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Intergovernmental Oceanographic Commission

## Utilizing NTWC products in DMO SOPs

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ICG Indian Ocean Tsunami Warning & Mitigation System SOP Workshops July 2023: Standard Operating Procedures (SOPs) for National Tsunami Warning Centres (NTWCs) and Disaster Management Organisations (DMOs)

## **Understanding the NTWC product**



- What communication means NTWC-DMO
  - Multi mode of communication: Email, WRS, Text Message, interagency networks, VHF, Vsat, fix-line phone, cell phone,

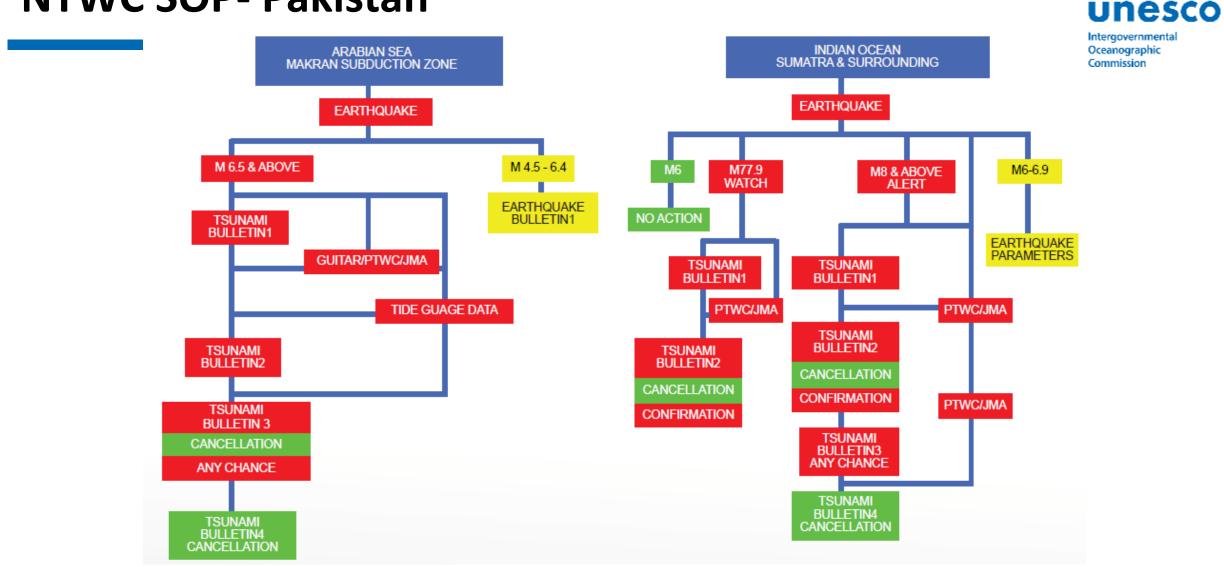
### What kind of information

- Technical parameter:
  - Warning Level information
  - ETA,
  - Tsunami Height,
  - Affected Areas
- Guidance for action
- Maps: travel time, inundation

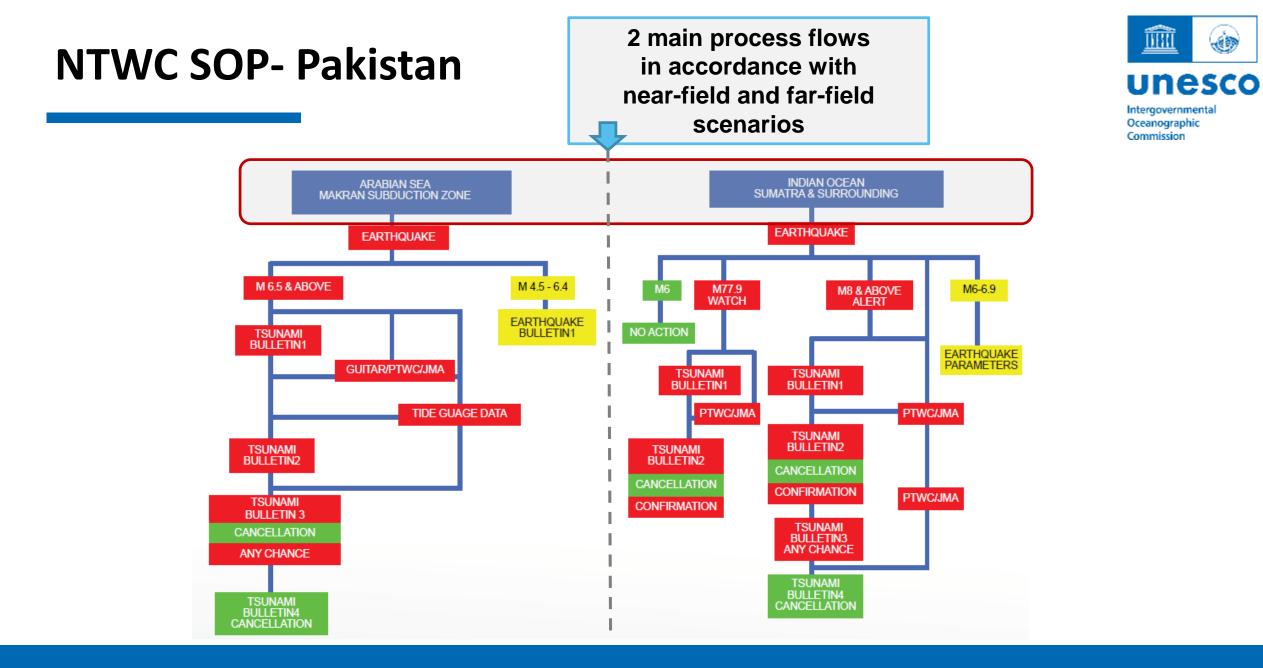
### Time-line for warning bulletin

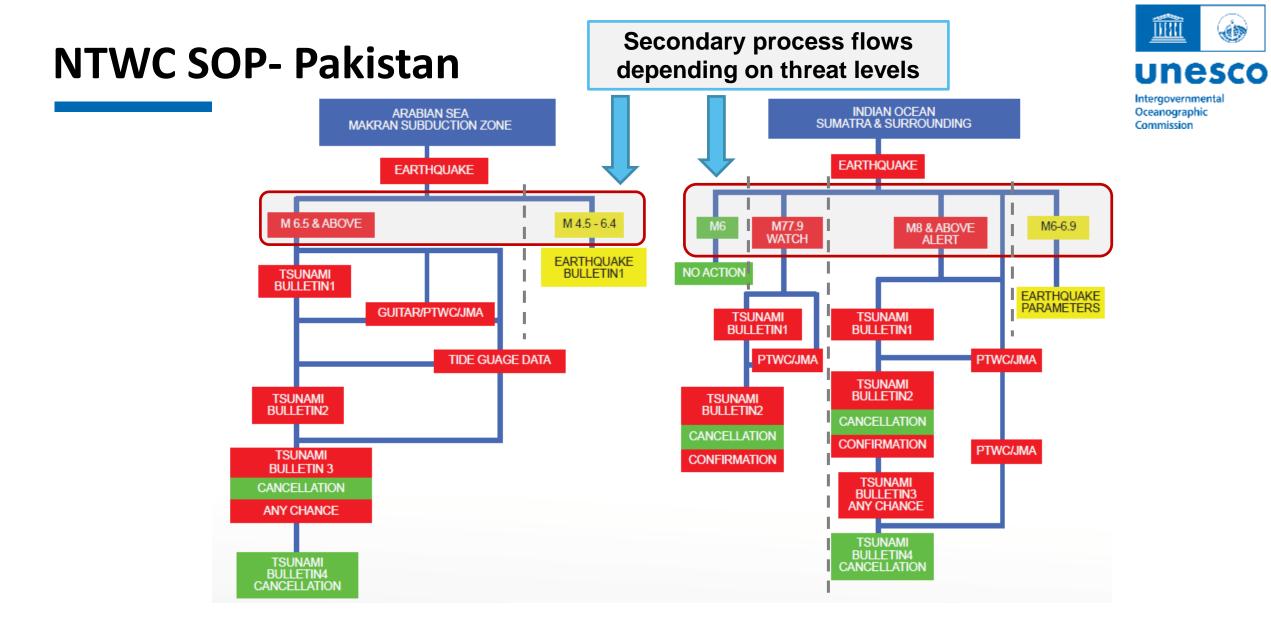
Bulletins 1 – 2 – 3 (3.1-3.n) – 4

### **NTWC SOP- Pakistan**

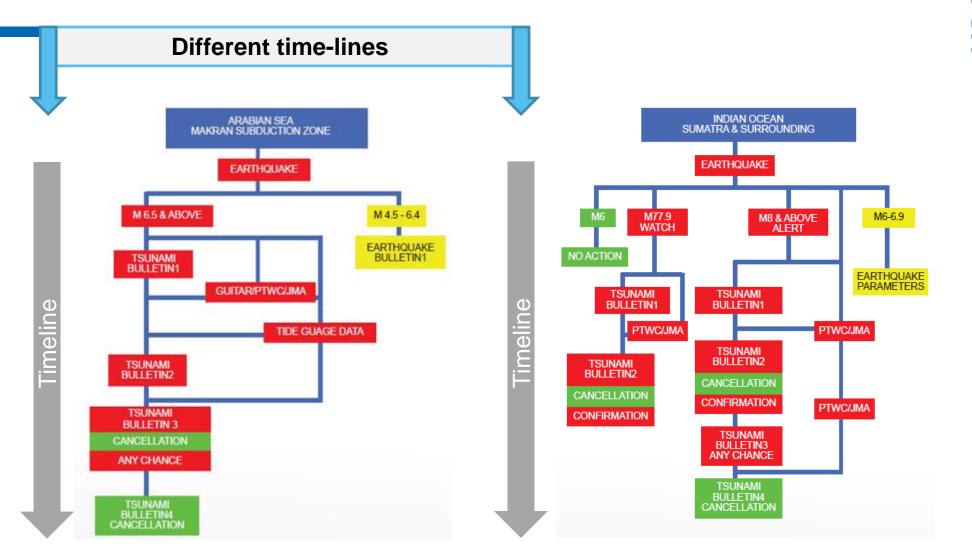


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## **NTWC SOP-** Pakistan

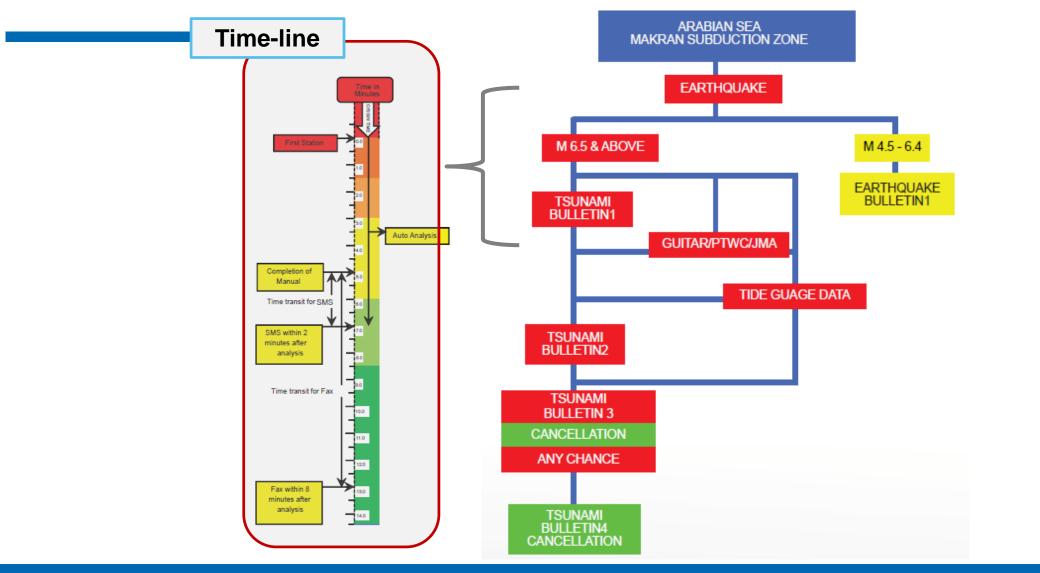


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## **NTWC SOP-** Pakistan for Near-Field threats



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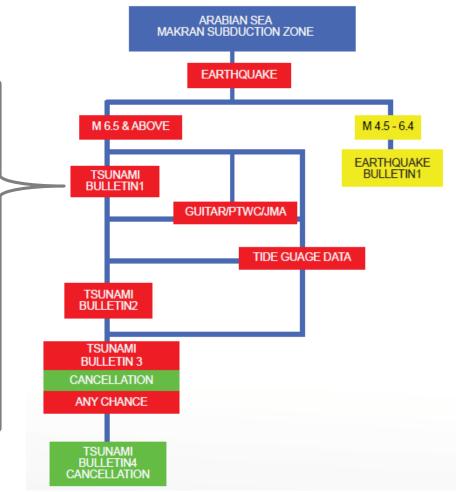
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### NTWC SOP- Pakistan Output: Bulletin 1

People in coastal areas of Balochistan especially Jiwani, Gwadar, Pasni, Ormara and neighbourhood are STRONGLY **ADVISED TO EVACUATE IMMEDIATELY** to higher grounds or go far inland. People in coastal areas of Sindh are advised to standby for evacuation. Boats and Ships at sea are advised to stay in the deeper parts of the sea until the threat is over. If there is sufficient time, boats and ships in harbours and bays are advised to go to the deeper parts of the sea until the threat is over.



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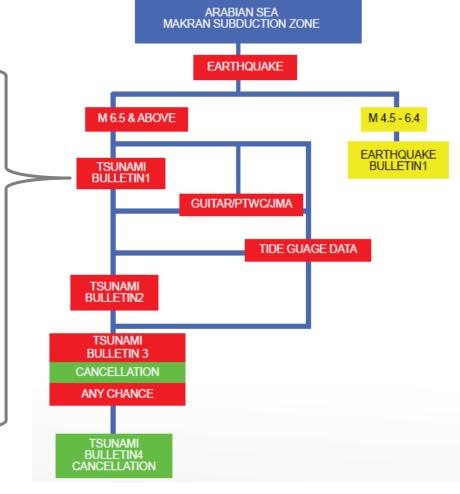
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### NTWC SOP- Pakistan Output: Bulletin 1

People in coastal areas of Balochistan especially Jiwani, Gwadar, Pasni, Ormara and neighbourhood are STRONGLY **ADVISED TO EVACUATE IMMEDIATELY** to higher grounds or go far inland. People in coastal areas of Sindh are advised to standby for evacuation. Boats and Ships at sea are advised to stay in the deeper parts of the sea until the threat is over. If there is sufficient time, boats and ships in harbours and bays are advised to go to the deeper parts of the sea until the threat is over.



## Input for DMO & Media

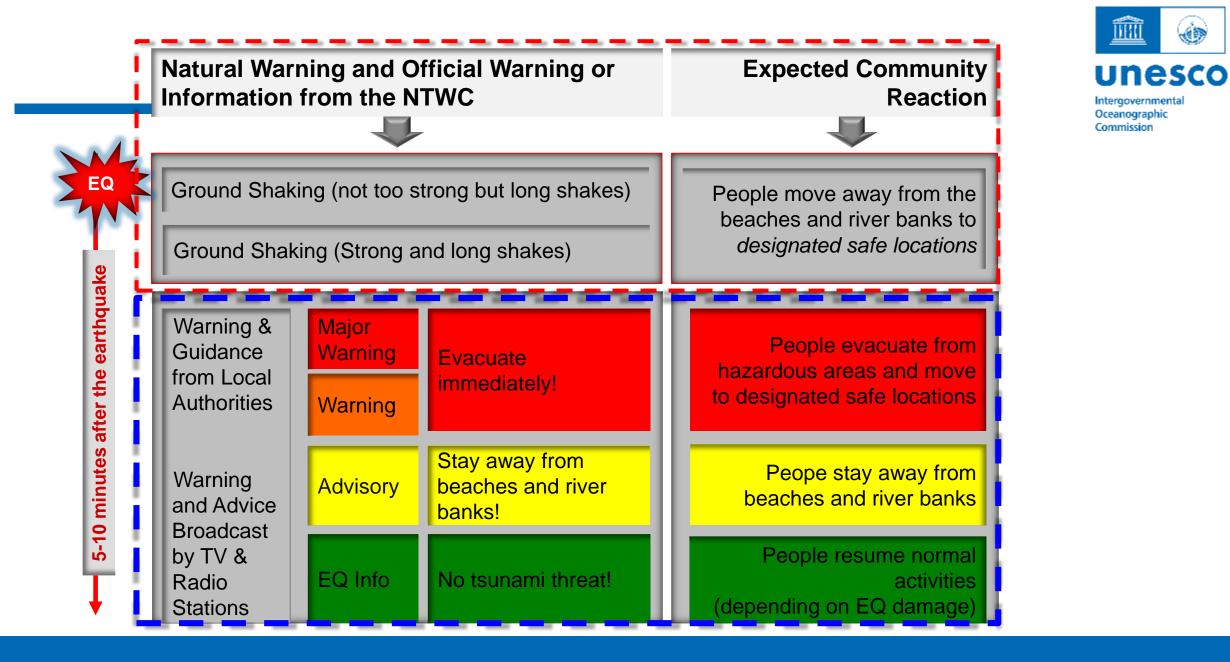
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Warning level and advice to local government by the BMKG

Warning Level	Saran dari BMKG pada PEMDA
AWAS (Major Warning)	Provincial/District/City governments that are at "Major Warning" level are expected to pay attention to this warning and immediately guide their communities for full evacuation.
SIAGA (Warning)	Provincial/District/City governments that are at " <b>Warning</b> " level are expected to pay attention to this warning and immediately guide their communities for evacuation.
WASPADA (Advisory)	Provincial/District/City governments that are at "Advisory" level are expected to pay attention to this warning and immediately guide their communities to move away from beaches and river banks.





#### Community: reaction to groundshaking **T1** Seismic **Bulletin 1 Earthquake information** <5min Local government: Receive warning and Area with Potential Tsunami Reaction in affected areas **Potential Threat** make decision whether to call for **T2** evacuation and provide guidance to community at risk **Tsunami Scenarios** Community: Reaction to the warning from BMKG and guidance from local **Bulletin 2** government **T3** Update of the EQ parameter, **Update information** threat level, and ETA (This has to be done in a short time as the waves will arrive in short time). T0 - T4 = Critical time**Observation 1** Т4 **Bulletin 3.1** Sea Level Observation Update of parameter and 10-60 **Tsunami Wave 1** GPS observation min Buoy, Tsunami Wave 2 **Observation** Т5 Bulletin 3.2 Tide gauge, Further update (if any) **Tsunami Wave 3 Observation - n T6 Bulletin 3.n** Further update (if any) **T7** End of Threat **Bulletin 4** > 120 min

Earthquake

### Example of NTWC Product in 3 Modes of Communications

- Warning Receiver System
  - DMO Dedicated
  - Media-Broadcast
  - Community-web based
  - Public-Mobile
    Phone.
- 2. Emails
- 3. Text Message

Warning Message **Via Warning Receiver System** for Stakeholder **Organizations** 



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Warning Message Via Warning Receiver System for Stakeholder Organizations



Peringatan dini TSURAMI yang disebabkan gempa kekuatan : 8.1 SR tanggal : 11-Apr-12 17:43:11 WIB dinyatakan TELAH BERAFRIR





Warning Message Via Warning Receiver System for Broadcasting Media (MCR)





HOW TO READ THE MESSAGE

#### TSUNAMI WARNING FROM BMKG.

AN EARTHQUAKE WITH A MAGNITUDE OF 8.9 ON THE RICHTER SCALE WITH A DEPTH OF 10 KILOMETRES OCCURRED ON 11 APRIL 2012 AT 15:38:33 WESTERN INDONESIA TIME (WIB), EPICENTER IN THE REGION OF SOUTHWEST SIMEULUE REGENCY ACEH PROVINCE AND HAS THE POTENTIAL TO CAUSE A TSUNAMI. THE COMMUNITY IS URGED TO FOLLOW DIRECTIONS FROM THE AUTHORITIES OR THE LOCAL GOVERNMENT.

EARTHQUAKE PARAMETERS ARE TEMPORARY AND WILL CONTINUE TO BE UPDATED BY THE BMKG.

COMMUNITIES HAVING WARNING OR MAJOR WARNING STATUS, INDICATED IN THE MAP BY ORANGE OR RED COLORS, ARE ADVISED TO IMMEDIATELY EVACUATE TO A SAFE PLACE OR HIGHER GROUND. COMMUNITIES WITH ADVISORY LEVEL INDICATED BY YELLOW COLOR ARE ADVISED TO STAY AWAY FROM BEACHES AND WATERWAYS INCLUDING RIVERS.



HOW TO READ THE MESSAGE

#### TSUNAMI WARNING FROM BMKG.

UPDATED INFORMATION ON THE EARTHQUAKE, WHICH OCCURRED ON 11 APRIL 2012 AT 15:38:33 WIB, WITH A MAGNITUDE OF 8.5 ON THE RICHTER SCALE AND A DEPTH OF 10 KILOMETRES, EPICENTER IN THE SOUTHWEST REGION SIMEULUE REGENCY ACEH PROVINCE AND WITH THE POTENTIAL TO CAUSE A TSUNAMI. FOLLOW INSTRUCTIONS FROM AUTHORITIES:

COMMUNITIES HAVING MAJOR WARNING OR WARNING STATUS, INDICATED IN THE MAP BY ORANGE OR RED COLORS, ARE ADVISED TO IMMEDIATELY EVACUATE TO A SAFE PLACE OR HIGHER GROUND. COMMUNITIES WITH ADVISORY LEVEL INDICATED BY YELLOW COLOR ARE ADVISED TO STAY AWAY FROM BEACHES AND WATERWAYS INCLUDING RIVERS.

Warning Message Via Warning Receiver System for Broadcasting Media (MCR)





TSUNAMI WARNING FROM BMKG.

TSUNAMI EARLY WARNING DUE TO THE EARTHQUAKE ON DATE 11-APR-12 TIME 15:38:33WIB, IN ACEH, NORTH SUMATRA, WEST SUMATRA, BENGKULU, LAMPUNG WITH A MAGNITUDE 8.1SR, HAS ENDED. THE END OF THIS WARNING APPLIES TO ALL AREAS IN INDONESIA.

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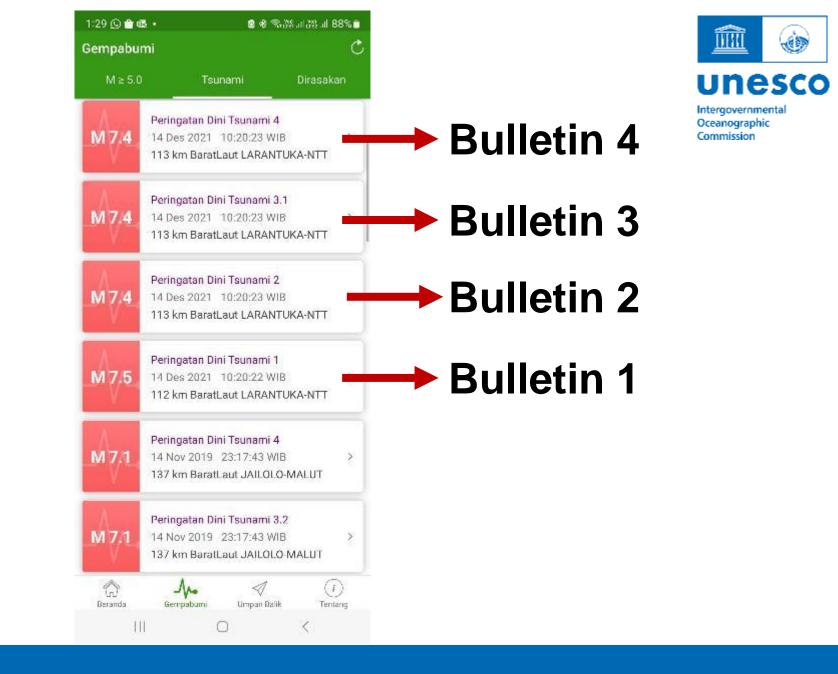


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Oceanographic Commission Warning Message Via Warning Receiver System of Mobile Phone

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Warning Message Via Warning Receiver System of Mobile Phone





Peringatan Dini Tsunami untuk wilayah: MALUKU, NTB, NTT, SULSEL, SULTRA, Gempa Mag:7.5, 14-Des-21 10:20:22 WIB, Lok:7.59 LS, 122:26 BT (112 km BaratLaut LARANTUKA-NTT), KedImn:12 Km ::BMKG

- 👝 Lokasi Gempa
- 112 km BaratLaut LARANTUKA-NTT
- Potensi TSUNAMI untuk diteruskan pada masyarakat
- Arahan BMKG
- Ikuti arahan peringatan dini TSUNAMI dari BPBD, BNPB dan BMKG

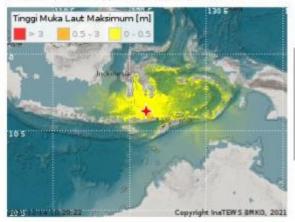
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#### Peta Perkiraan Tinggi Muka Laut Maksimum





#### Peta Perkiraan Tinggi Muka Laut Maksimum



#### Peta Waktu Datang & Zona Warning

Daerah yang berpotensi tsunami berdasarkan pemodelan

Kota	/ Kabupaten (F	Provinsi)	Status Peringatan
Selayar (SU	LSEL)		SIAGA
Pulau Ende	(NTT)		SIAGA
Beranda	Gempebumi	Umpan Balik	(i) Tentang
11	(	2	<

1:30 🖻 💭 📦 •	[Alarm] Pintu tidak te	standi. Monon
14 Des 2021 10:20:22 WIB (2 tahı	un yang lalu)	P.D. Tsunami
<b>№ 7.5</b> Magnitudo	<b>() 12 km</b> Kedalaman	() 7.59 LS 122.26 вт
Kota/ Kab	upaten (Provinsi)	Status Peringatar
Selayar (SULSEL)		SIAGA
Pulau Ende (NTT	)	SIAGA
Flores-Timur Bag	ian Utara (NTT)	SIAGA
Pulau Sikka (NTT	)	SIAGA
Sikka Bagian Uta	ra (NTT)	SIAGA
Ende Bagian Utar	a (NTT)	SIAGA
Pulau Lembata (1	(тти	SIAGA
Flores-Timur Pula	au Adonara (NTT)	SIAGA
Manggarai Bagia	n Utara (NTT)	SIAGA
Ngada Bagian Ut	ara (NTT)	SIAGA
Lembata Bagian	Utara (NTT)	SIAGA
Buton (SULTRA)		SIAGA
Alor Bagian Utara	a (NTT)	SIAGA
Bombana (SULTR	(A)	SIAGA
Manggarai-Barat	Bagian Utara (NTT	) WASPADA
Wakatobi (SULTR	A)	WASPADA
Bima Pulau Gili (I	NTB)	WASPADA () Balik Tentang
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Commission



#### Saran dan Arahan Status Peringatan

#### Status Awas

Pemerintah Propinsi/Kab/Kota yang berada pada status 'Awas'' diharap memperhatikan dan segera mengarahkan masyarakat untuk melakukan evakuasi menyeluruh

#### Status Siaga

Pemerintah Propinsi/Kab/Kota yang berada pada status 'Siaga' diharap memperhatikan dan segera mengarahkan masyarakat untuk melakukan evakuasi

#### Status Waspada

Pemerintah Propinsi/Kab/Kota yang berada pada status 'Waspada' diharap memperhatikan dan segera mengarahkan masyarakat untuk menjauhi pantai dan tepian sungai





Pemutakhiran Peringatan Dini Tsunami untuk wilayah: NTT, Gempa Mag:7.4, 14-Des-21 10:20:23 WIB, Lok:7.59 LS, 122:24 BT (113 km BaratLaut LARANTUKA-NTT), KedImn:10 Km ::BMKG

#### 🐮 Lokasi Gempa

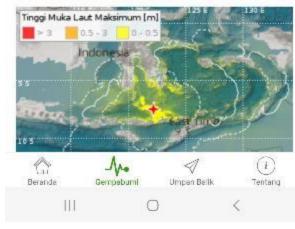
- 113 km BaratLaut LARANTUKA-NTT
- Potensi TSUNAMI untuk diteruskan pada masyarakat

#### Arahan BMKG

Ikuti arahan peringatan dini TSUNAMI dari BPBD, BNPB dan BMKG

. . . . . . .

#### Peta Perkiraan Tinggi Muka Laut Maksimum





Daerah yang berpotensi tsunami berdasarkan pemodelan

Kota/ Kabupaten (Provinsi)	Status Peringatan	Estimasi Tiba
Flores-Timur Bagian Utara (NTT)	WASPADA	14-12-2021 10:20:22 WIB
Pulau Sikka (NTT)	WASPADA	14-12-2021 10:20:22 WIB
Sikka Bagian Utara (NTT)	WASPADA	14-12-2021 10:20:22 WIB
Pulau Lembata (NTT)	WASPADA	14-12-2021 10:36:37 WIB

#### Saran dan Arahan Status Peringatan

 Status Awas

 Pemerintah Propinsi/Kab/Kota yang berada pada status 'Awas' diharap memperhatikan dan segera

 Image: Cross Status Awas

 Image: Cross Status

 Image: Cross Statu



Berdasarkan pengamatan muka air laut, tsunami telah terdeteksi

Lokasi (Koordinat)	Waktu	Ketinggian (m)
Marapokot (-8.51, 121.32)	14-12-2021 10:36 WIB	0.07
Reo (-8.28, 120.45)	14-12-2021 10:39 WIB	0.07

#### Daerah yang berpotensi tsunami berdasarkan pemodelan

Kota/ Kabupaten (Provinsi)		Status Peringatan	Estimasi Tiba	
Flores-Timu (NTT)	r Bagian Utara	WASPADA	14-12-2021 10:20:22 WIB	
Pulau Sikka (NTT)		WASPADA	14-12-2021 10:20:22 WIE	
Sikka Bagia	n Utara (NTT)	WASPADA	14-12-2021 10:20:22 WIB	
Baranda	Gempabumi	Impan Balik	(i) Lentang	
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Peringatan Dini TSUNAMI yang disebabkan oleh gempi Mag:7.4, 14-Des-21 10:20:23 WIB, dinyatakan telah berakhir::BMKG

- 👝 Lokasi Gempa
- 113 km BaratLaut LARANTUKA-NTT
- Potensi TSUNAMI untuk diteruskan pada masyarakat
  - Arahan BMKG

Ikuti arahan peringatan dini TSUNAMI dari BPBD, BNPB dan BMKG









::::1	BMKG	MKGBMKG	BM)
	indones	Warning System (InaTE	(WS)
	METEOROLOGICAL CLI	ATOLOGICAL AND GEOPHYSIC	AL AGENCY
	Address:Jl. Angkasa I n	o.2 Kemayoran, Jakarta, Indone	sia, 10720
		6546316 . Fax: (+62-21) 654631	
		t, Website : http://www.bmkg.g	
********			
	Issued date: 11 Ap	oril 2012, 15:43:05 WIB (UTC=W	(18-7)
		Bulletin-1	
	No.:103	/warning/InaTEW5/IV/2012	
AN EARTHQUA	KE HAS OCCURRED WIT	H THESE PRELIMINARY PARAMI	ETERS:
Magnitude	: 8.9 RS	2	
Date	: 11-Apr-2012		
Waktu Origin Ti	me: 08:38:29 UTC	(	Earthquake
Latitude	: 2.31 N	7	parameter
Longitude	: 92.67 E	1	
Depth	: 10 Km	)	
Location	: Off West Coast o	f Northern Sumatra	
Remarks	: 434 km SOUTHW	EST of Meulaboh	
	463 km SOUTHW	EST of Banda Aceh	
	493 km SOUTHW	EST of Sabane	Distance
	497 km SOUTHW		from
	550 km SOUTHW		epirer net
Evaluation:			

THERE IS THE POSSIBILITY OF A TSUNAMI IN THE FOLLOWING AREAS:

Province	Location	Warning Level
BENGKULU	Bengkulu-Selatan	MAJOR WARNING
BENGKULU	Bengkulu-Utara Bagian Utara	MAJOR WARNING
BENGKULU	Bengkulu-Utara Pulau Enggano	MAJOR WARNING
BENGKULU	Kaur	MAJOR WARNING
BENGKULU	Kota-Bengkulu Pantai-Panjang	MAJOR WARNING
BENGKULU	Mukomuko	MAJOR WARNING

Warning Level for Affected Areas

(Warning segments are usually equal to district borders, although there are exceptions)



 Guidance for local

government

JNG	Tanggamus Pulau Tabuan	WARNING
AR	Agam	WARNING
AR	Kota-Padang	WARNING
AR	Kota-Padang Bagian Selatan	WARNING
AR	Kota-Padang Bagian Utara	WARNING
AR	Padang-Pariaman Bagian Selatan	WARNING
AR	Padang-Pariaman Bagian Utara	WARNING
AR	Pasaman-Barat	WARNING
AR	Pesisir-Selatan Bagian Selatan	WARNING
AR	Pesisir-Selatan Bagian Utara	WARNING
N	Lebak	ADVISORY
	Cianjur Sindangbarang	ADVISORY
ING	Lampung-Selatan Kep. Krakatau	ADVISORY
ING	Lampung-Selatan Kep. Sebuku	ADVISORY

#### Advice:

LAMPU SUMBA SUMBA SUMBA SUMBA

SUMBA SUMBA SUMBA

BANTER JABAR LAMPU

Province/District/City governments that are at "Major Warning" level are expected to pay attention to this warning and immediately guide their communities for full evacuation.

Province/District/City governments that are at "Warning" level are expected to pay attention to this warning and immediately guide their communities for evacuation.

Province/District/City governments that are at "Advisory" level are expected to pay attention to this warning and immediately guide their communities to move away from the beach and river banks.

BMKG BMKG BMKG BMKG



BENGKULU	Bengkulu-Utara Bagian Utara	WARNING	10:48:22	2012-04-11	
BENGKULU	Kaur	WARNING	10:48:43	2012-04-11	
BENGKULU	Seluma	WARNING	10:49:43	2012-04-11	
SUMUT	Mandailing-Natal Bagian Selatan	WARNING	10 51 43	2012-04-11	
BENGKULU	Bengkulu-Selatan	WARNING	10:51:52	2012-04-11	
LAMPUNG	Lampung-Barat Pesisir-Selatan	WARNING	10:54-28	2012-04-11	
LAMPUNG	Lampung-Barat Pesisir-Tengah	WARNING	10:54:28	2012-04-11	
LAMPUNG	Lampung-Barat Pesisir-Utara	WARNING	10 55 37	2012-04-11	
BENGKULU	Kota-Bengkulu Pantai-Panjang	WASPADA	10 58 18	2012-04-11	
BANTEN	Pandeglang Pulau Panaitan	WARNING	11:01:43	2012-04-11	
BENGKULU	Bengkulu-Utara Bagian Selatan	ADVISORY	11:03:13	2012-04-11	
BANTEN	Pandeglang Bagian Selatan	NO THREAT	11:03:52	2012-04-11	
ABAR	Sukabumi Pelabuhan-Ratu	NO THREAT	11:05:18	2012-04-11	
ABAR	Sukabumi Ujung-Genteng	NO THREAT	11:05:18	2012-04-11	
LAMPUNG	Lampung-Selatan Kep. Krakatau	NO THREAT	11:05:22	2012-04-11	
LAMPUNG	Lampung-Selatan Kep. Sebuku	NO THREAT	11:05:22	2012-04-11	
LAMPUNG	Tanggamus Bagian Barat	ADVISORY	11:05:48	2012-04-11	
LAMPUNG	Tanggamus Pulau Tabuan	ADVISORY	11:05:48	2012-04-11	
LAMPUNG	Lampung-Selatan Bagian Barat	NO THREAT	11:06:22	2012-04-11	
LAMPUNG	Tanggamus Bagian Timur	NO THREAT	11:06:22	2012-04-11	
ABAR	Clanjur Sindangbarang	NO THREAT	11:06:33	2012-04-11	
BANTEN	Lebak	NO THREAT	11:06:52	2012-04-11	

(ETA: estimated time of arrival)

ACTUAL ARRIVAL TIMES MAY DIFFER AND THE INITIAL WAVE MAY NOT BE THE LARGEST.

Advice:

Province/District/City governments that are at "Major Warning" level are expected to pay attention to this warning and immediately guide their communities for full evacuation.

Province/District/City governments that are at "Warning" level are expected to pay attention to this warning and immediately guide their communities for evacuation.

Province/District/City governments that are at "Advisory" level are expected to pay attention to this warning and immediately guide their communities to move away from the beach and river banks.

BMKG BMKG BMKG	BMKG BMKG
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Indonesian Tsunami Early Warning System (InaTEWS) METEOROLOGICAL CLIMATOLOGICAL AND GEOPHYSICAL AGENCY Address: Jl. Angkasa I no.2 Kemayoran, Jakarta, Indonesia, 10720 Telp.: (+62-21) 4246321/6546316 , Fax: (+62-21) 6546316/4246703 P.O. Box 3540 Jkt, Website : http://www.bmkg.go.id

Issued date: 11 April 2012, 15:47:45 WIB (UTC=WIB-7) Bulletin-2 No.:104/warning/InaTEW5/IV/2012

AN EARTHQUAKE HAS OCCURRED WITH THESE PRELIMINARY PARAMETERS:

BMKG

## Warning Message Via Email **Bulletin 2**

Magnitude	: 8.5 RS	
Date	: 11-Apr-2012	
Origin Time	: 08:38:33 UTC	
Latitude	: 2.40 N	
Longitude	: 92.99 E	1
Depth	: 10 Km	- Pay attention
Location	: Off West Coast of Northern Sumatra	for the possibility of
Remarks	: 398 km SOUTHWEST Meulaboh	updates to the
	433 km SOUTHWEST Banda Aceh	earthquake's
	464 km SOUTHWEST Sabang	parameters
	465 km SOUTHWEST Sigli	
	515 km SOUTHWEST Bireun	

#### Evaluation:

THERE IS THE POSSIBILITY OF A TSUNAMI IN THE FOLLOWING AREAS:

Province	Warning Segment	Warning Level	ETA [UTC]	Date [YYYY-MM-DD]
NAD	Simeulue Pulau Simeulue	MAJOR WARNING	09-00-13	2012-04-11
SUMUT	Nias Bagian Barat	MAJOR WARNING	09.16.58	2012-04-11
SUMUT	Nias-Selatan Pulau Nias	MAJOR WARNING	09:22:03	2012-04-11
	and M			-

to Warning or Major Warning, or vice-versa

#### BMKG BMKG BMKG BMKG

Indonesian Tsunami Early Warning System (InaTEWS) METEOROLOGICAL CLIMATOLOGICAL AND GEOPHYSICAL AGENCY Address: Jl. Angkasa I no.2 Kemayoran, Jakarta, Indonesia, 10720 Telp.: (+62-21) 4246321/6546316 , Fax: (+62-21) 6546316/4246703 P.O. Box 3540 Jkt, Website : http://www.bmkg.go.id

Issued date: 11 April 2012, 18:15:03 WIB (UTC=WIB-7)

Bulletin-3 No.:113/warning/InaTEWS/IV/2012

#### UPDATING OF EARTHQUAKE PARAMETERS::

Magnitude	:	8.3 RS
Date	-	11-Apr-2012
Origin Time:	:	08:38:35 WIB
Latitude		2.33 N
Longitude	-	93.05 E
		10 Km
Location	:	Off West Coast of Northern
Remarks	-	396 km SOUTHWEST Meula
		435 km SOUTHWEST Banda
		465 km SOUTHWEST Sigli
		467 km SOUTHWEST Saban
		514 km SOUTHWEST Bireur

#### Evaluation:

Via Email

**Bulletin 3** 

Based on sea level observations, tsunami has detected in the following areas:

Location	Latitude	Longitude	Time[UTC] [HH:NN]	Date [YYYY-MM-D	Height [D]	been ob- served indicat ing location.
SABANG	05.80	95.00	10:00	2012-04-11	0.06 meter	wave height
MEULABOH	04.32	96.22	10:04	2012-04-11	0.8 meter	and arrival

#### BERPOTENSI TERJADI TSUNAMI DI WILAYAH:

Province	Warning Segment	Warning Level	ETA [WIB]	Date (YYYY-MM-DD)
NAD	Simeulue Pulau Simeulue	MAJOR WARNING	16:00:20	2012-04-11
SUMUT	Nias Bagian Barat	MAJOR WARNING	16:16:50	2012-04-11
SUMUT	Nias-Selatan Pulau Nias	MAJOR WARNING	16:21:54	2012-04-11

Be aware of the possibility that the status levels in each area may change from Advisory to Warning or Major Warning, or vice-versa

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SUMBAR	Kota-Padang	ADVISORY	17:31-20	2012-04-11
SUMBAR	Kota-Padang Bagian Selatan	ADVISORY	17:31:20	2012-04-11
SUMBAR	Padang-Pariaman Bagian Selatan	ADVISORY	17:31:20	2012-04-11
BENGKULU	Bengkulu-Utara Pulau Enggano	WARNING	17:32:20	2012-04-11
SUMUT	Kota-Sibolga	WARNING	17:34:05	2012-04-11
SUMUT	Tapanuli-Tengah Bagian Selatan	WARNING	17:34:05	2012-04-11
BENGKULU	Mukomuko	WARNING	17:35:00	2012-04-11
NAD	Aceh-Timur	WARNING	17:39:30	2012-04-11
SUMUT	Mandailing-Natal Bagian Utara	WARNING	17:41:54	2012-04-11
SUMUT	Tapanuli-Selatan	WARNING	17:41:54	2012-04-11
SUMBAR	Pasaman-Barat	ADVISORY	17:42:09	2012-04-11
BENGKULU	Bengkulu-Utara Bagian Utara	WARNING	17:48:20	2012-04-11
BENGKULU	Kaur	WARNING	17:48:39	2012-04-11
BENGKULU	Seluma	WARNING	17:49:39	2012-04-11
SUMUT	Mandailing-Natal Bagian Selatan	WARNING	17:51:45	2012-04-11
BENGKULU	Bengkulu-Selatan	WARNING	17:51:50	2012-04-11
LAMPUNG	Lampung-Barat Pesisir-Selatan	WARNING	17:54:20	2012-04-11
LAMPUNG	Lampung-Barat Pesisir-Tengah	WARNING	17:54:20	2012-04-11
LAMPUNG	Lampung-Barat Pesisir-Utara	WARNING	17:55:30	2012-04-11
BENGKULU	Kota-Bengkulu Pantai-Panjang	ADVISORY	17:58:15	2012-04-11
BANTEN	Pandeglang Pulau Panaitan	WARNING	18:01-35	2012-04-11
BENGKULU	Bengkulu-Utara Bagian Selatan	ADVISORY	18:03:09	2012-04-11
LAMPUNG	Tanggamus Bagian Barat	ADVISORY	18:05:39	2012-04-11
LAMPUNG	Tanggamus Pulau Tabuan	ADVISORY	18:05:39	2012-04-11

(ETA: estimated time of arrival)

ACTUAL ARRIVAL TIMES MAY DIFFER AND THE INITIAL WAVE MAY NOT BE THE LARGEST.

Advice:

Information

that tsunami

Province/District/City governments that are at "Major Warning" level are expected to pay attention to this warning and immediately guide their communities for full evacuation.

Province/District/City governments that are at "Warning" level are expected to pay attention to this warning and immediately guide their communities for evacuation.

Province/District/City governments that are at "Advisory" level are expected to pay attention to this warning and immediately guide their communities to move away from the beach and river banks.

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#### Warning n Sumatra aboh Message a Aceh 18



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Intergovernmental

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Commission

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Indonesian Tsunami Early Warning System (InaTEWS) METEOROLOGICAL CLIMATOLOGICAL AND GEOPHYSICAL AGENCY Address:Jl. Angkasa I no.2 Kemayoran, Jakarta, Indonesia, 10720 Telp.: (+62-21) 4246321/6546316 , Fax: (+62-21) 6546316/4246703 P.O. Box 3540 Jkt, Website : http://www.bmg.go.id

Issued date : 04-Apr-2011, 05:10:45 WIB (UTC=WIB-7) Bulletin - 4 No.:120/warning/InaTEWS/IV/2012

The Tsunami threat caused by the earthquake : Magnitude : 7.1 RS Date : 03-April-2011 20:06:39 UTC is over.

This is the final message issued by the Indonesia Tsunami Early Warning System, unless new information becomes available.

Do not reply to this email, please address any inquiry to : info\_inatews@bmg.go.id

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HOW TO READ THE MESSAGE

TSUNAMI WARNING FROM BMKG.

TSUNAMI EARLY WARNING DUE TO THE EARTHQUAKE ON DATE 11-APR-12 TIME 15:38:33WIB, IN ACEH, NORTH SUMATRA, WEST SUMATRA, BENGKULU, LAMPUNG: WITH A MAGNITUDE: 8.1SR, HAS ENDED. THE END OF THIS WARNING APPLIES TO ALL AREAS IN INDONESIA.

### ICG Indian Ocean Tsunami Warning & Mitigation System SOP Workshops July 2023

## Warning Message Via Email Bulletin 4

### Warning Message Via Text Message and Website



Sender: BMKG

#### HOW TO READ THE MESSAGE

#### TSUNAMI WARNING FROM BMKG.

TSUNAMI EARLY WARNING FOR THE AREAS OF BENGKULU, LAMPUNG, ACEH, WEST SUMATRA, AND NORTH SUMATRA AS A RESULT OF AN 8.9-MAGNITUDE EARTHQUAKE AT A DEPTH OF 10 KILOMETRES OCCURRING ON 11 APRIL 2012 AT 15:38:33 WIB.

#### NOTES:

SMS MESSAGES ONLY LIST UP TO 5 PROVINCES WITH TSUNAMI WARNING STATUS BUT NO WARNING LEVELS. THIS IS NOT SUFFICIENT FOR PUBLIC INFORMATION PURPOSES. THEREFORE MEDIA NEED TO IMMEDIATELY CONSULT LONG VERSION MESSAGES (AS DISTRIBUTED BY E-MAIL OR FAX).



This field displays the

occurred

parameter of the most

recent earthquake that has

This field displays early warning information. At the moment of a tsunami early warning, this field contains the same information that can be obtained via email/ fax

#### NOTES:

THE MEDIA CAN ALSO GET INFORMATION VIA THE WEBSITE. THERE IS A POSSIBILITY THAT DUE TO THE HIGH NUMBER OF PEOPLE TRYING TO ACCESS THE INFORMATION ONLINE, THE INTERNET MAY BE SLOW OR THE WEBSITE MAY NOT FUNCTION WELL. THE MEDIA MUST ENSURE THAT THE INFORMATION CAN BE OBTAINED VIA EMAIL.



# **THANK YOU**

Ardito M. Kodijat Programme Officer Indian Ocean Tsunami Information Centre – UNESCO/IOC Disaster Risk Reduction and Tsunami Information Unit - UNESCO Jakarta Office <u>a.kodijat@unesco.org</u> www.iotsunami.info



Indian Ocean Tsunami Information Centre of IOC UNESO