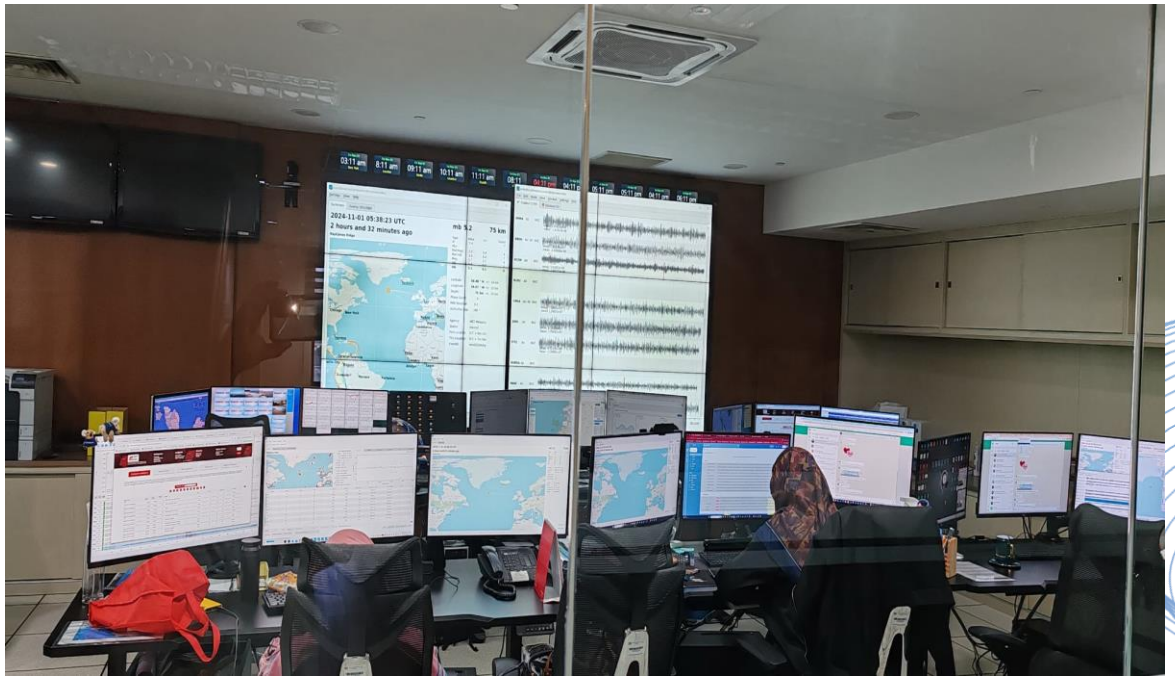
National Progress Reports

Twelfth Meeting Of The ICG/PTWS Regional Working Group On Tsunami Warning And Mitigation System In The South China Sea Region (ICG/PTWS/WG-SCS-XII) Jakarta, Indonesia On 7-8 November 2024

MET Malaysia

NATIONAL TSUNAMI EARLY WARNING SYSTEM(SAATNM)



- SAATNM was established in 2005 after the Indian Ocean tsunami December 2004
- Primary Objective of SAATNM is to issue effective and fast, early warning to the public, should there be any tsunami occuring over the Indian Ocean, South Cina Sea, Sulu Sea and the Pacific that could endanger Malaysia

TSUNAMI EARLY WARNING PROCESS

1) DATA

- Seismic Station (Local and International)
- Tide Gauge Station (Local and International)
- Coastal Camera System (CCTV)

2) SOFTWARE & APPLICATION

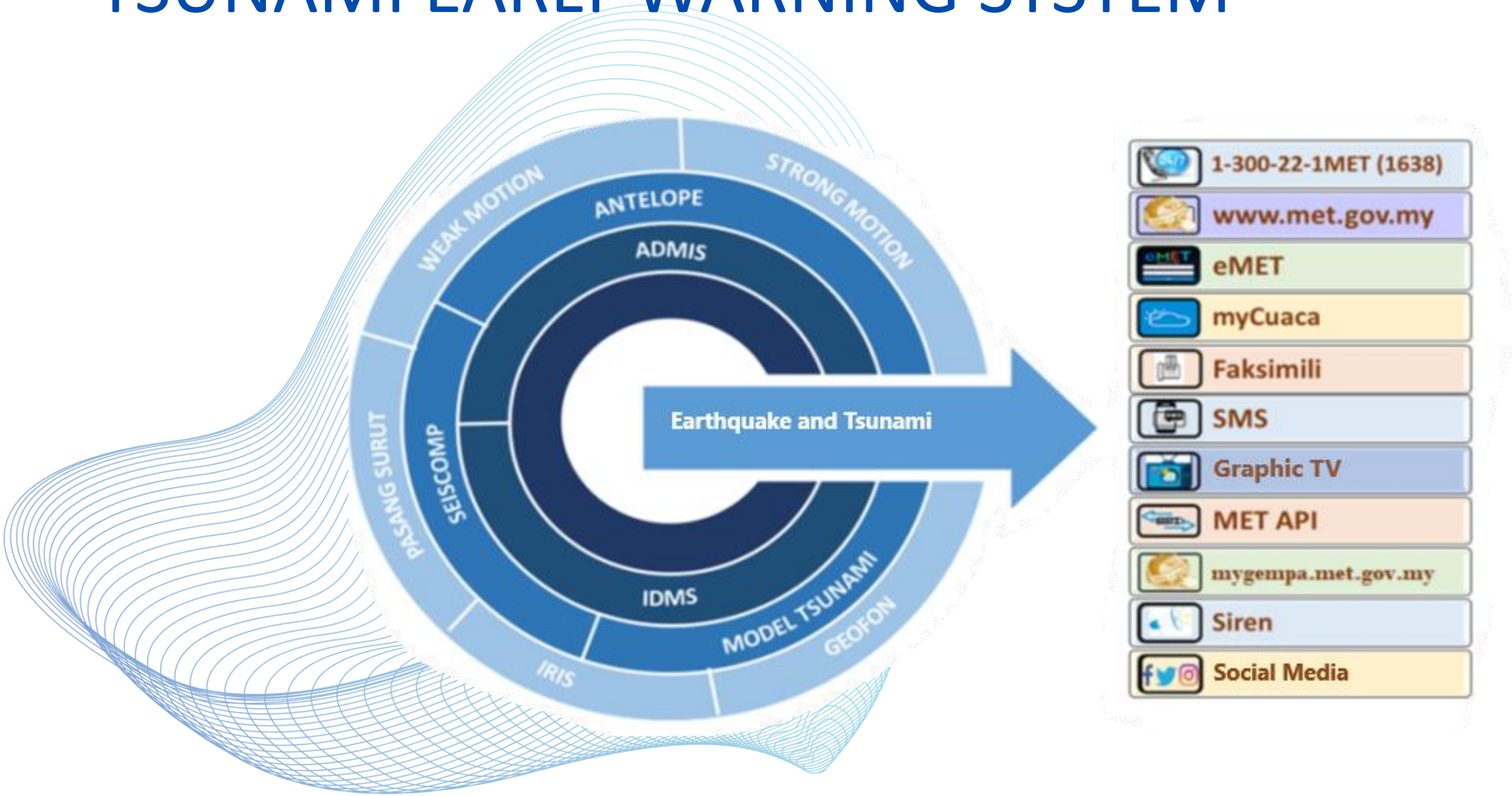
- Seismic Data Processing
- ADMIS
- Tide Tool
- IDMS / Tsunami Database
- Modelling/ TOAST
- Shakemap

3) DISSEMINATION AND COMMUNICATION

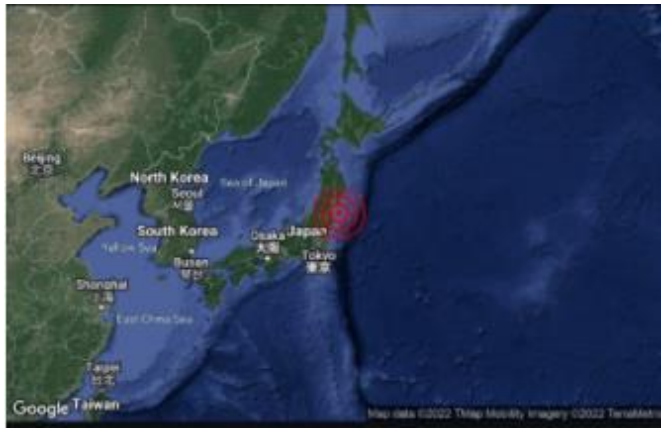
- Dissemination system via SMS, email, myGempa, website, fax, TV, radio, tsunami siren and social media

AREA OF RESPONSIBILITY (AOR)

TSUNAMI EARLY WARNING SYSTEM

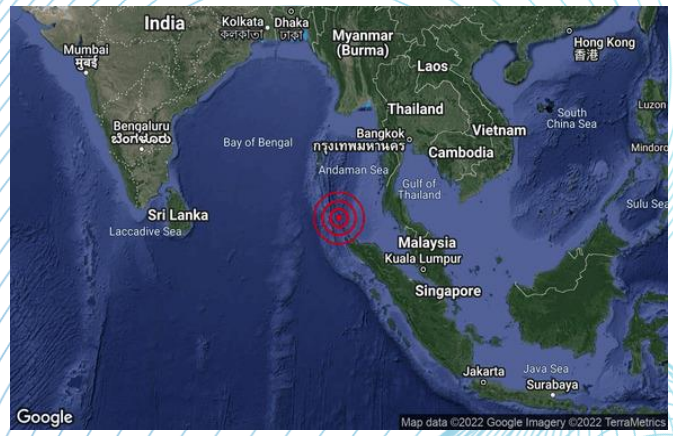


EARTHQUAKE INFORMATION DISSEMINATION



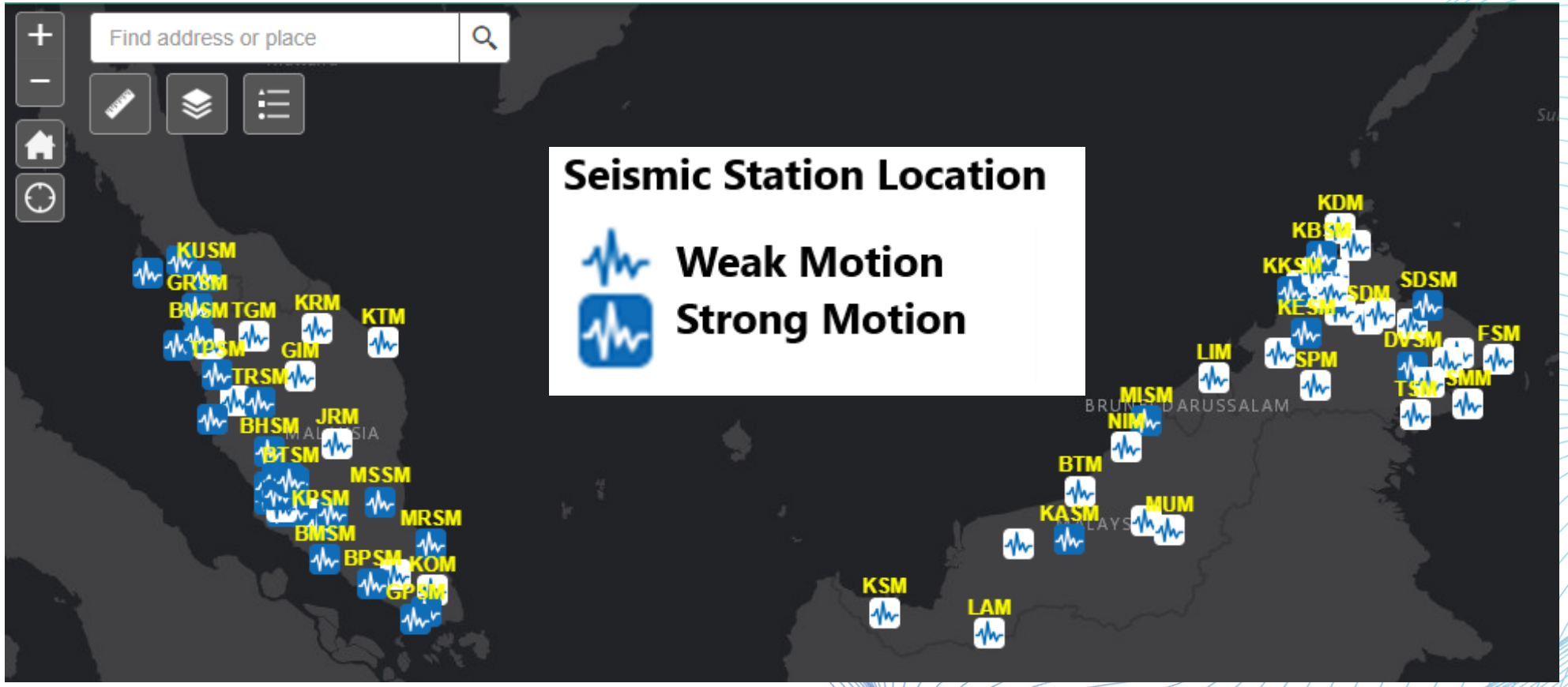
Gempa bumi kuat telah berlaku di Berhampiran
Pantai Timur Honshu, Jepun
pada jam 10:35 malam, 16 Mac 2022
Koordinat : 37.8° Utara dan 141.5° Timur
Magnitud : 7.4
Jarak : 79km Tenggara dari Sendai, Jepun
Kedalaman : 47 km
Tiada ancaman tsunami kepada Malaysia

Gempa bumi lemah telah berlaku di Beluran,Sabah
pada jam 8:39 malam, 28 Mac 2022
Koordinat : 6.5° Utara dan 117.5° Timur
Magnitud : 3.8
Jarak : 47km Timur dari Pitas,Sabah
Kedalaman : 7 km
Gegaran mungkin dirasai di Beluran dan sekitarnya.

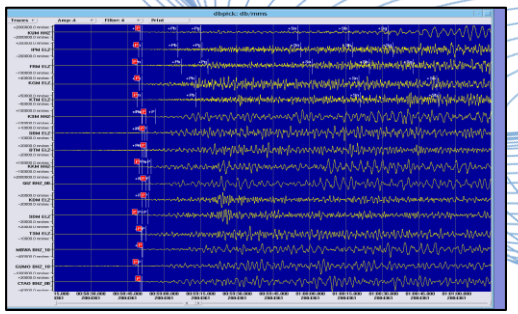


Gempa bumi sederhana telah berlaku di Kepulauan Nicobar, Rantau India pada jam 1:29 petang, 6 April 2022
Koordinat : 7.3° Utara dan 94.5° Timur
Magnitud : 5.6
Jarak : 89km Timur Laut dari Great Nicobar,India
Kedalaman : 10 km
Tiada ancaman tsunami kepada Malaysia.

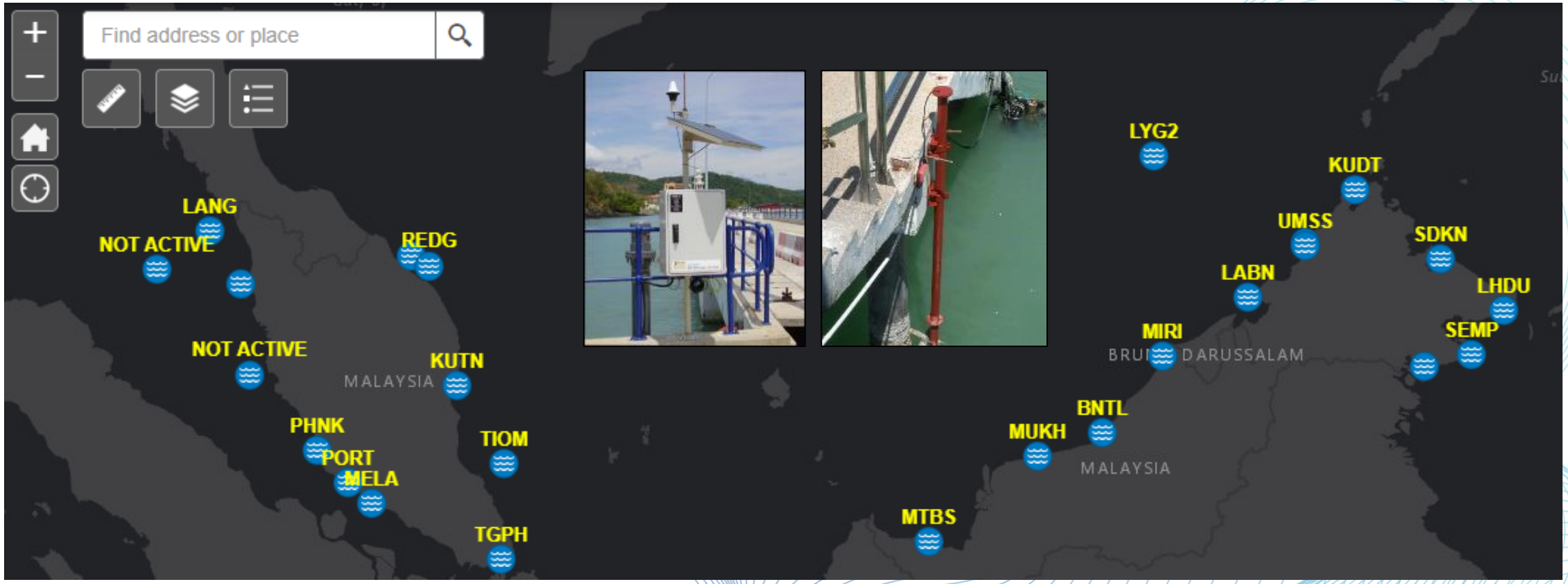
SEISMIC SISTEM NETWORK



Seismic Station (80 location: 42 Peninsular, 28 Sabah & 10 Sarawak)

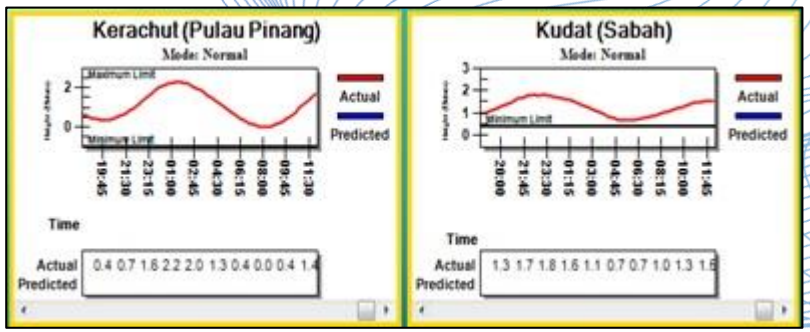


TIDE GAUGE NETWORKS

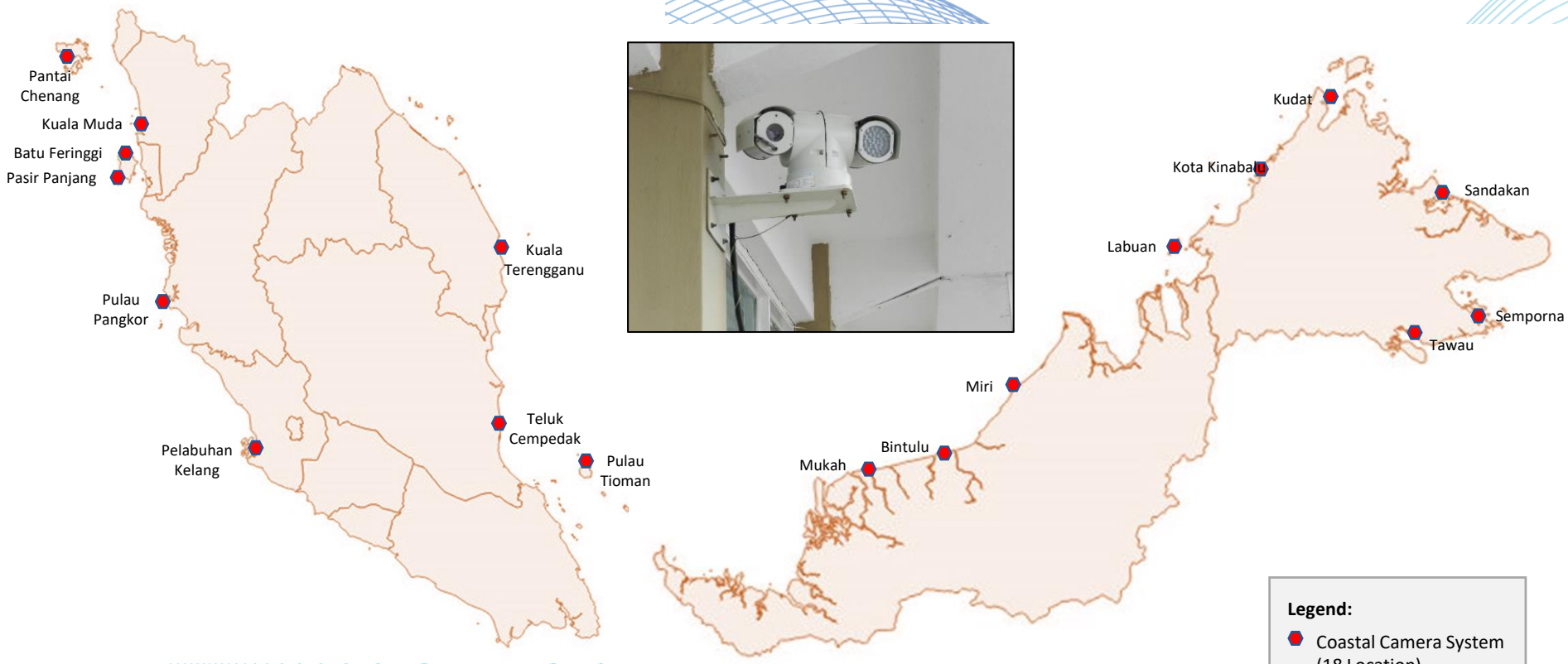


Tide gauge

(25 Location)



COASTAL CAMERA NETWORKS



Legend:

Coastal Camera System (18 Location)

TSUNAMI SIREN NETWORK

Tsunami Warning Siren Location

Siren (83):

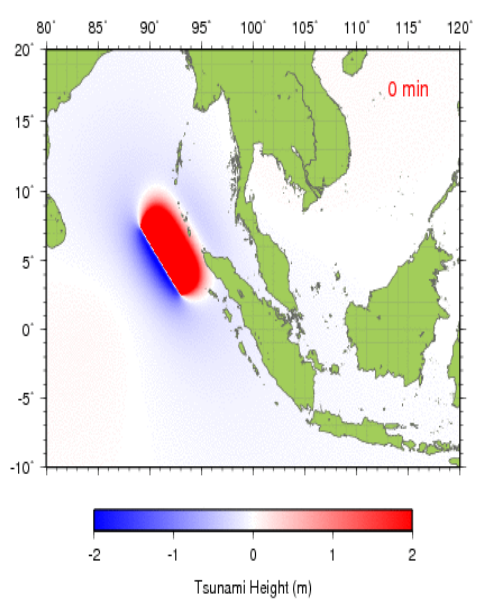
- Sabah & Labuan – 30
- Sarawak – 11
- Peninsular – 42

PROJECTS FOR UPGRADES

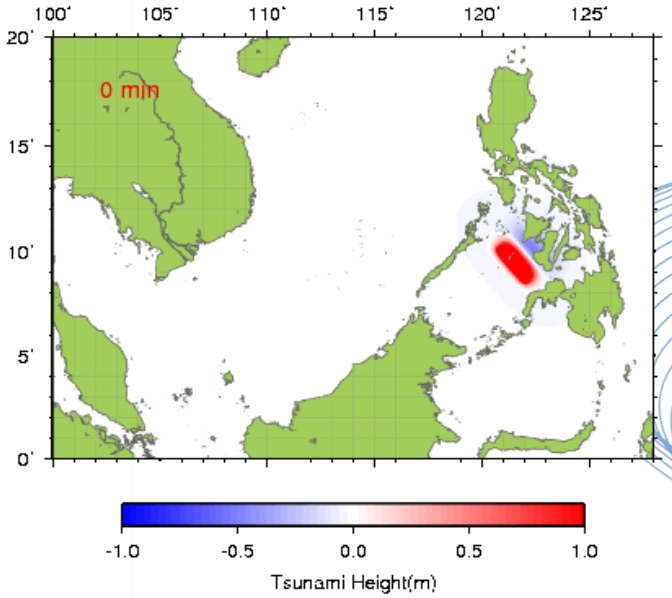
Component	Project Scope
A	Strengthening of the earthquake monitoring system by upgrading six (6) seismic stations and improving the earthquake information processing system.
B	Strengthening the tsunami monitoring system through upgrading seventeen (17) tide gauge stations and improving the tsunami information processing system
C	Strengthening of tsunami information delivery system by upgrading 23 tsunami siren
D	Improving earthquake and tsunami information delivery system.

MET MALAYSIA TSUNAMI SIMULATION MODEL

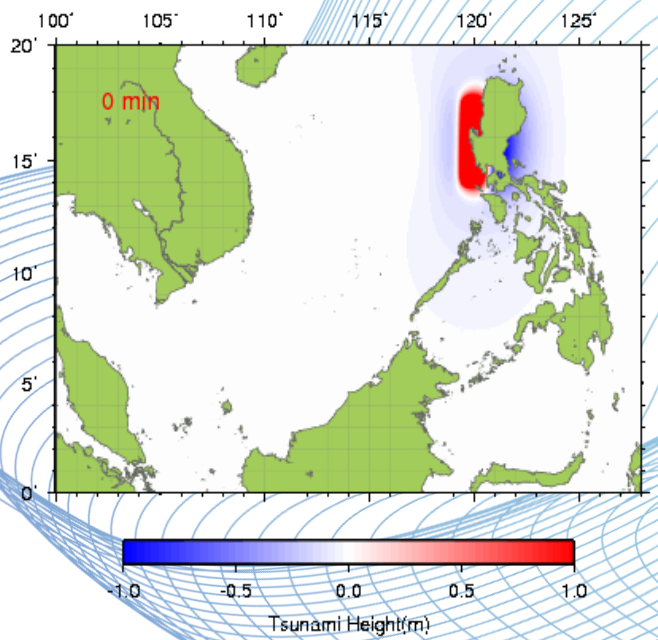
Tsunami worst Case Scenario using Tohoku University's Numerical Analysis Model For Investigation of Far-field Tsunami (TUNAMI-F1)



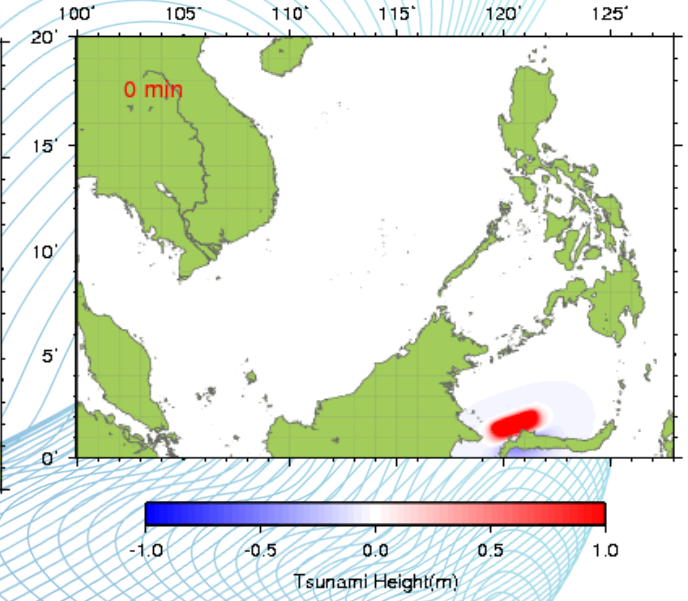
Indian Ocean
(Richter Scale: 9.5)



Sulu Sea
(Richter Scale: 8.5)



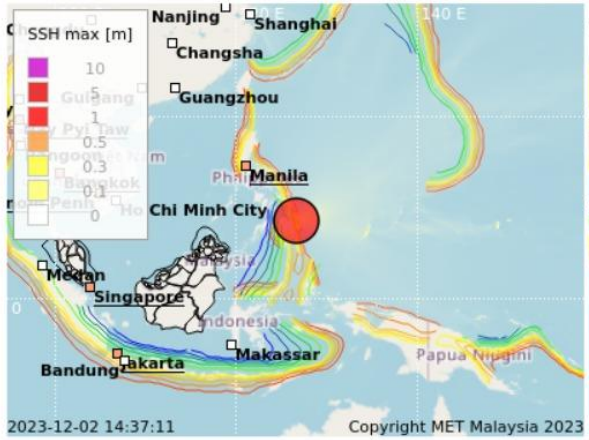
South China Sea
(Richter Scale: 9.0)



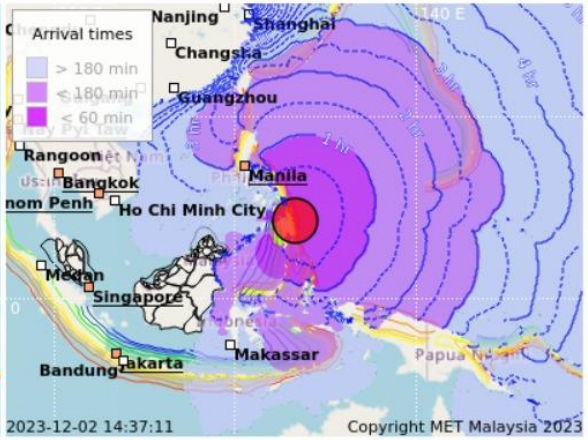
Sulawesi Sea
(Richter Scale: 8.5)

TOAST MODELLING ON EARTHQUAKE AND TSUNAMI

Ini merupakan anggaran ketinggian maksima aras laut dan masa ketibaan ombak tsunami. Masa ketibaan dan ketinggian sebenar ombak tsunami mungkin berbeza dalam keadaan sebenar disebabkan oleh data-data ketika pengiraan dilaksanakan.



Ketinggian Maksimum Aras Laut (SSH Max)



Masa Ketibaan (Arrival Times)

POI = Point of Interest (Tide Gauges Station)

Runup = Maximum positive wave amplitude at shoreline

ETA = Expected tsunami arrival time (UTC)

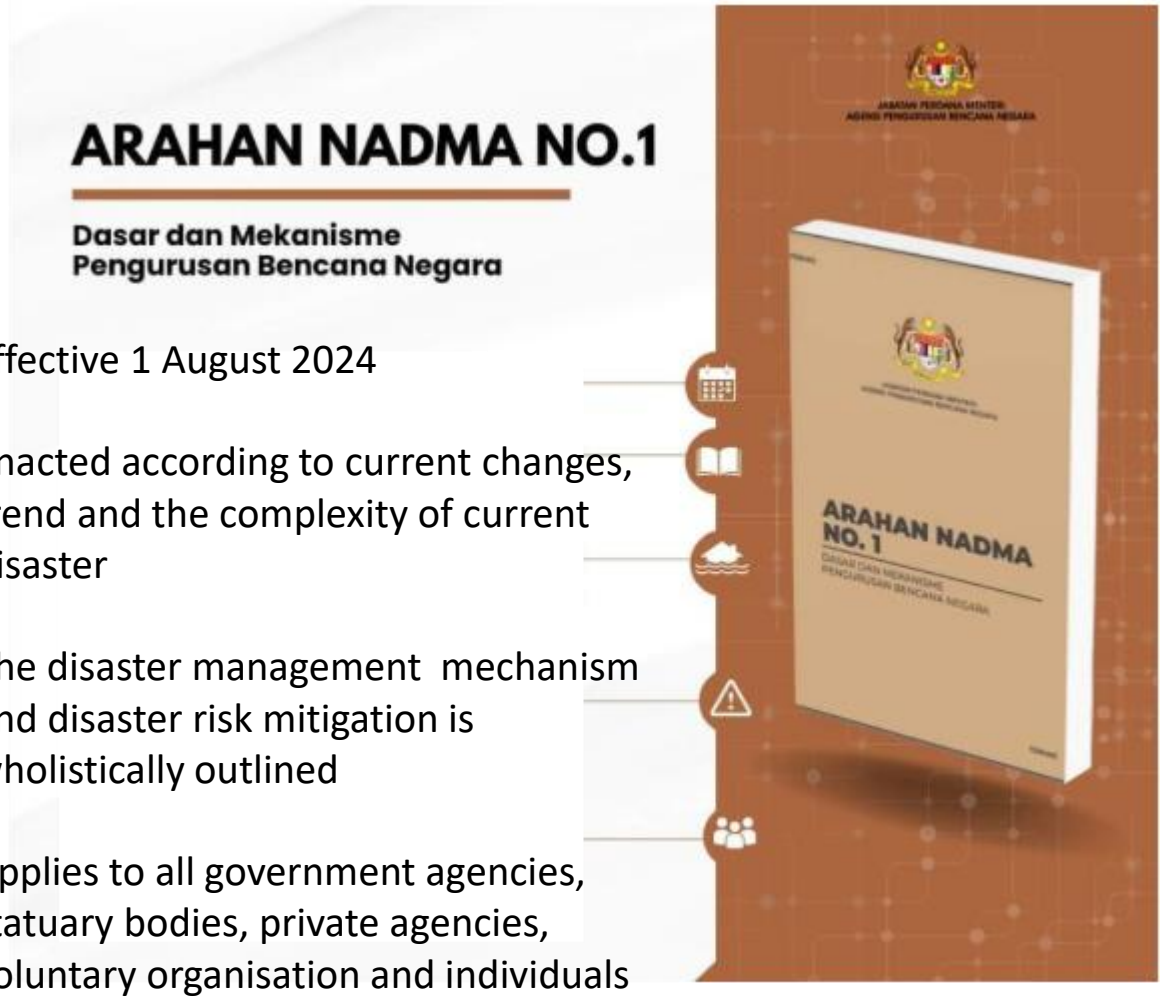
OTA = Observed tsunami arrival from tide gauges data

OTM = Time of observed tsunami maximum wave height from tide gauge data

OTMSSH(m) = Observed tsunami maximum wave height from tide gauge data

OTP(min) = Observed tsunami period from tide gauges data

POI	Koordinat	Negara	ETA (UTC)	OTA	OTM	OTMSSH(m)	OTP(min)	Runup(m)
VZ.MS006	5.076N 119.078N	Malaysia	2023-12-02 22:23:33					0.03



Effective 1 August 2024

Enacted according to current changes, trend and the complexity of current disaster

The disaster management mechanism and disaster risk mitigation is wholistically outlined

Applies to all government agencies, statuary bodies, private agencies, voluntary organisation and individuals

https://www.mkn.gov.my/web/ms/2024/10/24/apa-itu-arahan-nadma-no-1/

NADMA Directive No. 1: Policies and National Disaster Management Mechanism.

NADMA Directive No. 1 is enacted in accordance with the decisions of the Cabinet, considering current changes, patterns, and the complexity of current disaster.

This directive outlines Disaster Management and Mitigation mechanisms for more comprehensive Disaster Risk Reduction. Each agency involved in Disaster Management and Disaster Risk Reduction at every level is responsible for carrying out their respective roles in accordance with this directive.

This directive will also help prevent any waste, conflict or misunderstanding, contradiction and overlapping of roles when handling disaster.

INFORMATION DISSEMINATION ON EARTHQUAKE AND TSUNAMI

SMS

TOL FREE
1-300-22-1638

SMS & Whatsapp

Mass Media

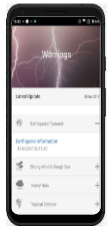
Tsunami Siren

E-mail & Fax

Website

www.met.gov.my
mygempa.met.gov.my

MET Malaysia



RakanMET

myCuaca

TV Crawler

Social Media

Weather Report (TV1)

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THANK YOU