid

that collides with or disrupts the ocean, causing a significant displacement of water



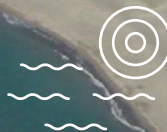
**800 km/h**

Tsunami waves travel at high speeds in all directions, up to 800 kilometres per hour in the deep ocean or the speed of a jet plane.



**100 km**

The time it takes for the waves to reach a shore is determined by the location of the tsunami's source. Local or near-field tsunamis, originating from within 100 kilometres of the coastline, are the most dangerous because they can strike the shore in as little as a few minutes or less than an hour before any alert can be issued.



Most earthquakes and tsunamis occur in the Pacific Ocean and its marginal seas. About 76% of history's lethal tsunamis have occurred in the Pacific Ocean. On average, local tsunamis strike some parts of the ocean every one to two years.



**100 ft/  
30 m**

The height of the waves is determined by the proximity of the disturbance to the coastline as well as the topography of the ocean floor. Tsunami waves swell when there is an abrupt change in seafloor depth and as they approach shallower waters. They can surge over 100 feet or 30 metres.

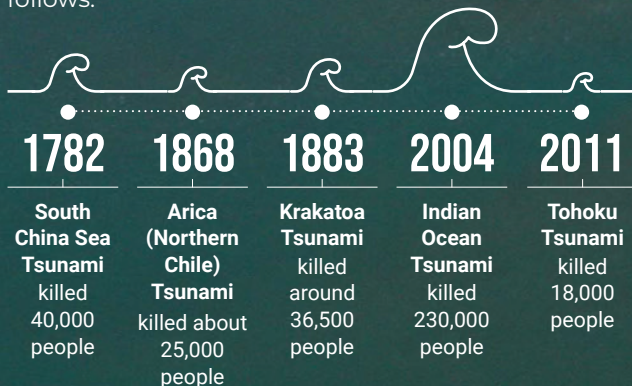


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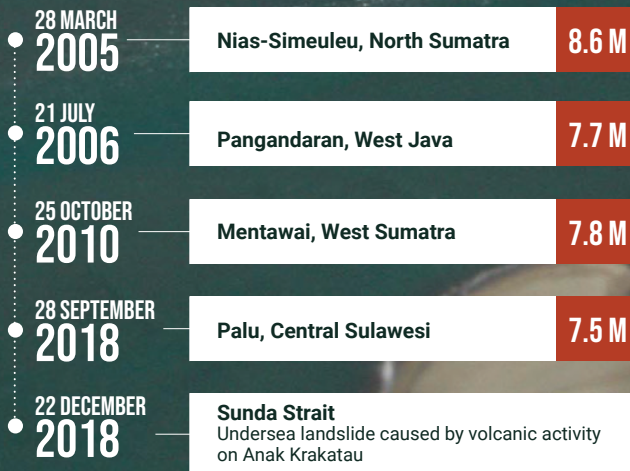
**5.18 million**

people in ASEAN (or 1 per cent of the region's population) are exposed to tsunamis.

The most destructive tsunamis on record were as follows:



Major tsunamis caused by earthquakes, volcanic activity, and undersea landslides in Indonesia after 2004



An aerial view of the Banda Aceh coastline, Aceh, following an 8.5 magnitude earthquake (12/4/2012)

## Tsunami early warning systems



The ASEAN region has two tsunami warning systems: the Indian Ocean Tsunami Warning and Mitigation System (IOTWMS) and the Pacific Tsunami Warning System (PTWS), coordinated through the Intergovernmental Oceanographic Commission (IOC).



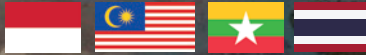
For each system, Tsunami Service Providers have been assigned and are responsible for delivering tsunami warnings to each National Tsunami Warning Centre within the first eight minutes after detection.



**Indian Ocean**

### IOTWMS

The Tsunami Service Providers of the IOTWMS are the Indonesian Tsunami Early Warning System (InaTEWS) operated by the Indonesian Meteorological, Climatological, and Geophysical (BMKG); the Joint Australia Warning Centre (JATWC); the Indian Tsunami Early Warning Centre (ITWEC) operated by the Indian National Center for Ocean Information Services (INCOIS). The end-users in ASEAN include Indonesia, Malaysia, Myanmar, and Thailand.



**Pacific Ocean**

### PTWS

The Tsunami Service Providers of the PTWS are the North West Pacific Tsunami Advisory Centre (NWPTAC) of the Japan Meteorological Agency (JMA) and the USA Pacific Tsunami Warning Centre (PTWC). The end-users in ASEAN are Indonesia and the Philippines.



## Tsunami preparedness

Warning signs of an impending tsunami include seismic activity or volcanic eruptions close to the shore, abrupt sea level drop or rise, abnormally huge or forceful waves, and a distant roar from the ocean.

- Learn about the local risks and history of tsunami
- Prepare an evacuation plan and route
- Practice an evacuation drill
- Learn and be ready to act on official tsunami advisories and alerts

- Stay away from the coast, tidal estuaries, rivers, and streams
- Beware of secondary hazards, such as contaminated water
- Don't return home until authorities say it's safe to do so

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Indonesia Agency  
for Meteorology,  
Climatology, and  
Geophysics

# INDONESIA'S EARLY WARNING SYSTEM

Approximately 3,000 students participated in an earthquake and tsunami drill at the Tsunami Museum in Banda Aceh, Aceh, during Indonesia's National Disaster Preparedness Day (26/4/2017)

**A**t the 20th anniversary of the Indian Ocean Tsunami commemoration event in Jakarta, Nelly Florida Riama, PhD, presented the remarks from the Head of Indonesia Agency for Meteorology, Climatology, and Geophysics (BMKG), Prof. Dwikorita Karnawati. BMKG highlights the critical lessons from the past two decades, emphasizing the importance of systematic observation, innovation, data sharing, and community preparedness in strengthening tsunami early warning systems. Read the full remarks below.

Two decades since the Aceh tsunami have provided us with at least four key lessons: (1) The importance of systematic observation and standard measurement for early warning; (2) the importance of innovation in science for non-seismic tsunamis, which require more appropriate observation beyond the seismic network; (3) the importance of data exchange between countries and institutions; (4) despite the progress and innovation of science and technology for early warning, large numbers of people can still be victims of tsunamis if the community is not prepared for early action.

For the first lesson learned, before the 2004 tsunami, Indonesia faced significant gaps. Tsunami risk was considered low, with limited seismic observation and real-time sea-level monitoring. There was no tsunami warning system at that time, communities were largely unaware and unprepared. As a result, the tools and measurements were not integrated into a systematic early warning network. This failure contributed to almost 230,000 deaths and significant economic loss.

From the 2018 Palu (Central Sulawesi) disaster, we have learned that there is a need for innovation in tsunami detection because the earthquake that triggered it was from a submarine landslide that hit in two to three minutes. This demonstrated that it is not enough to solely depend on sophisticated seismic monitoring systems. Communities in tsunami-prone areas must be educated and empowered to self-evacuate when needed.

From the Sunda Strait tsunami, we have learned that it was not caused by submarine or seismic or tectonic activity but by volcanic activity leading to a submarine landslide. This

provided another valuable lesson that data on volcanic activities must be included in the tsunami warning system. Another thing that we also realised is that a significant gap still exists between technological advancement and user capacity.

Technological innovation, including observation, modelling, and data sharing, is essential, but without community understanding, awareness, and preparedness, its effectiveness is limited. We must involve multiple stakeholders, including the private sector, to bridge the gap and ensure sustainability in tsunami preparedness efforts.

At the national level, right now Indonesia is strengthening our tsunami early warning system. By 2024, 533 seismograph sensors will be in place, and the warning technology will be more reliable, timely, and accurate.

We also developed Tsunami Modelling Data Base integrated into TOAST (Tsunami Observation and Simulation Terminal) System. The system enables us to simulate tsunami scenarios, improving our ability to predict and prepare for potential threats.

Another tool that can be used to improve our warning system is collaboration with local governments to identify areas with high tsunami hazard potential. Through field assessments and mapping activities, we have been able to generate detailed tsunami hazard maps for vulnerable regions.

We also have an action plan for non-tectonic tsunamis that includes not just technical but also non-technical measures. We need to promote local wisdom for self-evacuation and strengthen the tsunami readiness programmes. We also established our national consortium on earthquake and tsunami experts to coordinate across institutions because we cannot work alone. This consortium ensures the synergy of monitoring, processing, and analysis of earthquake and tsunami data to create an integrated and sustainable early warning system.

Other activities that have been established include the UNESCO-IOC tsunami readiness programme, currently implemented in 10 communities, working to comply with the 12 indicators of the tsunami readiness programme. This effort involves advocacy, community training, and the development of an emergency response team. For example, this is the Tanjung Benua Regency.

This community collaborates with BNPB (National Disaster Management Agency), BPBD (Local Disaster Management Agencies), UNDP (UN Development Programme), and Red Cross Indonesia to enhance tsunami preparedness. This partnership has resulted in the development of tsunami hazard maps, the installation of evacuation signs, and the establishment of vertical evacuation routes. Schools and hotels have also been actively involved in these training and preparedness activities to ensure a comprehensive approach to disaster response.

Indonesia is also preparing to propose international funders in this regard, specifically ISO 22327 for landslide early warning systems and ISO 22328-3 for community-based early warning systems. We need these ISOs to accelerate the development of early warning mechanisms. With this standard, we hope to enhance public-private partnerships and support the effectiveness of early warning systems in multi-hazard scenarios.

To conclude this speech, a holistic approach to early warning systems, one that combines systematic observations, scientific innovations, data sharing, and community preparedness, is crucial in building resilient societies. Our systems must continue to evolve alongside scientific advancements to effectively mitigate the impact of disasters like tsunamis.

Early warning systems not only help manage immediate risks but also contribute to long-term sustainability and resilience in vulnerable regions.

The journey to resilience is long, but it is one we must undertake together. As we advance our early warning system, let us remember that true resilience is not just about surviving the next disaster; it is about thriving in the face of uncertainty.

# CONVERSATIONS

The Indian Ocean Tsunami flattened the coastal communities of Aceh, North Sumatra, killing more than 170,000 people. At least 116,000 are listed as missing.

In this section, five survivors share their experiences from the harrowing day of 26 December 2004, how they dealt with the trauma of losing family members, neighbours, and friends, and how the tsunami changed their lives.

The narratives are based on interviews conducted by the UN Development Programme (UNDP) through its regional Tsunami Project in July 2024, as part of a joint ASEAN-UNDP publication on the 20th anniversary of the Indian Ocean Tsunami. This joint ASEAN-UNDP publication will be released in December 2024.

A woman reads the list of missing persons and victims of the earthquake and tsunami displayed at a volunteer post in Banda Aceh, Aceh, on 4 January 2005. Thousands are still declared missing after the 2004 Indian Ocean quake and tsunami



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# Cut Sa'adah

When the tsunami struck, I was around 65 years old. That morning, I was with my extended family at a relative's house in Meulaboh for a family event. We were getting ready to return to Banda Aceh, and I had packed a backpack with clothes. Suddenly, a powerful earthquake shook the ground so violently that I could barely stand. It felt like the end of the world.

Soon after, someone shouted, "Everyone run, the sea water is rising!" Instantly, everyone fled the house. Being older, I was the slowest, and before I realised it, I was alone. I took a shortcut through the back of the house, hoping to catch up with those who had run ahead. I ran barefoot, even though my feet were still aching from a recent hip surgery, and ended up cutting myself on sharp objects.

In the past, my parents used to tell me about a term called "Air Beunah." Air Beunah refers to a massive flood. This term has been passed down from our ancestors, but we don't know its exact origins.

As I fled, I kept my eyes forward and didn't look back. People I was fleeing with urged me to climb a higher hill. When I got there, they urged me to go even higher. Looking back, I witnessed a terrifying scene: debris, including mosque domes, was being swept away by the rising waters. The water rose swiftly, nearly reaching where I was, so I kept climbing, clinging to tree branches for support. From the top, I could see that the land below was entirely submerged. Amid the destruction, I marvelled at God's power,

astonished at how I managed to climb the steep hill. Overcome with emotion, I cried and prayed in gratitude.

I stayed on the hill for three days, fasting the entire time. With no electricity and limited clean water, some people went down to search for food and shared whatever they found. I saw them find rice mixed with sand, which they dried and cooked for us. We were desperately hungry, and the children suffered from diarrhea. We all gathered at a transmitter station, where we waited in line for instant noodles and other food supplies. I received three pieces of bread, gave away two to others, and kept one for myself.

On the fourth day, around 9 a.m., we decided to leave the hill and take a fishing boat to the refugee area in Banda Aceh. The boat had survived because fishermen noticed the darkened land from a distance. Soldiers helped us board, prioritising women first. It was extremely crowded, and I could barely sit upright. The journey was terrifying as we navigated through debris, and by 11 p.m., we arrived in Lampulo village. Since it was too late to continue, we spent the night on the boat, extremely hungry and shivering in the cold and darkness.

On the fifth day, we walked to the Darussalam Mosque. On the boat with me was a relative whose wife and mother-in-law were killed and whose house was destroyed. His child was missing. When we reached the mosque, he frantically searched for his child among the tsunami

survivors, calling out his name. Hearing this, his child ran to him, limping with a severed leg. The reunion was heart-wrenching as the father embraced his child with relief and gratitude. We learned that the child had survived by clinging to a refrigerator door carried by the current until he reached the mosque.

On the sixth day, at 1 a.m., we were taken to the airport to be flown to Medan (City in North Sumatra).

When I used to recount these events, I would feel sad and cry. Now, I am able to share this story with you all.

After the tsunami, NGOs and the government provided housing aid to disaster victims. By the time the aid arrived, I was already in Medan, far from Aceh. I worried about missing out on the assistance and inquired if I could still receive it. Thankfully, they provided aid. Although the house was small, it served as a temporary accommodation for my child when she went back to Aceh to collect the aid.

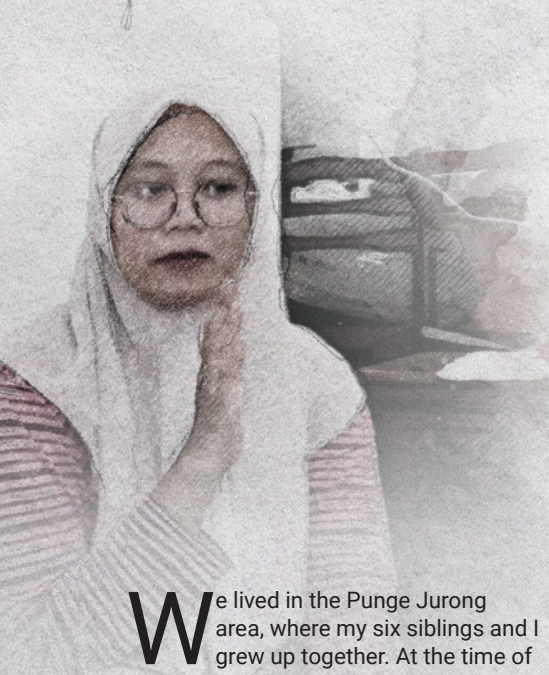
Until now, we have never returned to our original home that was destroyed by the tsunami. The disaster changed our lives completely. We decided to move to a higher area to avoid similar risks in the future. In addition to the temporary housing we received, we found a very helpful programme: cake-making training. This programme, a collaboration between NGOs and the government, was designed specifically for widows in our community. It provided not only new skills but also some relief from the burdens they faced after their immense losses. There is a disaster simulation programme conducted every few years to prepare the community for potential emergencies. Additionally, there is a disaster siren system installed in various strategic locations.

The tsunami was a deeply painful experience that left a lasting impact on my life. However, through all the difficulties, I learned to appreciate God's blessings more. This traumatic event taught me how to deal with disasters and take action to protect myself. Now, I feel more prepared to face challenges, thanks to the invaluable lessons I've learned from the hardships we endured in Aceh.

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*Interviewed and translated by UNDP on 25 July 2024 for the official joint ASEAN-UNDP publication on the 20th anniversary of the Indian Ocean Tsunami. The publication will be published in December 2024. These narratives were edited and condensed by The ASEAN editorial team for this special issue.*





# Azzahra Layusa

**W**e lived in the Punge Jurong area, where my six siblings and I grew up together. At the time of the disaster, I was around 21 years old. It was a Sunday, and I was relaxing with my family at home. Suddenly, a powerful earthquake shook our area. Although our house was about 5 kilometres from the coast, that distance didn't shield us from the devastating effects of the earthquake and the ensuing tsunami. We quickly rushed outside to the yard, seeking a safer place. I saw many people running in panic while others stood frozen, trying to understand what was happening. I had never experienced such a strong earthquake before, and the effects were immediate—I felt dizzy and confused.

Then I heard people around me shouting in panic, "The water is rising, the water is rising!" At that moment, I didn't fully understand what was happening. I had never even heard of a tsunami before. But seeing people running in fear, my instincts told me to run too, even though my parents were still inside the house. I ran aimlessly, overwhelmed by confusion and fear, until I was eventually swept away by the powerful current. It felt like walking in the middle of waves that suddenly grew and hit mercilessly.

Swimming was futile; the water was not only powerful but also filled with sharp and dangerous objects like sheets of metal and debris from buildings. Every movement was risky, and I had to struggle hard to stay afloat amidst the chaos. Fortunately, I got caught on a mattress that was floating with the waves. Around me, I heard people shouting for help, but I was in shock, not knowing what to do. I could only wonder, "Where am I? What is really happening?"

Amid the chaos, I briefly saw a few two-story houses still standing amidst the debris. The survivors who had managed to reach the second floor were shouting,

calling out to those still floating to come and save themselves. The strong current carried me about a kilometre, until I eventually washed up on a field. Somehow, I escaped that situation without injuries, which felt like an incredible stroke of luck. However, once the water receded, the sight was truly horrifying. I saw corpses stuck on doorways and many others swollen from being submerged during the disaster. The event left a deep scar on my memory.

From the field, I tried to find shelter by walking to the nearby Darussalam Mosque. There, people who saw my torn clothes immediately gave me a karate uniform to wear. Later, I, along with many others, took refuge in a university building that was left standing. We hoped this place would be safe from aftershocks, but the tremors continued, making us feel unsafe inside. Eventually, we all chose to sit outside in the open field for safety.

On the first day at the shelter, no aid arrived. The early days were extremely difficult. We struggled to get food and clean water. Aid started coming only a few days later, but it was still limited. I received only a few packs of biscuits. Despite the hardship, my thoughts were with my family at home. I worried about my parents and other relatives. Eventually, I decided to return home, despite many roads being blocked. I walked through debris with water up to my chest, starting at 9 a.m. and continuing until 1 p.m., barefoot. I could only pray that my feet would remain unharmed.

When I finally arrived home, the sight was heart-wrenching. My house was still standing, but much of it was destroyed and surrounded by trash and debris. The devastation was evident: behind my house, there were about 20 rental homes, all of which were completely demolished. Only two or three people from that entire complex survived. This stark destruction underscored the severity of the area I was in.

I learned from some relatives that my parents were gone, and their bodies could not be found. This news hit me hard. I also lost my younger siblings, my grandmother, and my niece. Everyone I loved disappeared in an instant.

A relative took me to a higher place on a motorcycle. I stayed there for several months. Due to limited food, we made various dishes from sardines to survive. Even now, I can't eat sardines anymore because I had them so often. The recovery process took about five years. During that time, I received 18 million rupiahs in house repair aid from the government. However, this amount was not enough to repair the roof and some walls of my damaged house. After the tsunami, there were various entrepreneurship training institutions for housewives affected by the tsunami, and the programme really helped us survive. Now, it is part of my job as a government employee. Moreover, there is a natural disaster simulation programme for the community.

Amidst the deep sorrow, we knew we had to survive. If we had been trapped in trauma, Aceh wouldn't have recovered as it has. We realised that to move forward, we needed to overcome the deep pain and trauma. This experience made me more resilient and self-reliant. After the disaster, facing life's challenges became easier because nothing seemed harder than the tsunami.

Now, I always advise my child to hope never to experience such a disaster again. When an earthquake occurs, my family and I know how to run away from the sea. I teach children that if an earthquake happens, they must run immediately. If running isn't possible, they should go to the second floor. I stress that material possessions are unimportant; safety and life are what matter most.

Despite trying to move on, the fear remains. Every time I see large waves at sea, that fear returns. I also feel scared when the sky is too dark or when the weather is extremely hot. It feels as though these signs might predict another disaster. These fears are now a part of my life, reminding me of the fragility and uncertainty I experienced that day.

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# Pipit

When I was just 10 years old, our lives changed drastically on what should have been an ordinary Sunday. Our house was situated in a relatively high area, about 4 kilometres from the coast, and we always felt safe from the threat of disasters. However, on that day, a very strong earthquake suddenly shook our region with tremendous force. The tremors made the entire house shake, and fear enveloped us.

Although our house was quite far from the coast, the impact of the earthquake and the subsequent tsunami was immense. About an hour after the earthquake, I saw many people running towards our house with pale, terrified faces, shouting in panic, "The sea water is rising, the sea water is rising!" The atmosphere became increasingly tense as some cried and ran aimlessly, as if being chased by something invisible. Amid this chaos, I noticed my aunt running while holding her young niece. With a sorrowful face, she tried to protect the little girl, who had tragically lost her mother to the tsunami. Witnessing my aunt's distress and hearing the tragic story of her niece made me truly grasp the severity of the disaster we were facing. Initially, we thought the rising sea water was just due to ordinary flooding, but people explained that it was from giant waves of water, so massive they destroyed everything in their path.

The impact of the disaster was immense, shaking our lives to the core. In the aftermath, food and clean water were scarce, electricity was nonexistent, and the grim news of Melaboh's destruction by the earthquake reached us. As night fell, the tremors persisted, a relentless reminder of the catastrophe that had struck. I remember watching as countless refugees sought shelter on the porches of local residents' homes, crowding together in a desperate search for safety.

On the second day, amidst the chaos, a relative who was a teacher from Melaboh arrived. He gathered us, the children who had become refugees overnight, and explained that the world was facing three major disasters: earthquakes, flash floods, and volcanoes. As he spoke, it dawned on us that we were living through two of these disasters at once—an earthquake and a flash flood. The teacher's words were more than just an explanation; they were an education. He wanted us to understand

the nature of tsunamis, explaining that they were not just ordinary flash floods, but a dangerous force that could sweep away everything in their path. His lessons gave us a new understanding of the peril we faced, even as we struggled to comprehend the magnitude of the disaster that had upended our lives.

For the first three days, aid did not arrive, and we had to make do with whatever food we had. The adults took on the responsibility of ensuring that everyone had food and drink, managing the rations carefully. Fortunately, despite the crisis, everyone came together and shared resources, preventing any conflicts from arising. By the fourth day, our supplies were dwindling, and we were even forced to eat rotten tempeh to survive. The children, including myself, felt the severe impact of the situation.

Occasionally, helicopters would come, but they were reluctant to land for fear of being overwhelmed by desperate and frantic people. One day, a foreign journalist arrived with chocolates. All the children, me included, ran eagerly to get them. I ran barefoot and injured my feet in the scramble for the chocolates. We were extremely hungry and thirsty, while the adults carefully rationed the limited drinking water. Soon after, aid began arriving via helicopter, but supplies were dropped from the air, often resulting in damaged food upon landing. A week later, when the electricity was finally restored, we were able to see our situation on TV and began to understand what a tsunami was.

A few days after the disaster, my family and I decided to evacuate to Medan using the available refugee transport. However, we ran into significant difficulties because the roads leading to Aceh were blocked, with some areas having turned into open sea. Our journey took us through several regions that had not been affected by the tsunami, making it a gruelling and challenging trip. Once we arrived in Medan, we stayed in a rented house for a month while we waited to return home and assess the damage. When we finally went back, I was deeply traumatised to see my school destroyed and covered in mud. The devastation was overwhelming. As a result of the disaster, four elementary schools in our area had been merged into one because so many students had died. Many children became orphans and were either taken in by their families or adopted.

One day, I reunited with my elementary school friends and learned that they had continued their education in refugee tents for a year. Some of them still carry deep

trauma from the experience. With our home and school in ruins, we decided to remain in Medan longer and continue our schooling there. We returned to Medan on a C-130 Hercules plane, and I will never forget the sight of the tsunami-affected areas, covered in black mud, and the horrific smell of decaying corpses and mud. Those memories continue to be deeply traumatic for me.

The tsunami also had a significant impact on the factory where my mother worked, causing it to cease operations until 2011. My mother had to stop working during that period. Fortunately, we received adequate economic aid and special assistance for tsunami victims, which helped us cope with the situation. Additionally, my mother started selling snacks to make a living.

In the aftermath of the tsunami, a disaster mitigation centre was relocated to Syiah Kuala University. Education on disaster preparedness increased significantly, and natural disaster simulations are now held every few years to commemorate the tsunami. Residents are informed in advance about these simulations, ensuring they understand it is a drill and participate effectively. Moreover, many of my friends received scholarships to study in Japan, focusing on fields related to tsunamis, such as hydrology.

Interestingly, many people living in coastal areas are newcomers, as the original residents have relocated to higher ground or other cities to avoid future disasters. Our family is no exception; we now choose to live in higher areas far from the coast. My husband and I have agreed that if a tsunami were to occur again, we would not return home but would immediately seek higher ground. We have prepared a backpack with essential documents wrapped in plastic, so we can quickly grab it if a disaster strikes. We are also aware that tsunamis can originate from rivers, not just the sea.

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# Laila

**M**y house was relatively far from the sea. You could say it was the area where the waves stopped. At that time, I was playing at my grandmother's house in Punge Blang, which is now the site of the Diesel Powerplant (PLTD) Apung Museum. I was only 14 years old then, still in middle school. My father worked as a woodcutter, and my mother was a housewife.

I had never heard of a tsunami before. It was never taught in school. Besides, I was still a child, so I didn't really understand what was happening. There was no special preparation for natural disasters, including tsunamis. We never had any specific programmes, either within our family or at the village community level.

When the earthquake struck, my friends and I, who were playing, panicked and were confused. However, we thought nothing would happen. We continued playing until a little later when we heard someone shouting and running, saying that the sea was rising. At first, I was confused about what they meant. Then, my friends and I ran too along with the adults, to get away from the sea waves.

I didn't think about saving anyone at that time. I just ran and kept running towards the mosque. Some people headed to the Quran study place. My thought, and that of others at the time, was that if we didn't survive, at least we would die in the house of our God. At that time, some adults (the fathers) quickly directed us to enter the mosque and ordered us not to leave.

I didn't face any significant obstacles, just fear and confusion when I first realised the sea was rising. However, from inside the mosque on the second floor, I could see people trying to save themselves from being hit by the

waves; they were struck by wood and building debris. Some of them made it to the mosque where we were, but the rest were swept away and disappeared.

As people panicked and scattered to save themselves, I saw some of them fall and get trampled. Amid the chaos, I noticed a toddler sitting still. As the water got closer, a man bravely pulled the child and carried him. The child was placed on the roof of a house that happened to remain intact after being hit by the waves. After the water subsided, we learned that the child survived, though very weak.

The seawater swirled like a top from a distance, and when that whirlpool hit the coastline, it splashed large waves that engulfed settlements. The water was black and smelled terrible. I clearly remember that there were corpses everywhere. Houses were destroyed. There were so many bodies that when we walked out, we sometimes had to step on them.

While taking refuge in the mosque, we didn't eat at all for several hours. We received food aid from Acehese people who weren't affected by the tsunami. The community spontaneously distributed food to us and raised aid from other areas as well.

After the tsunami, evacuation efforts were carried out together, including the government, the military, and local communities, especially for those who wanted to find their families. Public kitchens were set up at several points. Aid poured in from various parties, including from abroad. At that time, my family and I received food, clothing, and even temporary housing assistance.

I clearly remember that the process of restoring the living conditions of the community went quite well, thanks to the continuous aid we received. Economically, our situation improved year by year, although I still feel the trauma. But, on several occasions, the distribution of aid caused problems. Some victims didn't receive houses, clothing, or other assistance simply because they were missed from the recipient list, even though they were true victims. This issue was quite common during the recovery process at that time. In fact, as far as I know, some housing assistance problems remain unresolved.

The tsunami made Aceh far more developed than before. Development has progressed well, the conflict has ended, and certainly, job opportunities have expanded compared to before the tsunami. However, in my opinion, there are still important issues that need attention,

particularly concerning environmental conservation in coastal areas. Year by year, the coastline continues to encroach inland. More attention needs to be given to mangrove forests.

There's another significant issue. Perhaps because of the abundant aid during the recovery process, people have become more pragmatic. They are not very interested in or keen on attending awareness programmes, particularly on disaster preparedness, if they don't receive money. Even if they do participate, it's because of the money they get. So, their attendance at disaster awareness programmes, for example, doesn't guarantee that they genuinely understand the material.

The tsunami ultimately led me to decide to study environmental and disaster issues more seriously. That's why I am now part of an environmental organisation. I now understand a lot about disasters, such as mitigation and evacuation. However, I still have trauma related to earthquakes to this day. I always cry when an earthquake happens. I don't know why.

Natural disasters are very serious because they involve matters of life and death. I believe everyone must be well-prepared. I hope that what I experienced never happens again, but we never really know when it will strike. Natural disasters are indeed God's will. However, in some cases, we can take preventive or mitigation efforts to prevent and reduce the losses that may arise if they do happen. If a disaster like an earthquake or tsunami happens again, I feel more prepared.

I think the community is now more open to information about disasters. There have been many developments in disaster infrastructure, such as the giant evacuation buildings that are now in several locations in case an earthquake or tsunami happens again. Unfortunately, those buildings are now poorly maintained and are no longer being promoted to the community. I think this is important to be revived so that people are better prepared.

Currently, there are regular awareness or simulation programmes held at least once a year. These aim to inform the public about what and how to act if a disaster occurs. Besides that, there are also special lessons about disasters in elementary schools, although it's not yet a priority.

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*Interviewed and translated by UNDP on 25 July 2024 for the official joint ASEAN-UNDP publication on the 20th anniversary of the Indian Ocean Tsunami. The publication will be published in December 2024. These narratives were edited and condensed by The ASEAN editorial team for this special issue.*

# Yusnia

I was 29 years old then and had just started working at an insurance company. I lived with my mother and younger sibling in a house in the Lampulo area, Banda Aceh. My mother was 69 years old, while my sibling was still in school. I had no knowledge of tsunamis. There were no emergency drills. We absolutely had no preparation. Our community never thought something like that would happen. My family and I never considered the possibility of such a disaster. We knew that natural disasters existed, but we never thought it would happen in our area.

That day, I had just taken my mother to the Quran study group on a motorcycle. I was about to return home when suddenly the earthquake struck. Without thinking twice, I rushed home, but before I could reach the house, I saw people running from the direction of the coast, shouting, "The sea is rising, the sea is rising." I didn't know exactly what was happening. I joined in running, abandoning my motorcycle, filled with fear.

At that moment, I wasn't thinking about anything other than saving myself. I ran along with everyone else, trying to escape the waves. The situation was terrifying, especially since we didn't really know what was happening or what we should do. We just ran in all directions. Eventually, we took shelter on the second floor of a resident's house.

The situation was so frightening. There are many things I remember, and all of them are horrifying. I still remember shortly after the earthquake, the sea level rose, and the waves were pitch black and smelled awful. As the waves chased us, I saw an old man

being swept off his motorcycle and thrown into a roadside ditch. The old man was trapped, and his motorcycle fell on top of him. He cried out for help, but no one paid attention. Everyone was focused on saving themselves.

People were in a state of panic; some even had their clothes torn off by the waves. They were trying to find anything to cover themselves. I saw dead bodies everywhere, including a floating baby. I couldn't hold back my tears.

Another thing I remember clearly is the moment I found my mother, who had survived the tsunami. She held onto a mango tree, clutching a Quran. For me, that was a sign of God's power that I will never forget.

It was only after the waves had subsided that a few brave individuals decided to come down and help those who were still alive. They waded through the black, foul-smelling seawater to save people who were still trapped in trees, wood, and other debris.

We couldn't eat while we were in that second-floor house. Everything was destroyed and submerged in water. It was not until the afternoon that we got food. The fastest aid came from Acehese people who weren't affected by the tsunami and from some people from other regions, like Medan. I remember receiving bread. Because our area was still flooded, food couldn't be distributed properly, so it was thrown to us from below.

Our house was destroyed. We lost many things, both property and family. We tried to rebuild with the help that poured into Aceh. It was very helpful, including assistance with housing, clothing, food, and other

necessities. Alhamdulillah, our situation has improved since then. I still work at the same insurance company, and my mother is still healthy. However, the incident has left me with a fear of the sea. I haven't been to the beach since the tsunami. In fact, I'm afraid to get on a boat. The dark memories have left a trauma that lingers to this day.

For me, the tsunami changed many things in the lives of Acehese people. The economy improved, housing aid was provided, and infrastructure developed rapidly. Not to mention, at that time, there was still a conflict between the Free Aceh Movement (GAM) and the Indonesian government. The tsunami brought an end to that terrifying conflict with a peace agreement.

I'm still scared that a disaster like that could happen again. I believe that everything happens according to God's will. Therefore, the most important thing for me is to strengthen my faith.

The great wave destroyed everything. Now, I avoid the sea as much as possible, including choosing a place to live far from coastal areas.

If a similar disaster does occur, at least we now know what to do and where to go: away from the sea and to higher ground. This is based on my own experience.

*Interviewed and translated by UNDP on 25 July 2024 for the official joint ASEAN-UNDP publication on the 20th anniversary of the Indian Ocean Tsunami. The publication will be published in December 2024. These narratives were edited and condensed by The ASEAN editorial team for this special issue.*

*Survivors of the earthquake and tsunami queue to receive ten packs of instant noodles and two cans of packaged meat in Banda Aceh, Aceh (6/1/2005)*



Tsunami warning tower,  
coast of Krabi, Thailand

# THAILAND'S PROGRESS 20 YEARS AFTER THE INDIAN OCEAN TSUNAMI



Department of Disaster  
Prevention and Mitigation  
Ministry of Interior, Thailand

**O**n 26 December 2004, the Earthquake Observation Division under the Thailand Meteorological Department detected and issued an announcement to inform the public that an earthquake occurred in the sea off the west coast of Sumatra.

The Tsunami Early Warning System was not yet established at that time. There was no sufficient knowledge and experts on tsunamis. Most tourists and local people were not aware and did not have enough knowledge about tsunamis. There was no emergency response plan in the six Andaman Coastal Provinces. Hence, many people lost their lives and properties.

Since then, Thailand has improved and invested in a multi-hazard warning system for tsunamis and has been conducting drills/exercises regularly in Thailand.

It has also formulated a disaster risk management plan at all levels, from national to local communities, under

the concept of “build back better” for a resilient society.

Thailand’s regulations and guidelines for efficient disaster management include the following:

- i. Disaster Prevention and Mitigation Act (2007) which designated the Department of Disaster Prevention and Mitigation (DDPM) as the central government agency to operate any related activities on national disaster preparedness and emergency response. It has the power and authority to operate on disaster prevention and mitigation at the policy and operational levels before, during, and after the disaster.
- ii. The Nation Disaster Prevention and Mitigation Plan (2010-2014) is the framework for national disaster prevention and mitigation. It defines the roles of government agencies and other relevant agencies, and sets the guideline on disaster management, from disaster warning to recovery.

Thailand has established the National Disaster Warning Center with the responsibility of monitoring and disseminating early warning to relevant agencies and people in areas at risk. From issuing tsunami warnings, it has also expanded its responsibility to different hazards in the country.

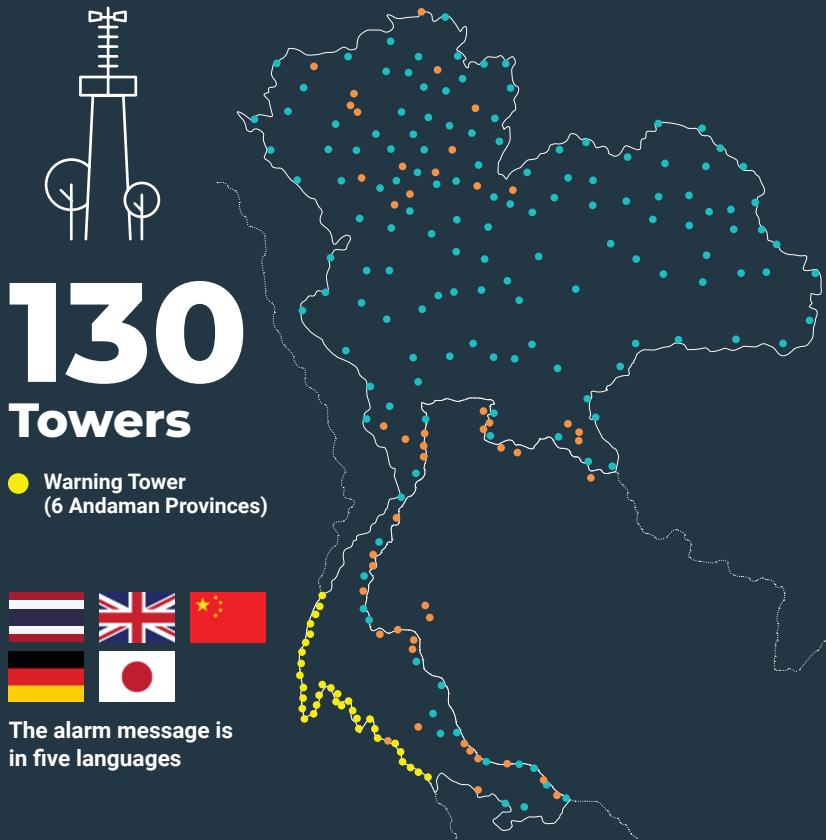
Thailand’s tsunami warning system includes two buoys installed in the Indian Ocean Rim and Andaman Coastal area to monitor undersea megathrust earthquakes with a potential to generate tsunami waves. It also installed two Automatic Tidal Gauge stations at Miang Island, Phang Nga Province and Racha Noi Island, Phuket Province to confirm if a tsunami will impact Thailand (last mile warning).

Thailand also set up 130 warning towers, 47 evacuation towers, 74 CSC (radio relay station) towers, and 22 information towers to alert people in at-risk areas and ensure timely evacuation. The alarm message is in five languages including Thai, English, Chinese, German, and Japanese.

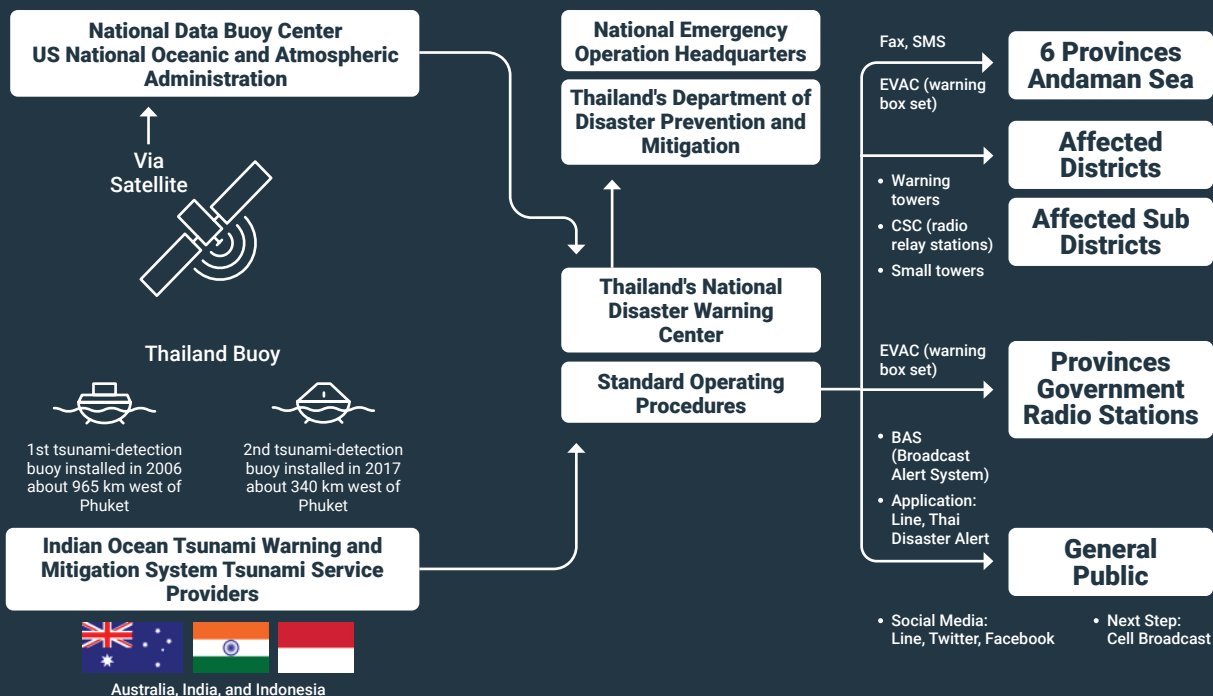
Thailand has assigned the six southern provinces at-risk of tsunami to prepare provincial tsunami action plans that clearly define the scope, duties, and responsibilities of relevant agencies in the area, including the area-appropriate operational procedures.

It has encouraged the conduct of rehearsals, with the participation of the community, to prepare for a tsunami, as well as disseminate knowledge related to tsunamis to the public. In 2023, the DDPM collaborated with the six southern provinces to organise the Walk and Run for Tsunami Learning to allow the public and tourists to learn evacuation routes, memorise escape routes, and test their awareness of symbols along the route and warning signal sounds.

Thailand also continues to enhance the capacity of its disaster management officers by joining training activities and participating in international organisation forums on disaster monitoring and disaster warning to improve their knowledge, to be more professional, and to be ready to handle tsunami threats.



## Thailand Tsunami Warnings Dissemination



# AFTER THE TSUNAMI LESSONS FROM THAILAND'S RECOVERY AND RECONSTRUCTION EFFORTS

Rescue workers search for casualties in Phang Nga, Thailand (30/12/2004)



**Siramon Sopha**  
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On 26 December 2004, a magnitude 9.1 earthquake struck off the coast of the Indonesian island of Sumatra, the most powerful undersea earthquake since 1964. It triggered a series of immense waves that slammed into the Andaman coastlines. Six provinces in the south of Thailand—Phuket, Phang Nga, Ranong, Krabi, Trang, and Satun—were severely devastated. The number of fatalities was approximately 5,400 people, with more than 8,000 injured and 2,800 missing (Nidhiprabha, 2007). Moreover, extensive damage to buildings occurred; local accommodations, resorts, hotels, and roads were completely destroyed.

Given that Thailand is not situated in the Ring of Fire, the tsunami came as a complete shock to the Thai people. Unlike other countries bordering the Pacific Ocean, Thailand lacked tsunami warning systems and experts at that time. Only the undersea earthquake was reported when it hit southern Thailand, and residents and tourists were unaware of another impending disaster. Moreover, the deadly waves hit the shores during the year-end tourism high season, exacerbating the catastrophic losses.

Thailand, like other countries around the Indian Ocean, heavily relies on the tourism sector. In 2004, tourism revenues from the six Andaman provinces accounted for 17 per cent of the total tourism revenues in the entire nation (Asian Disaster Preparedness Center, 2006). According to the Thailand Development Research Institute, the destructive surge devastated 324 hotels, 345 restaurants, 346 stores, and 4,000 stalls (Israngkura, 2005).

The damage to the tourism sector was estimated to be over 73 billion Thai baht—approximately 2.2 billion US dollars at the current rate (Somboon, 2005), with 30 billion Thai baht attributed to immediate damage and 43 billion Thai baht accounted for ongoing or long-term damage, based on 2005 values (Chamnongrasmi, 2005). The International Labour Organization also revealed that up to an estimated 100,000 people in the tourism sector may have lost their jobs. The tsunami not only destroyed the tourism infrastructure



Aerial view of Patong beach in Phuket Island

Photo Credit: ©tampatra/Envato Elements

but also shook tourists' confidence in the safety of the Andaman coast. Tourists' cancelled Thai Airways flights resulted in a loss of 270 million Thai baht—approximately 8 million US dollars at the current rate. The hotel occupancy rate was only 30 per cent in the affected areas in 2005 (Leelawat et al., 2018).

The lessons learned from Thailand's post-tsunami recovery centred on rebooting the economy, rebuilding infrastructure, and implementing new preventive measures and warning systems. The Thai government introduced financial assistance programmes and compensation schemes for the affected people. In the short term, the Ministry of Finance waived and reduced taxes and established the Tsunami SMEs Fund and Tsunami Recovery Fund for equity financing. Responsible lending measures were also enacted to help entrepreneurs survive. Additionally, the Finance Ministry, in collaboration with the Asian Development Bank, launched the Regional Development Plan, which covered policy-level, area-based, and activity-based development for the mid-term (2005-2009) and long-term (2010-2020) periods, targeting three affected areas: Phang Nga, Phuket, and Krabi.

To reconnect the affected areas with the rest of the world, the Thai Government tasked the Department of Highways with expediting the construction of highways between Krabi and Ao Leuk, as well as between Ao Leuk and Thap Put, by 2007. The Provincial Electricity Authority was directed to install electric cables from Ao Nang to Railay Beach quickly. Meanwhile, the Marine Department was assigned to conduct a feasibility study to establish a Port of Call from the mainland to Lanta Noi Island and further connect Lanta Noi to Lanta Yai.

Natural disasters can strike unexpectedly, and Thailand is committed to ensuring that history does not repeat itself. Since the tsunami of 2004, Thailand has successfully developed a world-standard disaster warning system, including offshore warning buoys and a tsunami warning tower in Phuket. Several tsunami evacuation drills are conducted annually in high-risk areas. Following the disaster, the government established the Department of Disaster Prevention and Mitigation under the Ministry of Interior to oversee the disaster warning system planning, and every year since, the 26th of December has been commemorated as a "National Disaster Prevention Day."

Disaster alerts are now available in five languages: Thai, English, Russian, Chinese, and Japanese, to ensure that tourists receive timely and inclusive warnings. In 2025, the Ministry of Digital Economy and Society plans to launch a five-language mobile phone emergency warning system, enabling both Thais and foreigners to receive warning messages in any area when disasters occur.

In the tourism sector, achieving a solid recovery has become a top priority. According to the Asian Development Bank Institute, the government set aside 112 million US dollars for immediate tsunami relief, of which 14 per cent was allocated to projects for reviving the tourism industry in the Andaman areas. According to the Bank of Thailand, tourist numbers began to increase two years after the tsunami. In response, the government initiated efforts to promote sports events aimed at transforming certain Andaman coastal areas into world-class sports and water sports hubs. Plans were also set in motion to accelerate the construction of convention and exhibition centres in Phuket, alongside organising tourism events in the coastal provinces for three consecutive years. Additionally, various initiatives were implemented to boost tourism in the affected areas and reshape tourists' perceptions of the safety of travelling along the Andaman coastline. These initiatives included leveraging influencers, producing commercials, organising roadshows, and hosting familiarisation trips to allow media representatives to witness firsthand the safety of travelling in these areas.

Twenty years after the Indian Ocean Tsunami, Thailand has made significant strides in disaster preparedness and community resilience. The country has implemented world-class warning systems, improved evacuation plans, and conducted regular disaster response drills to ensure the safety of its residents and tourists. These measures have helped rebuild trust in the safety of Thailand's coastal areas and demonstrated the nation's commitment to protecting its people and visitors from future natural disasters.



References may be downloaded from this link: [https://bit.ly/Issue39\\_Ref](https://bit.ly/Issue39_Ref)



# A DISASTER UNFORESEEN

## Reflections on Malaysia's Tsunami Response



Photo Credit: ©National Disaster Management Agency Malaysia



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Search and rescue operation for victims of a landslide in Cameron Highlands, Malaysia (26/1/2024)

The 26 December 2004 Indian Ocean Tsunami was one of the deadliest natural disasters in modern history, impacting several countries in South and Southeast Asia, including Malaysia. For Malaysia, a country seemingly blessed and spared from having to experience severe natural disasters, the likelihood of a tsunami hitting our shores is considered to be as remote as an asteroid hitting Earth. Yet, the unforeseen did occur— at about 12:45 pm on 26 December 2004, nearly four hours after the magnitude 9.1 undersea earthquake shook the west coast of northern Sumatra, Indonesia, the first wave of tsunami swept into the Straits of Malacca's northern entrance.

Cityscape of George Town, Penang  
from the seashore



Photo Credit: © a\_medvedkov / Envato Elements

Compared to the devastation in Banda Aceh, the tsunami's impact on Malaysia's west coast can be construed as minimal. Based on the assessment of the affected areas that was conducted, estimated damages amounted to 15 million Malaysian ringgit (equivalent to 3.4 million US dollars). Much of the damage involved village houses, light traffic bridges, vehicles, fishing boats, and fishing equipment.

The damage was particularly severe along the Kedah coastline, north of Kuala Muda. Although this area sustained the most severe damage, the highest loss of life occurred in the state of Penang. In total, 68 deaths were officially recorded in Malaysia, and 52 of these occurred in Penang. Fisheries, a vital source of livelihood for many coastal communities on the west coast of peninsular Malaysia, were particularly hard hit, resulting in loss of income for numerous families. Additionally, the tsunami caused considerable environmental damage, including the destruction of mangroves and coral reefs, which serve as natural

barriers against coastal erosion and storm surges. Overall, the cost of repair, reconstruction, and support to the affected victims borne by the Malaysian government was more than 100 million Malaysian ringgit (equivalent to 22.8 million US dollars).

In the immediate aftermath of the tsunami, the Malaysian government launched extensive rescue and relief operations through the coordination of its National Security Council, which was the focal point for disaster management at that time. Temporary shelters were set up and basic necessities as well as medical aid were provided to the affected population. The recovery phase focused on rebuilding homes, restoring infrastructure, and revitalising the local economy. Significant efforts were made to rehabilitate the affected communities, with special attention given to the restoration of fisheries and other sources of livelihood.

As in any disaster, local communities play a crucial role in the relief and recovery process. Volunteerism surged

as Malaysians from various walks of life came forward to assist in relief efforts. Community-driven initiatives, such as rebuilding houses and cleaning up affected areas, were instrumental in the recovery process. Traditional coping mechanisms, including mutual aid and community solidarity, were also essential in helping communities recover from the disaster.

The horrendous experience of the tsunami marked a turning point in Malaysia's approach to disaster management. It underscored several important lessons in preparedness, coordination, and response capabilities, leading to a series of reforms aimed at strengthening the country's resilience to future disasters.

The lack of an effective early warning system at that time contributed to the high number of casualties. As a result, Malaysia has since invested significantly in developing and maintaining a robust early warning system to ensure timely alerts and facilitate swift evacuations. The Malaysian Meteorological

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**The recovery phase focused on rebuilding homes, restoring infrastructure, and revitalising the local economy.**

Department (MET Malaysia) has established the National Tsunami Early Warning System to provide early warning on the possible onslaught of a tsunami. With this system, the government is able to provide early warning to the public of a potential tsunami occurrence over the Indian Ocean, South China Sea, and the Pacific Ocean. The National Tsunami Early Warning System is an integral part of the Indian Ocean Tsunami Early Warning System and the Northwest Pacific Tsunami System, coordinated by the Intergovernmental Oceanographic Commission (IOC), UNESCO. As part of the IOC Tsunami Network, Malaysia has also established linkages with the Pacific Tsunami Warning Centre and the Japan Meteorological Agency.

Community engagement is another vital lesson. The tsunami disaster highlighted the need to involve local communities in disaster preparedness and response planning. Engaging communities enhances their resilience and ensures that response strategies are culturally appropriate and locally relevant to suit their roles as initial responder at their

locations. The programmes conducted by various government agencies involve training community members in disaster response, conducting regular drills, and developing community-based disaster risk management plans. Public awareness campaigns are also conducted to educate and engage the public on disaster preparedness and climate resilience.

Inter-agency coordination is another crucial aspect. The tsunami revealed gaps in coordination among various government agencies, NGOs, and other partners. Since then, continuous training and capacity building have been conducted to improve inter-agency coordination and ensure a more cohesive and effective response to future disasters.

The need for resilient infrastructure also became apparent. The Integrated Resettlement Programme was introduced to build back safer and better for the disaster-affected communities, thus reducing disaster risk and solving problems on the ground arising from land title issues and squatters. Investment in resilient infrastructure projects has now become a key component of Malaysia's disaster preparedness strategy. Projects aimed at building flood defences, coastal protection, and resilient housing are being undertaken to reduce vulnerability to future disasters.

As the ASEAN region continues to face increasing threats from natural disasters, particularly exacerbated by climate change, Malaysia has been scaling up its preparedness and building our country's resilience against future disasters. National strategies and policies have been formulated to strengthen disaster risk reduction and climate change adaptation efforts.

Under Malaysia's 5-year development plan, green growth will be bolstered to ensure sustainability and resilience. Building upon the initiatives from the previous Malaysia Plans, the 12th Malaysia Plan addresses climate change, reducing risks and strengthening the enabling environment for effective governance through:

- i. Increasing resilience against climate change and disasters;

- ii. Implementing evidence-based and risk-informed actions;
- iii. Adapting integrated approaches for climate change and disaster risk reduction;
- iv. Enhancing early warning systems and disaster response; and
- v. Enhancing disaster preparedness and recovery.

Regional and international collaboration will continue to play a significant role in Malaysia's resilience-building efforts. Malaysia will continue to actively participate and leverage on regional collaboration under the ASEAN Agreement on Disaster Management and Emergency Response (AADMER) as well as its operational arm, the ASEAN Coordinating Centre for Humanitarian Assistance on disaster management (AHA Centre). Malaysia also partners with international organisations, NGOs as well as other countries to enhance our resilience.

Research and innovation are driving the development of new approaches and solutions for disaster risk management and climate resilience. Hence, Malaysia will continuously pursue research and innovation, focusing on understanding disaster risks and developing innovative solutions to mitigate these risks. Furthermore, technological advancements, such as GIS mapping and remote sensing, are being utilised to enhance disaster preparedness and response capabilities.

As we enter its 20th year commemoration, the Indian Ocean Tsunami is a stark reminder of nature's unpredictability and the devastating impact a disaster can have on even the most seemingly secure nation. For Malaysia, the tsunami was a tragedy and a turning point. It spurred our country towards better disaster preparedness and risk reduction to safeguard our people and preserve our nation's development gains against the challenges of the future disaster risk landscape.

ศูนย์ศึกษาใน 5 โรงเรียนจังหวัดพังงา

ความพร้อมรับมือคลื่นสึนามิใน 18 ประเทศเอเชีย-แปซิฟิก  
Preparedness for Tsunamis in 18 Asia-Pacific Countries

มกราคม พ.ศ. 256

Community drills are a critical component of an effective early warning system

90 drills in 18 countries

Strengthening tsunami preparedness in the Asia-Pacific



# THE INDIAN OCEAN TSUNAMI OF 2004 Lessons for ASEAN-UNDP Cooperation on Recovery



**Sanny R. Jegillos**  
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## The silent story of global solidarity

A Japanese proverb says, “A disaster happens when the last one is forgotten.” No other disaster event in the region has offered as much experience and knowledge as the Indian Ocean Tsunami of 2004.

It was a poignant moment that enveloped the entire Asia-Pacific region with profound sadness—a region that is not exactly a stranger to frequent disasters. Even with time, many of us still recall the devastation, and it is something we should not forget.

It is imperative to tell the story of the international response to the 2004 tsunami, particularly the global solidarity in its immediate aftermath. The international community raised 13.5 billion US dollars, of which up to 40 per cent was donated by individuals, trusts, foundations, and businesses. This was the most rapidly and generously funded disaster response in history at that time for the Asia Pacific region. The 13.5 billion US dollars were pledged or donated internationally for emergency relief and reconstruction, including more than 5.5 billion US dollars from the

general public in developed countries. Private donations broke many records. Governments were flexible and relatively rapid in their funding. Reporting of pledges and commitments and the timeliness of official donations turned out better than in previous crises. This presents an excellent case of the value of goodwill among peoples and nations and the integrity of the international community towards helping disaster-affected countries.

Solidarity among countries was also further amplified among ASEAN countries. The probability of a similar catastrophic event in one or several member states is a continuing concern of ASEAN and serves as the rationale for building regional cooperation. The Indian Ocean Tsunami was regarded as a catalyst for the enhancement of cooperation among ASEAN countries through the ASEAN Committee for Disaster Management and the creation of the AHA Centre. The ASEAN Agreement on Disaster Management and Emergency Response (AADMER), a legally binding regional agreement, was signed in 2005 and ratified on 24 December 2009. Within this ASEAN Framework, UNDP, through its Bangkok Regional Hub, was pleased

to cooperate under the UN-ASEAN Joint Strategic Plan for Disaster Management (UNJSPDM) in enhancing regional capacity for preparedness for resilient and sustainable recovery from a catastrophic event, such as another major tsunami impacting one or more states.

Following the 2004 tsunami, UNDP, through its country offices in the five most tsunami-affected countries, viz. Indonesia, Thailand, Sri Lanka, Maldives, and India responded swiftly to the immediate needs of the governments and communities to save lives and minimise losses and damages. To sustain gains of immediate response and help affected countries return to development pathways, UNDP implemented a regional programme on “Capacity Building for Sustainable Recovery and Risk Reduction in the Tsunami Affected Countries”. The regional project served the UNDP Country Office in these countries and prioritised the objectives of strengthened information management capacities, enhanced early warning systems, and capacity building of government and other stakeholders at community, local, national, and regional levels.

## Strengthening community preparedness

Twenty years later, UNDP has continued a more focused approach in cooperation with the people and government of Japan through a regional project titled “Partnerships for Strengthening School Tsunami Preparedness in the Asia-Pacific Region.” This project has been instrumental in building community resilience and preparedness in the Asia-Pacific region by focusing on high-risk areas prone to tsunamis. Its primary objective was strengthening school preparedness for tsunamis and other coastal hazards across 24 countries and almost all of the ASEAN Member States. The project involved conducting tsunami evacuation drills, developing and supporting national governments’ plans for scaling up through a regional guide to assist schools in conducting drills, updating school emergency plans, and integrating these plans into national disaster management frameworks.

As of today, over 520 schools participated in the drills, engaging more than 210,000 students, teachers, school staff, and local officials and helping raise awareness in the local communities. These efforts have increased community preparedness and readiness, ensuring that schools are equipped to act swiftly during emergencies. The 20th-year commemoration is an opportunity to enhance further awareness of the tsunami risks and the importance of school and community preparedness. UNDP advocates that more must be done to scale up this cooperation’s modest but meaningful gains.

Within ASEAN’s focus on the thematic agenda of “recovery” in 2025, UNDP leads the UN agencies under the UN-ASEAN Joint Strategic Plan for Disaster Management (UNJSPDM) in sharing lessons learned and best practices in preparedness for recovery. Under this cooperation, the ASEAN and the UNDP are collaborating on a joint publication on lessons learned from the Indian Ocean Tsunami due for dissemination on 26 December 2024.

## From managing relief to managing risks

The international community delivered but needed an environment that allowed more efficient and effective response delivery. Like most of the world at that time, the countries affected had few pre-established rules for managing the incoming humanitarian response. In an early consultation between UNDP and the International Federation of Red Cross and Red Crescent Societies (IFRC), we shared the challenges that hindered international assistance due to restrictive local laws—visas and customs approval processes were inadequate, complex, and time-consuming. At the same time, some laws were too lenient and did not allow for accountability and the promotion of inclusion and equity. This reflection became the basis of an enduring cooperation between the two agencies in enhancing institution and legislative systems in the Asia Pacific region (IFRC, n.d.).

More importantly, the affected governments organised themselves to address the constraints in their enabling environment. The event has been the major driver for increasing investments in disaster risk reduction, a significant shift from managing relief focus. The tsunami event in 2004 made the passing of a comprehensive institutional and legislative system urgent and a national priority to strengthen disaster management capacity in tsunami-affected countries. With support from stakeholders, including the UNDP, the government of Sri Lanka passed the Disaster Management Act number 13, which became the basis for substantial improvement in disaster risk management. It created a Ministry of Disaster Management in Sri Lanka signifying the importance of the issue.

UNDP is the main partner of the national government of Indonesia in the enactment of the Disaster Risk Reduction (DRR) Law in 2007, which incorporates the principles of good governance in risk reduction as well as comprehensive approaches to addressing the underlying causes of risks by mainstreaming DRR into development planning. Similar guidance was provided by UNDP in other countries in their own national processes to promulgate and approve new laws and policies, notably in Viet Nam, the Lao

PDR, Timor-Leste, and the Philippines. One can say that the lessons of the Indian Ocean Tsunami inspired these policy reforms at scale.

This momentum radiated into other countries when 168 countries met in Hyogo Prefecture, Japan, in 2005 to declare their commitment to a set of goals and targets known as the Hyogo Framework for Action on Disaster Risk Reduction (HFA 2005-2015). One of the goals they agreed on was international cooperation on multi-hazards early warning with the recognition that the presence of this capacity would have substantially reduced deaths and injuries (World Meteorological Organization, 2005). The HFA builds on the Yokohama Strategy for a Safer World (1994), which declared principles rather than concrete targets. The attention to concrete goals and targets is further advanced in the Sendai Framework for Disaster Risk Reduction (2015-2030), which advocates the notion of the strong interlinkages between development and disasters.

## The golden principles of “build back better”

Two years after the tsunami of 26 December 2004, there were major achievements on the long road to recovery among the devastated communities across the Indian Ocean region. By then, some 150,000 houses had been built, most of the displaced lived in adequate transitional shelters, and large infrastructure projects were underway. Children were quickly back in school, and hundreds of new schools were under construction. Most affected families resumed a livelihood of some kind, and in Aceh, the parties to its long-running political conflict achieved an agreement that paved the way for lasting peace.

UNDP was an active participant in the Tsunami Evaluation Coalition (TEC), which sought to improve policy and practice in the relief and rehabilitation sector, provide some accountability to both the donor and recipient public, and improve evaluation in the relief and rehabilitation sector by learning from the TEC process itself.



Photo Credit: ©UNDP Tsunami Project

Noteworthy, the TEC process created awareness of important principles from lessons learned. These principles are best stated in the Special Envoy's Propositions for Build Back Better. It is an important reminder for the UN/ UNDP agencies and the ASEAN in their desire for cooperation in response and recovery. These are the 10 "Build Back Better" (BBB) propositions:

- i. Governments, donors, and aid agencies must recognise that families and communities drive their own recovery.
- ii. Recovery must promote fairness and equity.
- iii. Governments must enhance preparedness for future disasters.
- iv. Local governments must be empowered to manage recovery efforts, and donors must devote greater resources to strengthening government recovery institutions, especially at the local level.
- v. Good recovery planning and effective coordination depend on good information.
- vi. The UN, World Bank, and other multilateral agencies must clarify their roles and relationships, especially in addressing the early stage of a recovery process.
- vii. The expanding role of NGOs and the Red Cross/ Red Crescent Movement carries greater responsibilities for quality in recovery efforts.

- viii. From the start of recovery operations, governments and aid agencies must create the conditions for entrepreneurs to flourish.
- ix. Beneficiaries deserve the kind of agency partnerships that move beyond rivalry and unhealthy competition.
- x. Good recovery must leave communities safer by reducing risks and building resilience.

The BBB approach in disaster recovery is a strategy aimed at reducing vulnerability to future disasters by improving the physical, social, and economic conditions of communities during the recovery and reconstruction process. The BBB approach aims to transform disaster recovery into an opportunity for improving the overall resilience and sustainability of communities rather than merely restoring them to their pre-disaster state. Since then, BBB has become the mantra of post-disaster reconstruction programs. Disasters have been recognised and leveraged as opportunities for change and improvement and, in some cases, are even considered as a "helpful interruption" to previously unchallenged inadequate policies and practices, such as those that disadvantaged certain groups, for example, persons with disabilities. BBB includes efforts to prevent recreating or exacerbating pre-disaster vulnerabilities in the process of reconstruction. By strategically embracing and optimising institutional, financial, political,

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**As of today, over 520 schools participated in the drills, engaging more than 210,000 students, teachers, school staff, and local officials and helping raise awareness in the local communities.**

and human opportunities, positive externalities are believed to arise from disasters, which can lead to safer and more resilient communities. As a consequence of the growing prominence of BBB, many organisations involved in disaster recovery, rehabilitation, and reconstruction have re-labelled their activities as espousing BBB.

Does BBB and doubling down on human development efforts work? Many of us who were in Aceh would not have imagined how the communities and province could recover in the immediate aftermath of the conflict and the tsunami. The unprecedented response from the global community after the tsunami of December 2004 made it possible to repair most of the damage and destruction to physical infrastructure, although the healing of trauma from the loss of kin and suffering during the tsunami and conflict continue to linger. The BBB principles during the recovery in Aceh are a key component of human development efforts in the province.

*The Human Development Index in Aceh improved more slowly following the tsunami, and the province ranked 29th among 33 provinces in 2008. In 2023, the province of Aceh ranked number 11 on the Human Development Index.*



References may be downloaded from this link: [https://bit.ly/Issue39\\_Ref](https://bit.ly/Issue39_Ref)

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# The ASEAN

ASEAN Secretariat celebrates the 57th ASEAN Day at its Jakarta headquarters, officiated by Indonesia's Foreign Minister Retno Marsudi and ASEAN Secretary-General Dr. Kao Kim Hourn, with the Jakarta diplomatic community in attendance. This year's theme, "Connected and Resilient Community," aligns with the Lao PDR's ASEAN Chairmanship theme for 2024, "ASEAN: Enhancing Connectivity and Resilience." (8/8/2024)



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