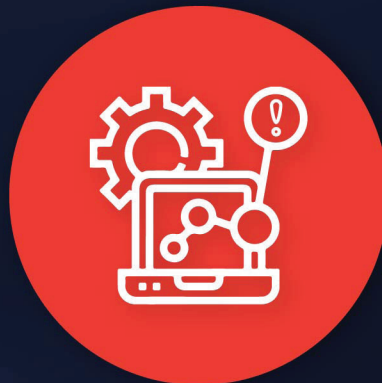
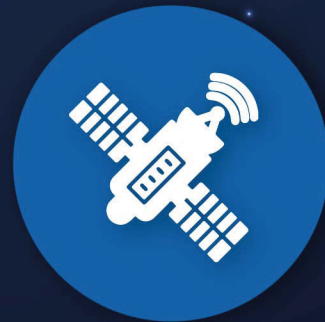




ASEAN Disaster Risk Communication Framework



The Association of Southeast Asian Nations (ASEAN) was established on 8 August 1967. The Member States are Brunei Darussalam, Cambodia, Indonesia, the Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Viet Nam.

The ASEAN Secretariat is based in Jakarta, Indonesia.

For inquiries, contact:

The ASEAN Secretariat

Community Relations Division (CRD)

70A Jalan Sisingamangaraja

Jakarta 12110, Indonesia

Phone : (62 21) 724-3372, 726-2991

Fax : (62 21) 739-8234, 724-3504

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ASEAN Disaster Risk Communication Framework

**The ASEAN Secretariat
Jakarta**

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Acronyms

AADMER	ASEAN Agreement on Disaster Management and Emergency Response
ACC THPC	ASEAN Coordinating Centre for Transboundary Haze Pollution Control
ACDM	ASEAN Committee on Disaster Management
ADDM	ASEAN Day for Disaster Management
ADINet	ASEAN Disaster Information Network
ADRCF	ASEAN Disaster Risk Communication Framework
AEIC	ASEAN Earthquake Information Centre
AHA Centre	ASEAN Coordinating Centre for Humanitarian Assistance on disaster management
AIM-Net	AHA Centre Information Management Network
AJDRP	ASEAN Joint Disaster Response Plan
AMS	ASEAN Member States
ARMOR	ASEAN Risk Monitor and Disaster Management Review
ASEAN-ERAT	ASEAN-Emergency Response and Assessment Team
ASMC	ASEAN Specialised Meteorological Centre
BDMD	Brunei Darussalam Meteorological Department
BMKG	Meteorology, Climatology, and Geophysics Agency
CBOs	Community-Based Organisations
CSOs	Civil Society Organisations
DID	Department of Irrigation and Drainage
DMH	Department of Meteorology and Hydrology
DMR	Department of Mineral Resources
DMRS	ASEAN Disaster Monitoring and Response System
DOE	Department of Environment
DRC	Disaster Risk Communication
DRM	Disaster Risk Management
EWS	Early Warning System
HADR	Humanitarian Assistance and Disaster Relief
ICG/IOTWMS	Intergovernmental Coordination Group for the Indian Ocean Tsunami Warning and Mitigation System
JTWC	Joint Typhoon Warning Centre
MARD	Ministry of Agriculture and Rural Development
MetMalaysia	Malaysian Meteorological Department

MIC	Ministry of Information and Communications
MONRE	Ministry of Natural Resources and Environment
MOWRAM	Ministry of Water Resources and Meteorology
MSS	Meteorological Service Singapore
NDMOs	National Disaster Management Offices
NDRRMC	National Disaster Risk Reduction and Management Council
NGOs	Non-Governmental Organisations
PAGASA	Philippine Atmospheric, Geophysical and Astronomical Services Administration
PHIVOLCS	Philippine Institute of Volcanology and Seismology
PTWC	Pacific Tsunami Warning Centre
PUPR	Ministry of Public Works and Housing
PVMBG	Center for Volcanology and Geological Hazard Mitigation
SASOP	Standard Operating Procedure for Regional Standby Arrangements and Coordination of Joint Disaster Relief and Emergency Response Operations
SOPs	Standard Operating Procedures
TMD	Thai Meteorological Department
UN	United Nations
VMHA	Viet Nam Meteorological and Hydrological Administration

Forewords



As the Chair of the ASEAN Committee on Disaster Management in 2024, it is my great privilege to present the ASEAN Disaster Risk Communication Framework. This framework is a fundamental tool for enhancing the dissemination of disaster risk information throughout the ASEAN region, guaranteeing that crucial information reaches the appropriate parties at the opportune moment - prior to, during, and subsequent to disasters.

In recent years, the disaster risk landscape has evolved rapidly. Climate change has exacerbated the intensity and severity of disasters, while rapid urbanisation and advancing technologies have introduced new complexities. Recognising these challenges, the ASEAN Agreement on Disaster Management and Emergency Response (AADMER) Work Programme 2021-2025 emphasises the importance of effective communication in disaster management. Improved communication is essential to significantly reduce disaster risks and to achieve our shared goal of substantially reducing losses to lives, livelihoods, health and assets across the region.

The ADRCF embodies ASEAN's commitment to fostering regional resilience through inclusive and sustainable approaches. It provides a comprehensive guide to the disaster risk communication process, mapping the roles of various stakeholders and outlining actionable strategies to improve the reliability, clarity, and trustworthiness of risk information. Moreover, the framework aligns seamlessly with the theme of Brunei Darussalam's ACDM Chairmanship in 2024: *"Building a resilient ASEAN through Inclusive and Sustainable Disaster Recovery"*.

At its core, the ADRCF emphasises the importance of timely and accurate information-sharing among a wide array of stakeholders, including national agencies, ASEAN centres, regional entities and international partners. By outlining a four-step process for effective communication and urging the implementation of a robust Plan of Action, the Framework serves as both a blueprint and a catalyst for enhancing disaster preparedness, response, and recovery in the ASEAN region.

I extend my heartfelt gratitude to all those who contributed to the development of the framework, especially the ACDM members, for their dedication and expertise in shaping this significant framework. Your collective efforts have laid a strong foundation for a safer and more resilient ASEAN. Together, we can rise to the challenges of an ever-changing disaster landscape, ensuring the well-being and safety of our communities.

Thank you

A blue ink signature of the official.

COL (R) MUHD HARRITH RASHIDI BIN HAJI MUHD JAMIN

Director of the National Disaster Management Centre,
Ministry of Home Affairs Brunei Darussalam,
Chair of ASEAN Committee on Disaster Management

Executive Summary

The ASEAN Disaster Risk Communication Framework (ADRCF) is a guiding framework designed to support the improvement and harmonisation of disaster risk communication efforts across ASEAN Member States before, during, and after disasters. The Framework is of particular value in ASEAN, a region, which experiences frequent, severe natural hazard events.

The ADRCF provides a common point of reference for stakeholders in the ASEAN region on the goals and processes of disaster risk communication, including national agencies, ASEAN centres, regional entities and international partners. It also aims to engage these stakeholders in a dynamic process, ensuring that informed decisions and actions continually enhance risk communication across the region.

The ADRCF is an integral component of the region's efforts to mitigate the impact of disasters, as outlined in the ASEAN Agreement on Disaster Management and Emergency Response (AADMER).

The ADRCF has four key objectives:

1. To increase the **timeliness and reliability** of disaster risk information flows via ASEAN institutions to and from national disaster management organisations (NDMOs) and other stakeholders;
2. To promote disaster risk communication that is consistently **understandable and actionable** by decision-makers in pre-, ongoing, and post-disaster phases;
3. To encourage institutions in ASEAN to **raise the trustworthiness** of disaster risk information, so that stakeholders are more willing to act on information and take appropriate risk management actions;
4. Finally, to **strengthen ASEAN's leadership** in disaster risk communication by setting examples through sharing best practices, continuous learning, and fostering innovation on disaster risk communication in international networks and partnerships among diverse stakeholders, both regionally and globally.

In the ADRCF, disaster risk communication is conceived as a four-step process:

1. **Collect, Analyse, and Inform:** Gathering and processing data on hazards, exposure and vulnerabilities and disseminating this information to relevant stakeholders to inform preparedness and mitigation efforts.
2. **Decide:** Making informed decisions about what to communicate, when, how and to whom.
3. **Implement:** Executing communication strategies and plans.
4. **Monitor, Report, and Improve:** Continuously monitoring the implemented strategies' effectiveness, reporting outcomes, and making necessary adjustments to improve future risk communication efforts.

The ADRCF identifies a range of stakeholders in the ASEAN region who have a role in disaster risk communication. These include NDMOs, and other government agencies involved in monitoring natural hazards, the AHA Centre, other ASEAN sectoral bodies, centres and entities with mandates related to natural hazard monitoring, the ASEAN Secretariat, non-governmental organisations, international partners, as well as the private sector and media. This inclusive approach ensures that all relevant stakeholders are reflected in the framework.

The ADRCF promotes the systematic collection, analysis, and sharing of reliable data on hazards and vulnerabilities, enabling informed decisions and timely action, employing established and frontier technologies.

The ADRCF applies across all the phases of disaster management - risk assessment and monitoring, prevention and mitigation, preparedness and response, and recovery. Risk communication is critical at all stages to facilitate informed decision-making, and support effective action. In the risk assessment phase, findings need to be communicated effectively to decision-makers to inform policy and planning. In the prevention phase, communications raise awareness and understanding of underlying risks and promote appropriate responses. During preparedness and response, the ADRCF sets the objective for communities receive timely information on threats, evacuation routes, and safety procedures. In the recovery phase, effective communication supports resilience through targeted solutions for affected communities.

The framework calls on stakeholders to carry out a Plan of Action (POA):

1. **Strengthen hazard monitoring coordination** between national government agencies and relevant organisations with the AHA Centre.
2. **Enhance existing regional guidelines for disaster risk communications** between regional and national levels.
3. **Capacity building for effectively delivering disaster risk communications** between regional and national level.
4. **Enhance data sharing between regional and national level**, including data collection on risk information, available communication channels, communication protocols, and existing disaster risk communication materials of all ASEAN Member States.
5. **Developing, refining, and applying indicators** based on feedback and collected data to enhance disaster risk communication strategies, protocols, and materials.
6. **Sharing best practices and lessons learned ASEAN countries**, through policy notes, case studies, briefing papers, and evaluation reports on the ADRCF process

Introduction

Rationale

Southeast Asia is one of the most at-risk regions in the world for natural hazards. ASEAN Member States are exposed to a variety of hazards, including floods, storms, typhoons, droughts, earthquakes, and landslides. The region has experienced numerous disasters in recent years, including large-scale events such as the Sulawesi Earthquake and Tsunami in Indonesia (2018), wildfires in Myanmar (2018), Typhoon Damrey in the Philippines and Viet Nam (2017), and Typhoon Haiyan in the Philippines (2013).

These disasters, combined with the Covid-19 pandemic, have underscored that effective risk communication not only builds awareness but also prompts appropriate protective action. Effective communication can be measured and significantly contributes to overall improved outcomes in disaster risk management. Disaster risk communication is a crucial component of effective disaster risk management. It promotes inclusivity, supports sound policymaking, and saves lives through early warning systems. In recent years, communication has emerged as a central pillar in the disaster risk sector, as highlighted by the UN's Global Assessment Report 2022 and the Sendai Monitoring Framework. This underscores the critical role that effective communication plays in mitigating the impacts of disasters and saving lives.

Effective communication in disaster risk management involves more than just top-down dissemination of information by experts. It is a two-way process where information must be tailored to the needs of the target audience, providing clear guidance on actionable steps to take in the face of impending risks. Messages that are specific, reliable, accurate, and consistent motivate individuals to take protective action. When the audience trusts the sender of a message, they are more likely to take actions to protect themselves.

Timely communication of disaster risks is particularly crucial for enabling decision-makers to make informed choices, which can then lead to prompt action and ultimately reduced disaster losses. Delayed or inadequate communication, on the other hand, can exacerbate negative disaster impacts, increasing human suffering and economic losses. In this context, the development of a comprehensive disaster risk communication framework within ASEAN is not only essential but also urgent, given the increasing frequency and severity of natural hazards in the region.

Overview of Disaster Risk Communication in ASEAN

ASEAN Member States recognised the importance of disaster risk communication and, in 2021, called for the development of a Disaster Risk Communication Master Plan (Output 1.3.1.1 of the AADMER Work Programme 2021-2025, Priority Programme 1).

In the prevention and mitigation phase of the disaster management cycle, the collection and analysis of risk information is an important starting point when deciding which risks to communicate, what information the audience needs, and what decisions and actions they are expected to take to prepare themselves. A number of ASEAN frameworks and tools have been developed to support this (see Box 1). These call for enhancing the region's risk information and analysis capability, particularly emphasising the collection and analysis of data on vulnerabilities and capacities.

Risk analysis benefits from high-quality data inputs.

Several ASEAN and regional centres and institutions are already working to improve data availability and quality for South-East Asia. A selection of these ongoing data initiatives is shown in Box 2.

Human interaction in communicating risk information and engaging target audience remains relevant in this digital age. ASEAN activities in this domain create spaces for dialogue between ASEAN, its Member States, and the broad network of stakeholders who are partners in achieving regional resilience. There are also mechanisms and initiatives that provide space to collect and analyse the perspectives of other competent authorities and stakeholders that are not regularly involved in the crafting of these regional coordination arrangements.

BOX 1

ASEAN INITIATIVES & PLATFORMS THAT MONITOR DISASTER RISKS

- ASEAN Coordinating Centre for Humanitarian Assistance on disaster management (AHA Centre)
- ASEAN Specialised Meteorological Centre (ASMC)
- ASEAN Earthquake Information Centre (AEIC)
- ASEAN Coordinating Centre for Transboundary Haze Pollution Control (ACC THPC)

ASEAN INITIATIVES & PLATFORMS THAT PROVIDES DATA ANALYSIS AND DISSEMINATION

- ASEAN Disaster Monitoring and Response System (DMRS)
- ASEAN Disaster Information Network (ADINet)
- Regional Haze Situation (<https://asmc.asean.org/home/>)
- ASEAN Earthquake Information Centre (<https://aeic.bmkg.go.id/mapperaeic.php>)

During the preparedness and response phases, stakeholders can access Disaster Information Products from AHA Centre as reliable information, including the provision of early warning, that helps them prioritise response actions. AHA Centre Executive Briefings, meanwhile, pave the way for improved collective response as they provide a diverse audience of decision-makers with a platform to respond to requests of affected Member States and to contribute their own perspectives.

The issuance of early warnings illustrates best the role of effective risk communication in disaster management. While these are usually issued by national governments to the public, ASEAN provided support by producing an assessment report on the current capacities and gaps in the region. The report (Strengthening ASEAN Multi-hazard End to End Early Warning System (EWS) for natural disasters - An Assessment of Current Capacity) indicated that there were “gaps in tailoring communication to different groups, the absence of clear actionable guidance in warning messages, and weaknesses in communication channels- especially to reach isolated, rural communities.

In relation to post-disaster risk communication, the AHA Centre, in collaboration with the affected and assisting Member States and other partners, conducts post-response reviews to gather lessons learned and improve regional response, including coordination and communication strategies as well as the effectiveness, usefulness, and reliability of the AHA Centre’s information products in disseminating timely and actionable disaster risk information. The feedback gathered from these evaluations is used to enhance future communication efforts, ensuring that information products continue to meet the needs of stakeholders during disaster response operations.

BOX 2

ASEAN FRAMEWORKS AND TOOLS FOR DATA COLLECTION AND ANALYSIS

- ASEAN Regional Guidelines on Risk and Vulnerability Analysis
- ASEAN Common Framework for Comprehensive School Safety & Manual for Operationalisation
- ASEAN Framework and Guidelines for Operationalizing Protection, Gender, and Inclusion
- ASEAN Framework on Anticipatory Action in Disaster Management

Purpose

The ASEAN Disaster Risk Communication Framework (ADRCF) is developed to enhance disaster risk communication across the ASEAN region. The framework aims to improve the ways in which disaster risk information is communicated before, during, and after disasters occur, ensuring that relevant ASEAN stakeholders-from government bodies and regional organizations like the AHA Centre, to local communities and international partners-are effectively informed and can respond appropriately.

The ADRCF provides a common point of reference on the goals and processes in disaster risk communication. The framework highlights the importance of timely and accurate information sharing among stakeholders, including NDMOs, ASEAN centres and international partners and also aims to effectively engage its target audience in a dynamic process so that informed decisions and actions continually lead to the reduction of risks in the region.

Building on the goals of the ASEAN Agreement on Disaster Management and Emergency Response (AADMER) to promote regional cooperation and collaboration in reducing disaster losses, a dedicated framework for disaster risk communication is intended to further strengthen ASEAN's collective resilience and ability to reduce and respond effectively to disasters.

Structure

This document explains the vision, objectives and process of disaster risk communication that is relevant to ASEAN. This Section (Section 1) provides the introductory remarks of the framework. Section 2 sets out the vision and objectives of the ADRCF; proposes a conceptualisation of disaster risk communication as a multi-stage process; and describes how risk communication is currently being conducted in ASEAN. Section 3 identifies the stakeholders involved in the process and their roles. Section 4 of the Framework concludes with a Plan of Action to improve the disaster risk communication process in the region further.

ASEAN Disaster Risk Communication Framework

Vision and Objectives

The vision of the ASEAN Disaster Risk Communication Framework is:

“Disaster risk impact in ASEAN is reduced through the communication of timely and reliable, understandable and actionable, and trusted disaster risk information”.

To achieve this vision, the framework delineates four key objectives as follows:

1. To increase the timeliness and reliability of disaster risk information flow via ASEAN entities and ASEAN Centres to and from national disaster management organisations and other involved stakeholders.
2. To ensure that disaster risk information is consistently understandable and actionable, so that it can be understood by national disaster management agencies and other stakeholders and used to make decisions in pre-, ongoing, and post-disaster phases.
3. To raise trust in disaster risk information produced and disseminated by ASEAN entities and ASEAN Centres, to strengthen the link between disaster risk information and appropriate risk management actions.
4. Additionally, to strengthen ASEAN's leadership by setting examples through the sharing of best practices, continuous learning, and fostering innovation on disaster risk communication in international networks and partnerships among diverse stakeholders, both regionally and globally.

The ADRCF is primarily intended for National Disaster Management Organisations (NDMOs) of ASEAN Member States and other relevant national government bodies whose role includes communicating about disaster risks. Their counterparts in these communications may be decision-makers at different levels of government, the general public, or particular groups, such as those with disabilities. The communications aim to inform people about the level and nature of a risk and elicit a response, either a decision or action, that will mitigate or reduce disaster risk or increase resilience.

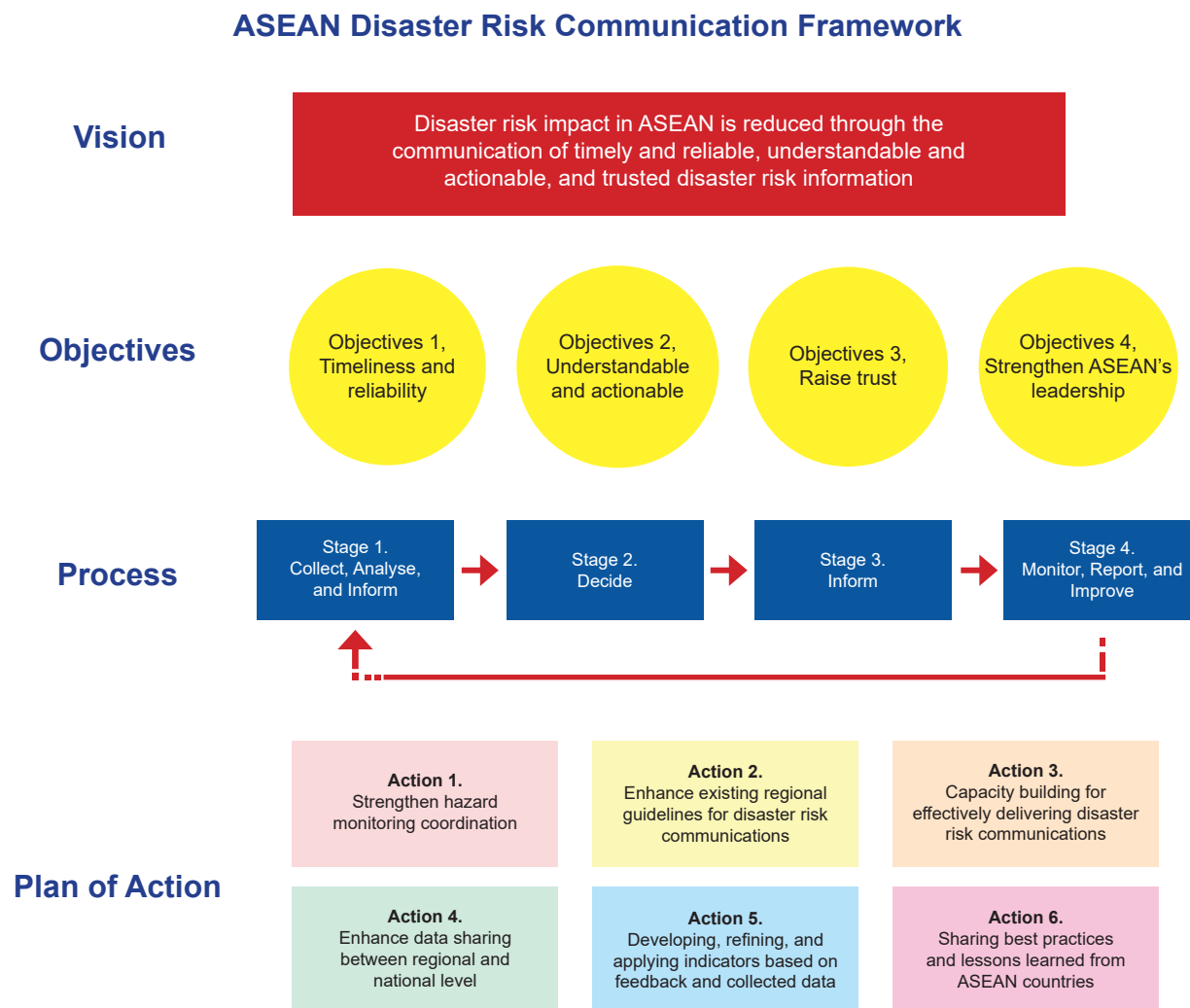


Figure 1. The structure of ASEAN Disaster Risk Communication Framework

The elements of the ADRCF, particularly its objectives and conceptualisation of Disaster Risk Communication (DRC), are also relevant to other non-government stakeholders who have a crucial role in communication, including ASEAN level entities like the AHA Centre and other institutions.

Disaster Risk Communication Process

Definitions

Disaster risk is the potential loss of life, injury, or destroyed or damaged assets which could occur to a system, society, or community in a specific period, determined probabilistically as a function of hazard, exposure, vulnerability, and capacity¹. Communication involves the transfer or exchange of facts, information, ideas, suggestions, or orders between two or more people through speaking, writing, or other methods.

Disaster risk communication is the real-time, two-way exchange of information, advice and opinions between experts or officials and people who face a hazard or threat to their survival, health, or economic or social well-being². The purpose of disaster risk communication is to enable people at risk to make informed decisions to mitigate the effects of a threat (hazard) – such as an incoming typhoon, flood, or volcano eruption – and take protective and preventive measures. Depending on the nature and evolution of the risk being addressed, disaster risk communication can be used to reduce unwarranted anxiety, incentivise preparedness actions, or raise awareness of issues when engagement is low³.

In the context of the Framework, stakeholders are understood as national and regional entities in the ASEAN region who are involved in the communication of disaster risk information, to inform and support decision-making.

These definitions set the scope for the ADRCF within the domain of disaster risk. The Framework focuses on risk communication specifically, set within the broader field of disaster risk management.

Disaster Risk Communication Process

Disaster risk communication is conceptualised as a four-step process, illustrated in Figure 1. Risk communication is recognized as an interactive and iterative process rather than a single activity by a particular stakeholder, in line with scholarly research and policy publications.⁴ The process is therefore represented as a cycle with four stages. This conceptualisation does not take the perspective of any particular entity and can therefore reflect the different actors and activities involved in risk communication at the different stages.

¹ <https://www.undrr.org/terminology/disaster-risk>

² <https://www.who.int/emergencies/risk-communications>

³ Stewart, I. S. "Advancing disaster risk communications." *Earth-Science Reviews* (2024): 104677.

⁴ U.S. National Research Council Committee on risk perception and communication Study Report, "Improving Risk Communication" 1989. Available at: <https://nap.nationalacademies.org/catalog/1189/improving-risk-communication>; Fischhoff, B. (1995). Risk perception and communication unplugged: twenty years of process 1. Risk analysis, 15(2), 137-145.



Figure 1. Disaster Risk Communication Process

As Fig.1 shows, one phase is concerned with the translation of scientific and technical information and the development of risk messages by experts; the next phase relates to the transmission and use of the risk information in decision-making, including designing the communication strategy; and then implementing the disaster risk communication strategy; and finally monitoring and evaluation of these activities against strategic objectives. While these activities are not specifically differentiated as phases in existing publications on risk communication, they correspond to sets of activities that are consistently identified as essential components of the risk communications process across sectors, including the disaster risk management sector.⁵

Stage 1. Collect, Analyse, and Inform

Disaster risk communication starts with understanding your data and how the target audience will use that data to take decisions. In the “**Collect, Analyse and Inform**” stage, the communicator selects the most important information to convey to support stakeholders to make decisions.

⁵ Stewart, I. S. “Advancing disaster risk communications.” *Earth-Science Reviews* (2024): 104677. UNDRR, “UN Global Assessment Report on Disaster Risk Reduction – Our World at Risk: Transforming Governance for a Resilient Future,” 2022. Available at: <https://www.undrr.org/gar/gar2022-our-world-risk-gar#container-media>

As such, besides having accurate and reliable risk information, it is also important to have information about your audience and their needs, what formats are effective for them and which channels will reach them at the time they should be able to get them so that in turn, they can process the information, make information and respond accordingly.

Therefore, data collection and analysis are not only about having information about hazards, historical patterns, climate projections, and community exposure. Disaster risk communication also requires vulnerability and capacity information including risk perception, practices, cultural values and norms. The latter shape the audience's context and how they will receive, process, and respond to the risk information (for example, early warning).

ASEAN Risk Monitor and Disaster Management Review (ARMOR) publication is an example of striving to communicate scientific and technical information to decision-makers in terms that can be easily understood and used.

At the global level, there is increasing recognition of the value of listening to the information needs of target audiences when designing risk information products (GAR 2022). In the Southeast Asian region, one example is the SERVIR SEA geospatial data-for-development program, which provides user-tailored geospatial data, products and services and builds the capacity of government decision-makers to use these products.⁶

In the **“Collect, Analyse, and Inform”** stage, the primary focus lies in gathering essential data on disaster risks, conducting thorough analysis to gauge potential impacts, and disseminating these findings promptly and comprehensibly to relevant stakeholders so that they can be used to take decisions.

This foundational step involves systematically collecting relevant data, including hazard information, historical disaster patterns, community exposure, and vulnerabilities from various sources, including official data from government reports, social media, academic studies and articles, and reports from UN agencies and civil society organisations. Additionally, ongoing crises necessitate the utilisation of real-time data and feedback to assess the situation, infrastructure, and response capacities. Through coordinated data sharing and technical support, member states work collectively to establish an informed understanding of the risk landscape. Collaborative efforts among national disaster management agencies, hazard

BOX 3

Key questions at the Collect, Analyse and Inform Stage

- Is the risk information reliable, trustworthy, and adequate?
- Who needs this information to take what decision?
- Who is the audience? What are their preferences and motivations?

⁶ <https://servir.adpc.net/about/about-servir-sea>

monitoring institutions, scientific research bodies, and regional organizations ensure a solid knowledge base for effective two-way risk information exchange, such as sharing early warning data and receiving feedback on local preparedness measures.

BOX 4

AHA Centre Disaster Information products and platforms

- Situation updates
- Flash updates
- Weekly Disaster Update
- Monthly Disaster Review and Seasonal Outlook
- ASEAN Disaster Information Network (ADINet)
- ASEAN Disaster and Response System (DMRS)

NDMOs primarily employ hazard information from national agencies for analysis and subsequent dissemination. They are supported at the regional level by the AHA Centre which gathers early warning information from these national sources as well as other regional and global organisations for further analysis. The AHA Centre relays information back to NDMOs and to other partners, including UN agencies, NGOs, and private sector entities through emergency updates and other risk information products (see Box 4).

To ensure effective end-to-end dissemination, information needs to be tailored, translated, and distributed through appropriate channels barriers, taking into account risk perception, education levels, and language differences among different audience groups.

Stage 2. Decide

In the “**Decide**” stage, the decision-maker determines the specific objective for communicating risk information and selects the format, style, channel, and timing to convey the risk information. When designing a comprehensive risk communication strategy, this is the opportunity to identify different audiences, the key message tailored to them, the format and delivery of the risk information based on the needs, preferences and motivations of the audience. Box 5 illustrates questions relevant to this stage.

BOX 5

Key questions at the Decide stage :

- What do we want our audience to do after receiving the risk information?
- What is the appropriate style, format, medium for our audience?
- When should we deliver the risk information? How often?

The commemoration of the ASEAN Day for Disaster Management (ADDM) in October of every year is an example of how a format selected (an event) to achieve an objective (raising disaster awareness) can be approached in various ways based on reflecting on past experiences. When the commemoration of ADDM started, it was focused on poster-

making competitions in schools throughout the region. Whilst it reached a big audience, it did not allow students to be engaged with decision-makers in a meaningful way. In succeeding years, it was commemorated as a live event with participants from different countries gathering together to bring their voices in a dialogue or conversation with the ASEAN Member States.

The outcome of the Decide stage is a “risk communication plan”. Such a plan can either be a verbally agreed-upon short-term instruction or a detailed written document, depending on the context and phase of DRM. When a disaster is imminent, it may take the form of a decision to issue an early warning to local government officials, while in non-emergency situations, it could take the form of an engagement plan for vulnerable communities.

Stage 3. Implement

At this stage, “**Implement**”, the communicator carries out the decisions made in the previous step. Messages are disseminated through various channels, ensuring broad and targeted reach as well as accessibility. Box 6 shows questions that need to be addressed at this stage.

BOX 6

Key questions to ask at the Implement stage

- What resources and competencies do we have to carry out my plan?
- What emerging situation or context do we need to consider before we execute our plan?
- How well are we delivering risk communication in a timely manner?

In this phase, it is also essential to acknowledge and address potential barriers that may impede effective communication. These barriers could include language differences, varying levels of understanding among different demographics, limitations in communication channels, and cultural factors. Identifying and mitigating these barriers is crucial to ensure that messages reach the intended audience. By proactively recognizing and addressing these challenges, stakeholders can

optimise the delivery of disaster risk information, fostering better comprehension and response among relevant stakeholders.

Global experience in communications implementation demonstrates the value of mainstream media engagement, social media, and partnerships with telecom companies to rapidly disseminate information to a broader audience. For example, partnerships in Japan between municipal governments and telecom companies allow for the swift dissemination of flood alerts and tsunami warnings. In the ASEAN context, countries like the Philippines have adopted similar best practices by partnering with telecom providers to issue early

warning messages, reaching millions of people in real-time. The ADRCF builds upon such regional and global experiences by encouraging Member States to enhance cooperation with telecom companies and technology partners to improve the speed and reach of disaster risk communication.

Stage 4. Monitor, Report, and Improve

Finally, in the “**Monitor, Report and Improve**” stage, the emphasis is on evaluating the effectiveness of the disaster risk communication activities employed. The key to effective communication is feedback. In a communication setting, time is of the essence when feedback is collected and how that feedback is used. Feedback also helps build a better understanding of the audience so that the format, style, channel and timing can be improved. In a sense, monitoring and improving risk communication could and should happen as the communication is taking place almost simultaneously. However, this does not preclude the need for a deeper reflective and systematic assessment of post-event disaster risk communication. Box 7 highlights the questions that stakeholders ask at this stage.

BOX 7

Key questions to ask at the Monitor, Report and Improve stage

- How did our target audience respond to the disaster risk information? Is it according to our desired outcome?
- What is the effective approach to deliver disaster risk communication to our target audience?
- In a broader context, how did disaster risk communication contribute to effectively reduce risk and improve regional coordination?

Globally, monitoring, evaluation and improvement is probably the weakest stage in the risk communications process. Evaluation indicators used by agencies responsible for communicating risk almost always take the form of output indicators – warnings issued, posters distributed or social media views – rather than outcome indicators, such as whether people understood and used the information provided to take a decision about protective action. In some cases, evacuation rates are used as an indicator of risk communication effectiveness, but this disregards the many constraints that prevent people

from evacuating even when they have understood the need to do so.

This stage also includes promoting experiences, best practices, and lessons learned on disaster risk communication with partners. By actively participating in international forums and partnerships, ASEAN institutions contribute to shaping global approaches to disaster risk communication, displaying leadership through informed decision-making.

Application of the ASEAN Disaster Risk Communication Framework

Disaster Risk Identification, Assessment, and Monitoring Phase

Disaster risk identification, assessment, and monitoring are foundational elements for effective disaster risk communication. These processes are integral to the AADMER and serve as the basis for informed decision-making and timely action. The systematic identification of disaster risks by promoting the collection and analysis of data related to natural hazards, vulnerabilities, and exposure involves gathering information from various sources, including meteorological data, geological surveys, and historical disaster records, to recognize potential threats.

Continuous monitoring of identified risks is crucial for early warning and timely response. ADRCF emphasizes the use of advanced technologies and communication channels to monitor and disseminate real-time information about evolving threats, ensuring that stakeholders remain aware and prepared for any changes in risk levels.

Currently, the AHA Centre, alongside AMS, plays a crucial role in disaster risk identification, assessment, and monitoring across the region. Each AMS has its own disaster monitoring systems and processes, which are tailored to their unique geographic and socio-economic contexts. For example, the Philippines' National Disaster Risk Reduction and Management Council (NDRRMC) operates a comprehensive disaster monitoring and early warning system that includes real-time weather updates, earthquake monitoring, and flood forecasting. These national systems work in tandem with regional efforts to ensure comprehensive coverage and coordination.

The AHA Centre regularly produces situation updates that provide comprehensive information on current disaster situations, including data on affected areas, response efforts, and immediate needs. One of the disaster monitoring tools utilized by the AHA Centre is the Disaster Monitoring and Response System (DMRS). This tool provides near real-time information on hazards in the region as they occur, supplemented by hydrometeorological data such as wind direction, speed, cloud cover, and sea temperature. Basic maps from the DMRS can be overlaid with additional data, such as population density, locations of airports and seaports, and major roads and infrastructure. The information generated from the DMRS is integrated with national data from AMS, creating disaster information products that are robust and reflective of the entire region.

These updates are disseminated to ASEAN Member States and relevant stakeholders to ensure a coordinated response. For slow onset disasters such as tropical cyclones, the AHA Centre may issue flash updates even before the cyclone makes landfall, providing rapid, concise information about the impending event. Additionally, in the immediate aftermath of a

disaster, the AHA Centre issues flash updates to deliver critical information about the event, including initial impact assessments, urgent needs, and the status of response operations. These updates enable quick decision-making and resource mobilization, enhancing stakeholders' understanding of disaster risks and supporting proactive risk reduction measures.

Furthermore, both the AHA Centre and AMS contribute to the ASEAN Risk Monitor and Disaster Management Review (ARMOR), a regular publication that offers a comprehensive overview of disaster risks and management efforts in the ASEAN region. This publication includes analyses of recent disasters, lessons learned, and recommendations for future resilience-building activities, drawing from experiences across all Member States. By integrating these processes and products into the ADRCF, the AHA Centre and AMS ensure that disaster risk communication in the ASEAN region is grounded in accurate, timely, and actionable information. This approach enhances preparedness and response, while also contributing to long-term resilience and sustainable development. By setting examples and leading by action, ASEAN showcases its leadership in disaster risk communication, both regionally and globally, contributing to a safer and more resilient world.

Disaster Prevention and Mitigation Phase

In the prevention and mitigation phase, the ADRCF focuses on raising awareness about potential hazards and promoting proactive measures to reduce vulnerabilities. This involves disseminating information on best practices for building resilient infrastructure, implementing early warning systems, and educating communities on risk reduction strategies. Effective communication ensures that stakeholders, including governments, businesses, and the public, understand the risks and take necessary actions to prevent or mitigate the impact of disasters. In the ASEAN region, initiatives such as public information campaigns and educational programs are critical for fostering a culture of prevention and resilience.

The ADRCF aims to foster a culture of proactive risk management by facilitating the exchange of disaster risk data and monitoring analysis among ASEAN member states in non-emergency situations. By sharing valuable insights and data, member states can collectively identify potential hazards, assess vulnerabilities, and develop strategies for mitigating risks, ultimately enhancing the region's capacity to anticipate and respond to disasters effectively. The use of the ADRCF in this context is illustrated in Case Example 1 to promote collaboration in sharing disaster risk data in the Mekong River region, fostering regional resilience and preparedness (see Box 8).

BOX 8**Case Example A. Mekong River Region Flood Risk Collaboration for prevention and mitigation**

In the Mekong River region, which includes Cambodia, Lao PDR, Myanmar, Thailand, and Viet Nam, the recurring challenge of seasonal flooding demonstrates the potential for improving outcomes through collaboration on disaster risk communication. With a wealth of shared information, policymakers can improve public understanding of underlying risks and appropriate protective actions that can be taken at the household and community level, understand public concerns and barriers to action and design interventions to address these barriers. Two-way risk communication between decision-makers and stakeholders is essential for the successful and sustained implementation of long-term risk management strategies, including potentially difficult decisions about building regulations, land use planning, and resettlement of residents from high-risk localities as well as the location and nature of public flood risk management infrastructure.

The ADRCF can strengthen regional collaboration, enabling countries in the Mekong River region to collectively address flood risks and build a resilient future. The ADRCF encourages the collection and sharing of comprehensive flood risk data among ASEAN Member States. This includes hydrological data, rainfall patterns, historical flood events, and vulnerability assessments. By leveraging the capabilities of regional institutions, ASEAN can produce a guideline on disaster risk communication that includes systematic data collection, accurate analysis, and prompt sharing with relevant stakeholders. This collaborative approach helps in creating a unified understanding of flood risks across the Mekong River Region, enabling better prevention and mitigation planning. National and local level decision-makers can benefit from research and regional and international experience in flood risk communication with at-risk communities to shape risk communication interventions, for example with shared flood risk data translated into community-friendly formats, and evacuation plans can be developed collaboratively, considering the interconnected nature of communities across borders.

In addition, by integrating data from various national meteorological and hydrological agencies, the framework can facilitate the creation of a regional early warning network. Effective early warning systems can significantly reduce the loss of life and property by ensuring that communities are adequately prepared and can evacuate in a timely manner. Through ASEAN-level exchange and collaboration, national decision-makers can identify opportunities for cross-border interventions.

Initiatives are already in place in ASEAN which strengthen the timeliness and reliability of risk assessment and monitoring information. The AHA Centre Information Management Network (AIM-Net) stands out as an example of good practice. The AIM-net is able to serve as a pivotal platform for facilitating data sharing and collaboration, enabling NDMOs to share critical information and coordinate efforts in strengthening information management and interoperability of information systems, getting information from analysts to decision-makers more rapidly. By harnessing shared data and leveraging robust analytical capabilities, policymakers can gain deeper insights into underlying risks and design targeted interventions to mitigate these risks effectively.

Key stakeholders, including national and local governments, can be empowered to take proactive measures to take actions and protect themselves and their assets by accessing shared information on disaster risks. The success of the ADRCF hinges on its ability to bridge the gap between data collection and action of stakeholders from regional to national and local levels, thereby fostering a culture of risk-informed decision-making at all levels. By leveraging regional collaboration mechanisms such as AIM-Net, the ADRCF holds the potential to significantly enhance disaster resilience across the ASEAN region. AIM-Net may also serve as an example of regional cooperation which could be adapted and rolled out to other disaster-prone regions.

Disaster Preparedness and Response Phase

During the preparedness and response phase, disaster risk communication is vital for ensuring that communities and stakeholders are ready to act timely and effectively when a disaster strikes. This involves sharing timely and accurate information about impending threats, evacuation routes, emergency shelters, and safety procedures. Communication channels such as social media, mobile alerts, and community networks are utilized to disseminate warnings and instructions. Coordination among NDMOs, the AHA Centre, and other regional entities ensure a unified and efficient response. The goal is to minimize confusion and ensure that all parties are well-informed and prepared to respond promptly to disasters. Box 9 describes how this is being done in relation to typhoon risks.

BOX 9

Case Example B. Typhoon Risks to Multiple Countries in the ASEAN Region

As the typhoon season unfolds, meteorological offices across Southeast Asia closely monitor weather patterns. A powerful typhoon emerges in the Pacific, posing a significant threat to multiple countries in the region, including the Philippines and Viet Nam, as well as flood risks in Lao PDR and Cambodia.

The Philippine Atmospheric, Geophysical and Astronomical Services Administration meteorological (or PAGASA) analyses data on the typhoon's trajectory and intensity and assesses risks to the country. The risk assessment and recommendations for action are communicated to the NDMOs and relevant government stakeholders as well as to the AHA Centre.

Similarly, the Viet Nam's National Centre for Hydrometeorological Forecasting independently gathers and analyses data on the typhoon and produces an assessment of potential impact and recommendations for action which is communicated to the key stakeholders and the public.

Simultaneously, the AHA Centre analyses data from various sources and provides regular updates to NDMOs and to the ASEAN Secretariat together with recommendations for the deployment of personnel under the ASEAN-ERAT as well as mobilise assets and capacities under the ASEAN Standby Arrangements, in advance before the typhoon make landfall, if necessary. The ASEAN Disaster Risk Communication Framework plays a vital role in fostering collaboration, informed decision-making, and effective communication across multiple countries, mitigating the impact of the typhoon risks on the ASEAN community, including also strengthening preparedness and response capacity.

In disaster scenarios such as incoming floods, typhoons or tsunamis, which may impact multiple countries in the region, the Framework highlights the importance of seamless information sharing and coordinated response actions among relevant stakeholders. Through established communication channels and protocols, member states can disseminate timely and accurate information to decision-makers, enabling informed response actions and ensuring the efficient allocation of resources. This will enhance the region's capacity to manage emergencies effectively and minimize the impact on affected communities.

Disaster Recovery Phase

In the recovery phase, disaster risk communication supports the rebuilding and rehabilitation efforts by providing information on available resources, recovery programs, and support services. It helps local and national stakeholders understand the steps needed for safe and resilient reconstruction and connects them with necessary assistance. Additionally, effective communication ensures transparency and accountability in the recovery process, building

trust between affected populations and stakeholders. The AHA Centre and ASEAN Secretariat play key roles in facilitating information exchange and coordination among member states to support a comprehensive and resilient recovery process. Box 10 illustrates this with the example of recovery after the Central Sulawesi earthquake and tsunami of 2018.

BOX 10

Case example C. Accelerating recovery process in the aftermath of the Central Sulawesi Earthquake and Tsunami in Indonesia

In response to the catastrophic 7.4 magnitude earthquake and subsequent tsunami that struck Central Sulawesi in September 2018, causing over 2,000 deaths and displacing more than 200,000 residents, the ASEAN Coordinating Centre for Humanitarian Assistance on disaster management (AHA Centre) launched the ASEAN Village project. This initiative aimed to provide permanent housing and essential facilities for the affected communities in Palu. The project, funded by ASEAN Member States and partners, including Brunei Darussalam, the Philippines, and Australia, saw the construction of 100 permanent houses, a mosque, and an auxiliary health centre by April 2021. Effective disaster risk communication played a crucial role throughout the project, facilitating data collection and analysis, stakeholder engagement, and community involvement.

This is evident in the selection on the location of the ASEAN village. The AHA Centre coordinated with the Government of Indonesia, as well as international donors to support that the recovery interventions were well-targeted and met the actual needs of the affected communities. The ASEAN Village project demonstrated the importance of effective disaster risk communication in achieving resilient recovery. By ensuring accurate information was collected, analysed, and communicated, the project provided targeted and sustainable solutions for the affected population. Community-centred communication approaches enhanced the relevance and impact of recovery efforts, recognising local wisdom in the community, fostering a sense of ownership and resilience among the residents. The project highlighted the value of coordination and collaboration among diverse stakeholders, optimizing resource use and expertise.



Stakeholder Mapping

The Stakeholder mapping section serves as a guide outlining the key players, their roles, and responsibilities at each stage of the disaster communication process. By elucidating the roles and interactions of each stakeholder, the section facilitates a clear understanding of the collaborative efforts needed for effective disaster risk communication.

The stakeholder mapping aims to identify the primary actors and highlight their interdependencies and collaborations throughout the entire disaster communication process. It aims to enhance coordination, streamline communication channels, and foster a collective approach to mitigate and respond to disasters in the ASEAN region.

National and local governments and relevant agencies are important stakeholders in the risk communication process, in risk communication process as outlined below. In order to identify the functions and responsibilities, this section draws on existing publications and reference materials from ASEAN and national governments. This includes the AADMER, ASEAN Joint Disaster Response Plan (AJDRP), Standard Operating Procedure for Regional Standby Arrangements and Coordination of Joint Disaster Relief and Emergency Response Operations (SASOP), and the ASEAN-ERAT Guidelines, as well as from the national government policies and regulations.

Based on each stage of the disaster risk communication process, in the first stage “**Collect, analyse, and inform**”, the AHA Centre coordinates the collection and analysis of disaster risk data at the regional level. This stage allows for relevant data on hazards, vulnerabilities, and risks is gathered, analysed, and disseminated to inform decision-making. The AHA Centre collaborates with national disaster management organisations (NDMOs), which are the primary collectors of data on natural hazards, vulnerabilities, and risks within their respective countries. Other relevant national government agencies (see **Annex 2** for further details), such as meteorological and geological institutions, provide crucial data related to their areas of expertise. Other organisations, including United Nation agencies, the Red Cross and Red Crescent Movement, NGOs, academic institutions, and the private sector, also contribute valuable information on vulnerabilities and capacities.

In the second stage, “**Decide**”, NDMOs, with information from other national agencies and regional organisations, develop disaster risk communication strategies and plans. The AHA Centre and the ASEAN Secretariat facilitate regional cooperation and ensure consistency in decision-making. Other relevant national government agencies provide technical advice based on their sectoral expertise and participate in inter-agency coordination meetings. Other organisations, including UN agencies, NGOs, and the

private sector, support regional coordination and collaboration by providing technical assistance and facilitating knowledge sharing.

During the third stage “**Implementation**”, NDMOs lead the execution of national communication plans, while the AHA Centre oversees regional risk communication initiatives, providing technical expertise and additional capacity support to ASEAN Member States, when needed. Local governments engage with community stakeholders, CSOs, and NGOs to develop localised communication strategies and implement campaigns aimed at raising awareness and fostering community engagement. Regional organisations and initiatives support broader regional coordination efforts, and the media disseminates timely and accurate information to the public.

In the final stage, “**Monitor, report, and improve**”, the AHA Centre conducts data analysis and feedback, using evaluation findings to enhance future communication efforts. NDMOs lead the evaluation of communication effectiveness at the national level, implementing mechanisms to assess performance and inform decision-making. Other relevant national government agencies contribute to monitoring and evaluation within their sectors, implementing recommendations for improvement. CSOs and NGOs contribute to the evaluation exercises, providing local perspectives and sharing lessons learned with government agencies and other stakeholders through existing platform or by creating dedicated platform.

Further description related to the stakeholder mapping and also government agencies at the national level that are relevant to disaster risk communication is also available in the **Annex 1**.

Plan of Action

The Plan of Action (POA) is organised in line with the disaster risk communication process. The POA (see Table 1) is developed based on the objectives of the ADRCF, namely, to ensure that disaster risk information is timely and reliable, understandable and actionable, raise trust, and strengthen ASEAN leadership.

The implementation of the action plans within the ADRCF reflects a strategic approach to strengthening disaster risk communication across ASEAN. The first action, **strengthening hazard monitoring coordination**, is of immediate priority as it forms the foundation for timely and accurate disaster risk information. Enhanced coordination between national government agencies and the AHA Centre ensures reliable data is collected, analysed, and shared efficiently. Following this, **enhancing existing regional guidelines** is prioritized to provide agreement on principles, methodologies, and standard operating procedures to harmonize disaster risk communication across institutions in ASEAN. This step ensures that all Member States follow a coherent approach to risk communication.

Equally important is **capacity building**, which focuses on developing the necessary skills and expertise for effectively delivering disaster risk communications. This action ensures that both technical personnel and decision-makers are equipped to manage and communicate disaster risk information effectively. This is accompanied by **enhancing data sharing** mechanisms between regional and national levels, which is crucial for ensuring the smooth exchange of critical information, fostering real-time communication, and improving interoperability. **Collecting data against agreed indicators** is essential to monitor progress, review performance, and identify areas for improvement in disaster risk communications. This ensures that communication strategies, protocols, and materials are continuously improved and refined based on evidence and feedback. Lastly, **sharing best practices and lessons** learned consolidates the knowledge gained from these efforts, promoting continuous improvement and fostering collaboration within ASEAN. Together, these prioritised actions ensure a systematic and coordinated approach to strengthening disaster risk communication across all phases of disaster management.

Table 1. Plan of Action

No	Actions	Indicators of progress	Responsible Institutions	Relations to the ADRCF objectives
1.	Strengthen hazard monitoring coordination between national government agencies and relevant organisations	<ul style="list-style-type: none"> Review existing guidelines and procedures for coordination on natural hazard monitoring between national government agencies and other relevant national and regional organisations Inclusion of national government agencies and other relevant organisations in joint exercises, drills, or training sessions on disaster risk communication 	AHA Centre, NDMOs, other relevant National Government Agencies, Other ASEAN Centres (such as ASMC, AEIC, and ACC THPC)	Timely and reliable
2.	Enhance existing regional guidelines for disaster risk communications between regional and national levels	<ul style="list-style-type: none"> Development and integration of disaster risk communication guidelines that outline best practices, principles, and methodologies into existing regional disaster management frameworks, policies, and standard operating procedures (SOPs) Integration of the developed guidelines into national policies, strategies, and practices related to disaster risk management and communication Scoping study on the cooperation between the media and telecommunication providers in ASEAN region with the AHA Centre, ASEAN Secretariat, and NDMOs 	AHA Centre, ASEAN Secretariat, NDMOs, NGOs, CBOs, Academia, Private sector	Understandable and actionable
3.	Capacity building for effectively delivering disaster risk communications between regional and national level	<ul style="list-style-type: none"> Standardized training manuals and curriculum for disaster risk communication, outlining best practices, principles, and methodologies for ensuring effective risk information Organising trainings, learning visits, or capacity-building programs for effectively communicating disaster risk information Integration of the regional training manuals into national training manuals related to disaster risk communication 	AHA Centre, ASEAN Secretariat, NDMOs, NGOs, CBOs, Academia, Private Sector	Understandable and actionable

Table 1. Plan of Action

No	Actions	Indicators of progress	Responsible Institutions	Relations to the ADRCF objectives
4.	Enhance data sharing between regional and national level, including data collection on risk information, available communication channels, communication protocols, and existing disaster risk communication materials of all ASEAN Member States	<ul style="list-style-type: none"> • Agreements for risk information exchange in place and implementation of formal data sharing • Strengthen the use of ADINet as database by encouraging AMS to provide information and submit protocols or materials to the AHA Centre for consolidation in ADINet. • Increase in the frequency of data sharing related to risks (e.g. hydromet and geometeorology data) between the AHA Centre and NDMOs as well as with other relevant ASEAN centres and entities 	AHA Centre, NDMOs, other relevant National Government Agencies	Timely and reliable
5.	Developing, refining, and applying indicators based on feedback and collected data to enhance disaster risk communication strategies, protocols, and materials.	<ul style="list-style-type: none"> • Agreed indicators specifically tailored to measure the effectiveness, reach, and impact of disaster risk communication efforts • Utilisation of collected feedback and data to improvements in disaster risk communication strategies, protocols, and materials • Data collected from key responsible institutions, stakeholders, and communities, including surveys, feedback mechanisms, and participatory assessments 	AHA Centre, ASEAN Secretariat, NDMOs, NGOs, Academia	Raise trust

Table 1. Plan of Action

No	Actions	Indicators of progress	Responsible Institutions	Relations to the ADRCF objectives
6.	Sharing best practices and lessons learned from ASEAN countries, through policy notes, case studies, briefing papers, and evaluation reports on the ADRCF process	<ul style="list-style-type: none"> Successful development and widespread dissemination of policy notes, case studies, briefing papers, and evaluation reports highlighting best practices, innovative approaches, and lessons learned in disaster risk communication from ASEAN countries Participation in regional and international events showcasing disaster risk communication in ASEAN 	AHA Centre, NDMOs, Academia, NGOs, CBOs	Strengthen ASEAN's leadership



Annex 1. Stakeholder Mapping

Stages in DRC process	Name of Institutions	Roles	Responsibilities
Stage 1. Collect, analyse, inform	AHA Centre	Facilitate cooperation and coordination of disaster risk information collection and analysis at the regional level	<ul style="list-style-type: none"> - Supports and facilitates with national disaster management organisations (NDMOs) and other relevant stakeholders to collect relevant disaster risk data and information. - Facilitate the analysis of collected data to identify potential hazards, vulnerabilities, and risks in the ASEAN region. - Ensure timely dissemination of analysed information to NDMOs and regional stakeholders for informed decision-making.
	NDMOs	Primary collectors of disaster risk data and information at the national level, acting as the single National Focal Point of AADMER	<ul style="list-style-type: none"> - Collect and compile data on natural hazards, vulnerabilities, and risks within their respective countries. - Analyse collected data to assess the potential impact of hazards on communities and infrastructure. - Share analysed information with the AHA Centre and other relevant stakeholders for regional coordination and collaboration
	Other relevant National Government Agencies (see Annex 2)	Providers of data and information related to disaster risk within their specific areas of expertise	<ul style="list-style-type: none"> - Contribute relevant data and information on natural hazards, vulnerabilities, and risks based on their sectoral responsibilities (e.g., meteorological agencies providing weather data, geological agencies providing seismic data), including alerts and early warning about potential hazards - Collaborate with NDMOs and other stakeholders in the collection and analysis of disaster risk information. - Participate in regional initiatives led by the AHA Centre to ensure alignment and consistency in data collection and analysis efforts

Stages in DRC process	Name of Institutions	Roles	Responsibilities
	Other regional institutions monitoring disaster risks, including other ASEAN entities and centres (e.g. ASMC, AEIC) and non-state actors, including UN agencies, Red Cross and Red Crescent Movement, NGOs, academic and scientific organisations, and private sector	Providers of data and information related to disaster risk within their specific areas of expertise	<ul style="list-style-type: none"> - Provide vulnerability and capacity information about specific hazards at local, national, and regional level - Ensure coordination and information-sharing between the parties with regard to evolving priorities and strategies, as well as joint performance assessments in agreed work areas
Stage 2. Decide	NDMOs	Decision-makers at the national level for disaster risk management strategies and actions	<ul style="list-style-type: none"> - Assess the analysed disaster risk information to identify priority areas for intervention and response. - Develop national disaster risk communication strategy and policies based on the identified risks and vulnerabilities. - Coordinate with relevant government agencies, local authorities, and other stakeholders to ensure alignment and coherence in decision-making
	AHA Centre	Facilitating informed decision-making at the regional levels	<ul style="list-style-type: none"> - Facilitate access to relevant information such as up-to-date disaster risk information and analysis - Provide technical support to NDMOs and relevant decision-makers at the national level - Facilitate cooperation and coordination of regional discussions and consultations among ASEAN Member States enabling joint decisions or harmonised strategies
	Other relevant National Government Agencies (see Annex 2)	Contributors to the decision-making process based on their sectoral expertise	<ul style="list-style-type: none"> - Provide technical advice and input on disaster risk management strategies within their respective domains (e.g., infrastructure, health, education). - Participate in inter-agency coordination meetings to discuss and finalize disaster risk communication strategy and policies.

Stages in DRC process	Name of Institutions	Roles	Responsibilities
	Other Regional Institutions, including ASEAN Secretariat, UN agencies, Red Cross and Red Crescent Movement, NGOs, academia, and scientific organisations, as well as private sector	Supporters of regional coordination and collaboration in decision-making processes	<ul style="list-style-type: none"> - Provide technical assistance and expertise to ASEAN Member States in developing and implementing disaster risk management strategies. - Facilitate knowledge sharing and capacity building activities to enhance regional resilience to disasters. - Coordinate with the AHA Centre to ensure coherence and consistency in regional approaches to disaster risk management
Stage 3. Implement	NDMOs	Lead coordinators of disaster risk communication efforts at the national level	<ul style="list-style-type: none"> - Develop and implement national disaster risk communication plans and strategies, in alignment with the overall disaster risk management framework. - Coordinate with relevant government agencies, local authorities, and stakeholders to ensure the effective dissemination of disaster risk information to the public.
	AHA Centre	Facilitate cooperation and coordination of disaster risk communication efforts at the regional level	<ul style="list-style-type: none"> - Implement regional disaster risk communication strategies and initiatives, in line with agreed SOPs, policies, plans, and strategies - Provide technical expertise and capacity-building support to ASEAN Member States in enhancing their disaster risk communication capabilities. - Facilitate coordination and cooperation of regional communication efforts, fostering collaboration among countries and stakeholders to ensure a cohesive and effective response to disasters in the ASEAN region.

Stages in DRC process	Name of Institutions	Roles	Responsibilities
	Other relevant National Government Agencies (see Annex 2)	Implementers of sector-specific disaster risk communication initiatives	<ul style="list-style-type: none"> - Develop and implement communication plans tailored to their respective sectors, focusing on raising awareness, promoting preparedness, and facilitating information sharing. - Collaborate with other government agencies and stakeholders to ensure consistency and coherence in disaster risk communication efforts across sectors. - Provide resources and support for the implementation of communication activities, including funding, expertise, and logistical assistance.
	Local Government	Frontline implementers of community-level disaster risk communication activities	<ul style="list-style-type: none"> - Engage with relevant local stakeholders, including local governments, NGOs, CSOs, and community organisations - Develop and implement localized communication strategies to reach at-risk communities, addressing their specific needs and vulnerabilities. - Work closely with national and regional authorities to integrate local communication efforts into broader disaster risk communication frameworks. - Engage community members in participatory communication processes, empowering them to take proactive measures to reduce their vulnerability to disasters.
	CSOs and NGOs	Partners in implementing disaster risk communication initiatives at local level.	<ul style="list-style-type: none"> - Implement communication campaigns and activities aimed at raising awareness, building resilience, and fostering community engagement in disaster risk reduction. - Collaborate with government agencies, local authorities, and other stakeholders to ensure the effective delivery of communication services and support to at-risk communities.

Stages in DRC process	Name of Institutions	Roles	Responsibilities
	Regional Organisations and Initiatives, including UN agencies, Red Cross and Red Crescent Movement, NGOs, academia, and scientific organisations, as well as private sector	Support regional coordination and cooperation in disaster risk communication	Facilitate cooperation with relevant wider regional and/ or global disaster risk communication initiatives
	Media	Disseminate timely and accurate information	<ul style="list-style-type: none"> - Enhance links and engage active collaboration of media in disaster-affected countries. - Disseminates timely and accurate information about disaster risk information, including imminent threats, ongoing disasters, and recovery efforts to the public, ensuring that the public receives credible updates and guidance - Broadcast early warnings, evacuation orders, and safety advisories, reaching a broad audience and facilitating prompt action - Facilitating dialogue and feedback, enabling stakeholders to share their experiences, concerns, and suggestions, fostering two-way communication between authorities and the relevant stakeholders
Stage 4. Monitor, Report, and Improve	AHA Centre	Support in regional learning and knowledge exchange in disaster risk communication	<ul style="list-style-type: none"> - Support in data analysis and feedback to evaluate the impact and effectiveness of communication strategies and interventions, identifying strengths, weaknesses, and areas for improvement. - Use evaluation findings to inform decision-making and enhance future disaster risk communication efforts, updating communication plans and strategies as needed to address gaps and challenges

Stages in DRC process	Name of Institutions	Roles	Responsibilities
	NDMOs	Lead evaluators of disaster risk communication effectiveness at the national level	<ul style="list-style-type: none"> - Establish monitoring and evaluation mechanisms to assess the performance of disaster risk communication activities, including the collection of feedback from stakeholders and affected communities. - Analyse data and feedback to evaluate the impact and effectiveness of communication strategies and interventions, identifying strengths, weaknesses, and areas for improvement. - Use evaluation findings to inform decision-making and enhance future disaster risk communication efforts, updating communication plans and strategies as needed to address gaps and challenges
	Other relevant National Government Agencies (see table 2)	Contributors to the monitoring and evaluation of disaster risk communication initiatives within their respective sectors	<p>Referring to AADMER general obligations, article 4:</p> <ul style="list-style-type: none"> - Participate in the monitoring and evaluation process, providing data and feedback on sector-specific communication activities and outcomes. - Collaborate with NDMOs and other stakeholders to conduct assessments of communication effectiveness, sharing information and insights to support broader evaluation efforts. - Implement recommendations for improving communication strategies and practices, integrating lessons learned into sectoral policies and programs.

Stages in DRC process	Name of Institutions	Roles	Responsibilities
	CSOs and NGOs	Partners in monitoring, evaluation, and learning, providing valuable insights and perspectives from the local level	<ul style="list-style-type: none"> - Participate in collaborative monitoring and evaluation exercises, contributing data, analysis, and local perspectives to assess the impact of communication initiatives. - Engage with affected stakeholders to gather feedback on communication effectiveness, amplifying the voices of vulnerable populations and marginalized groups in the evaluation process. - Share evaluation findings and lessons learned with government agencies, NDMOs, and other stakeholders, advocating for evidence-based approaches to disaster risk communication and response.

Annex 2. National Government Agencies Relevant to Disaster Risk Communication

Member States	Responsible for monitoring natural hazards	Responsible for information and communication	Responsible for coordinating and overseeing local governance
Brunei Darussalam	Brunei Darussalam Meteorological Department (BDMD)	Information Department, Prime Minister's Office	Ministry of Home Affairs
Cambodia	Ministry of Water Resources and Meteorology (MOWRAM)	Ministry of Information	Ministry of Interior
Indonesia	Meteorology, Climatology, and Geophysics Agency (BMKG), Center for Volcanology and Geological Hazard Mitigation (PVMBG), Ministry of Public Works and Housing (PUPR)	Ministry of Communication and Information Technology	Ministry of Home Affairs
Lao PDR	Ministry of Natural Resources and Environment (MONRE), Department of Meteorology and Hydrology (DMH)	Ministry of Information, Culture, and Tourism	Ministry of Home Affairs
Malaysia	Malaysian Meteorological Department (MetMalaysia), Department of Environment (DOE), Department of Irrigation and Drainage (DID)	Ministry of Communications and Multimedia	Ministry of Housing and Local Government
Myanmar	Department of Meteorology and Hydrology (DMH)	Ministry of Information	Ministry of Home Affairs
Philippines	Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA), Philippine Institute of Volcanology and Seismology (PHIVOLCS)	Presidential Communications Office	Department of the Interior and Local Government (DILG)
Singapore	Meteorological Service Singapore (MSS)	Ministry of Digital Development and Information	Ministry of Home Affairs
Thailand	Thai Meteorological Department (TMD), Department of Mineral Resources (DMR)	Ministry of Digital Economy and Society	Ministry of Interior
Viet Nam	Viet Nam Meteorological and Hydrological Administration (VMHA), Ministry of Agriculture and Rural Development (MARD), Institute of Geophysics, Vietnam Academy of Science and Technology	Ministry of Information and Communications (MIC)	Ministry of Home Affairs

Annex 3. List of References and Endnotes

Publication list for references	
NDMO Roles on AADMER	<p>"National Focal Point" means an entity designated and authorised by each Party to receive and transmit information pursuant to the provisions of this Agreement.</p> <p>Article 3, paragraph 1: The sovereignty, territorial integrity and national unity of the Parties shall be respected, in accordance with the Charter of the United Nations and the Treaty of Amity and Cooperation in Southeast Asia, in the implementation of this Agreement. In this context, each affected Party shall have the primary responsibility to respond to disasters occurring within its territory and external assistance or offers of assistance shall only be provided upon the request or with the consent of the affected Party.</p> <p>Article 4 on general obligations:</p> <ol style="list-style-type: none"> co-operate in developing and implementing measures to reduce disaster losses including identification of disaster risk, development of monitoring, assessment and early warning systems, standby arrangements for disaster relief and emergency response, exchange of information and technology, and the provision of mutual assistance; immediately respond to a disaster occurring within their territory. When the said disaster is likely to cause possible impacts on other Member States, respond promptly to a request for relevant information sought by a Member State or States that are or may be affected by such disasters, with a view to minimising the consequences; <p>Article 5 on risk identification and monitoring: paragraph 1: Each Party shall take appropriate measures to identify disaster risks in its respective territories covering, among others, the following aspects:</p> <ol style="list-style-type: none"> natural and human-induced hazards; risk assessment; monitoring of vulnerabilities; and disaster management capacities. <p>Article 6 on prevention and mitigation, para 1, 2 and 3:</p> <ol style="list-style-type: none"> The Parties shall, jointly or individually, develop strategies to identify, prevent and reduce risks arising from hazards. Each Party shall undertake measures to reduce losses from disasters which include: <ol style="list-style-type: none"> developing and implementing legislative and other regulatory measures, as well as policies, plans, programmes, and strategies; strengthening local and national disaster management capability and co-ordination; promoting public awareness and education and strengthening community participation; and promoting and utilising indigenous knowledge and practices. The Parties shall co-operate in developing and implementing regional disaster prevention and mitigation programmes to complement national-level efforts.

Publication list for references	
	<p>Article 7 on early warning, paragraph 1: The Parties shall, as appropriate, establish, maintain, and periodically review national disaster early warning arrangements including:</p> <ul style="list-style-type: none"> a) regular disaster risk assessment; b) early warning information systems; c) communication network for timely delivery of information; and d) public awareness and preparedness to act upon the early warning information. <p>Article 18, paragraph 1: Technical Co-operation</p> <ol style="list-style-type: none"> 1. In order to increase preparedness and to mitigate disasters, the Parties shall undertake technical cooperation, including the following: <ul style="list-style-type: none"> a) facilitate mobilisation of appropriate resources both within and outside the Parties; b) promote the standardisation of the reporting format of data and information; c) promote the exchange of relevant information, expertise, technology, techniques, and know-how; d) provide or make arrangements for relevant training, public awareness and education, in particular, relating to disaster prevention and mitigation; e) develop and undertake training programmes for policy makers, disaster managers and disaster responders at local, national and regional levels; and f) strengthen and enhance the technical capacity of the Parties to implement this Agreement. <p>Article 19: The Parties shall individually or jointly, including in cooperation with appropriate international organisations, promote and, whenever possible, support scientific and technical research programmes related to the causes and consequences of disasters and the means, methods, techniques, and equipment for disaster risk reduction. In this regard, the protection of the Intellectual Property Rights of the Parties concerned must be respected.</p>
Agreement on the Establishment of the AHA Centre	<p>The Agreement on the Establishment of the AHA Centre outlines its role as a facilitator of cooperation and coordination among ASEAN member states, and relevant international organizations, in disaster management. The AHA Centre is tasked with supporting regional collaboration on preparedness, response, and recovery efforts. It also works to streamline technical cooperation and scientific research on disaster management. Importantly, the agreement emphasizes that the AHA Centre operates on the principle of subsidiarity, meaning affected countries retain primary responsibility for managing disasters within their territories, and the AHA Centre acts in a supportive role.</p> <p>Article 4 of the Agreement, in particular, outlines the functions of the AHA Centre in all phases of disaster.</p>
ASEAN Declaration on One ASEAN, One Response (2016)	<p>Provides a legal declaration and convinced the critical role of the AHA Centre in the ASEAN response to disasters as one in the region and outside the region.</p> <p>The declaration affirms AHA Centre as the primary ASEAN regional coordinating agency on disaster management and emergency response and, where appropriate, will work in partnership with relevant regional and international agencies and centres to strengthen Humanitarian Assistance and Disaster Relief (HADR) efforts that include civilian and military coordination.</p>

Publication list for references	
ASEAN Declaration on Institutionalising the Resilience of ASEAN and its Communities and Peoples to Disasters and Climate Change (2023)	<p>The ASEAN Declaration on Institutionalising the Resilience of ASEAN and its Communities and Peoples to Disasters and Climate Change spells out the importance of disaster risk communication and its scope:</p> <p>Continue sharing and dissemination of risk and climate information to support ongoing and future efforts on research and development in disaster risk management and climate change adaptation and widen the accessibility of users and stakeholders to such risk and climate information and knowledge to further support risk-informed policy development, decision-making and investment programming in both public and private sectors</p>
ASEAN Joint Disaster Response Plan (2017)	<p>The ASEAN Joint Disaster Response Plan (AJDRP) is providing a common framework to deliver a timely, at-scale, and joint response through mobilisation of required assets and capacities. The AJDRP elucidate the working arrangements of all ASEAN's mechanisms in anticipating a disaster situation and to strengthen engagement with other sectors and stakeholders as part of the overall response of ASEAN to a large-scale disaster in the region.</p>
AADMER Work Programme 2021-2025	<p>The Terms of Reference of the ASEAN Committee on Disaster Management (ACDM) Working Groups (WGs) on Programme/Actions, includes the following points:</p> <ol style="list-style-type: none"> 1. Key responsibilities of the ACDM Working Groups pertaining to the implementation of the AADMER Work Programme include initiating, leading, and implementing the outputs and activities that fall under their respective strategic components and priority programmes; 2. The ACDM Working Groups shall provide strategic directions in the implementation of the AADMER Work Programme outputs and activities, and be aware of related initiatives in their respective territories, within the region as well as globally in order to start possible opportunities for collaboration; and 3. The ACDM Working Groups shall also conduct regular monitoring, review, and evaluation of the implementation of their respective strategic components, priority programmes, outputs, activities, related building blocks and drivers. At the outset of the implementation, they will agree on a set of indicators, design a methodology and system (i.e. who will do what, what are the sources of verification) for monitoring and evaluation with the assistance of the ASEAN Secretariat as well as other technical experts.
ASEAN Mapping Exercise: to Promote Synergy with Other Relevant Sectoral Bodies, ASEAN Centres, and Entities Associated with ASEAN on Disaster Management (2021)	<p>The document outlines the institutional arrangements for disaster management in ASEAN</p> <p>The ASEAN Committee on Disaster Management (ACDM) initiated a mapping exercise of all relevant ASEAN Sectoral Bodies, as well as ASEAN Centres and Entities associated with ASEAN to outline their potential roles, capabilities and resources, which could contribute towards a whole-of-ASEAN approach in disaster management.</p> <p>The mapping exercise aims to strengthen the Joint Task Force to Promote Synergy with Other Relevant ASEAN Bodies on Humanitarian Assistance and Disaster Relief (JTF on HADR) that was established in 2014.</p>

Publication list for references	
ASEAN-UN Joint Strategic Plan of Action on Disaster Management 2021-2025 (2021)	<p>The mutual commitment to continued and enhanced partnership between ASEAN and the UN also reflects a changed regional context, characterized by ASEAN Member States' increasing self-reliance and capacity to lead domestic disaster management and response and to cooperate with each other in times of disaster emergencies.</p> <p>In this context, the role of regional and international partners is also evolving, to complement national efforts through the provision of technical knowledge and support in specific areas, when and as requested.</p> <p>Well-coordinated initiatives are essential to ensure that Governments received appropriate, timely and relevant support when needed, and that such support is based on a clear division of roles and responsibilities at all levels of governance.</p>

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- ⁸ UNDRR, 2022, Here's how Japan is using technology to mitigate disasters, <https://tsunamiday.undrr.org/news/heres-how-japan-using-technology-mitigate-disasters>
- ⁹ For further information regarding ASEAN village, please see AHA Centre (2021) New Homes of Opportunities, accessible at: <https://ahacentre.org/wp-content/uploads/publications/New-Homes-of-Opportunities.pdf>
- ^x Please see Article 6 of the AADMER and Chapter IV of SASOP
- ^{xi} Please see ASEAN-UN Joint Strategic Plan of Action on Disaster Management 2021-2025
- ^{xii} Please see articles 5, 6, 7, and 8 of the AADMER
- ^{xiii} Please see article 3, 4, 5, 6, 7, 18, and 19 of the AADMER
- ^{xiv} Please see article 4 of the Agreement on the Establishment of the AHA Centre
- ^{xv} Please see the ASEAN Vision 2025 on Disaster Management
- ^{xvi} Please see the ASEAN Mapping Exercise to Promote Synergy with Other Relevant Sectoral Bodies, ASEAN Centres, and Entities Associated with ASEAN on Disaster Management
- ^{xvii} Please see article 3, 4, 5, 6, 7, 18, and 19 of the AADMER

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