

# IMPACT

## Statistical Report on Catastrophic Event

### MENTAWAI EARTHQUAKE - 29 August 2022

#### EARTHQUAKE DETAILS

##### General Information

Seismic Source Zone:  
Sumatera Megathrust -  
Segment Mentawai - Siberut  
Date of Event  
29 August 2022  
10:29:14 Local Time



**Magnitude**  
6.4 M  
**Depth**  
10.0 km  
**Epicenter**  
0.99°S; 98.53°E  
<https://www.bmkg.go.id/gempabumi/gempabumi-dirasakan.bmkg.bumi/gempabumi-dirasakan.bmkg>



**Magnitude**  
5.9 Mww  
**Depth**  
17.6 km  
**Epicenter**  
1.008°S; 98.642°E  
<https://earthquake.usgs.gov/earthquakes/eventpage/us6000hllj/executive>



**Magnitude**  
6.0 Mw  
**Depth**  
10.0 km  
**Epicenter**  
0.95°S; 98.64°E  
<http://geofoon.gtz-potsdam.de/eq/info/event.php?id=fr2022zeta>

#### AFFECTED CITIES

as reported by USGS (accessed at <http://earthquake.usgs.gov> - latest update on 29 August 2022 at 10.46 AM Jakarta local time)



#### MENTAWAI EARTHQUAKE - 29 AUGUST 2022

An earthquake with magnitude of **6.4M** (BMKG) or **5.9Mww** (USGS), occurred in near Siberut Island, West Sumatra area on Monday morning at 10.29 WIB, August 29<sup>th</sup>, 2022. The epicenter of the earthquake was 116 kilometers Northwest of Mentawai Island at a depth of 10 kilometers. The earthquake resulted from the Sumatra Megathrust activities, part of Sunda Megathrust.

The earthquake came from different seismic source zone of big earthquakes in 2009 (7.9Mw). From the preliminary data and assessment, we can estimate the earthquake resulted from Mentawai - Siberut Segment, southward continuation from segment of Aceh Earthquake 2004 (9.2 Mw) in 2004, and Segment of Nias Earthquake 2005 (8.7 Mw)

Based on MCM<sup>1</sup> simulation, the maximum intensity is VI MMI. Siberut Island, Kab. Kepulauan Mentawai experienced V - VI intensity (MMI) also three other sub-provinces and three city in West Sumatra province experienced III - IV intensity (MMI). According to MAIPARK database (from the earthquake insurance policy session), affected insurance exposure is considerably. Total affected portfolio in the V - VI MMI is only 72.06 billion rupiah (43 risks).

<sup>1</sup>MCM (MAIPARK Catastrophe Model) Ver. 2.1.

#### ACCUMULATION SUMMARY - INDONESIA EQ INSURANCE on-risk as at 29 August 2022

Earthquake intensity (MMI) simulated using Maipark Cat Model (MCM) ver. 2.1

Intensity (MMI)		II	III	IV	V	VI	VII	VIII	IX+
Perceived Shaking		Weak	Light	Moderate	Strong	Very Strong	Severe	Violent	Extreme
Potential Damage	Resistant Structure	None	None	Very Light	Light	Moderate	Moderate/Heavy	Heavy	Very Heavy
	Vulnerable Structure	None	None	Light	Moderate	Moderate/Heavy	Heavy	Very Heavy	Very Heavy
Number of Risk		~	9,917		43		~	~	~
Total Exposure (billion IDR)		~	35,095.00		72.06		~	~	~

Per Interest (billion IDR)		II	III	IV	V	VI	VII	VIII	IX+
Building		~	27,003.81			52.27	~	~	~
Machinery		~	2,476.88			5.44	~	~	~
Stock		~	3,761.74			2.75	~	~	~
Others		~	1,553.87			9.94	~	~	~
Business Interruption		~	298.69			1.67	~	~	~

Per Occupation (billion IDR)		II	III	IV	V	VI	VII	VIII	IX+
Agriculture		~	81.58			~	~	~	~
Commercial		~	9,540.77			62.91	~	~	~
Industrial		~	6,570.35			~	~	~	~
Residential		~	18,902.31			9.14	~	~	~

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### Annex 1 - Affected Portfolio per Occupation

Intensity Scale MMI	City / Kabupaten	Number of Risk	Premium (million IDR)	Exposure per Occupation (billion IDR)				
				Agriculture	Commercial	Industrial	Residential	Total
V - VI	KAB. KEPULAUAN MENTAWAI	43	148.52	-	62.91	-	9.14	72.06
III - IV	KAB. AGAM	256	790.60	10.40	159.64	109.68	107.42	387.14
	KAB. PADANG PARIAMAN	182	4,703.24	-	1,201.20	1,121.35	36.69	2,359.24
	KAB. PASAMAN BARAT	179	521.92	36.52	73.12	132.40	35.26	277.31
	KOTA BUKITTINGGI	481	1.82	-	656.23	4.18	187.01	847.42
	KOTA PADANG	8,645	76.34	34.66	7,383.90	5,188.32	18,502.88	31,109.75
	KOTA PARIAMAN	174	0.28	-	66.66	14.42	33.06	114.14
	<b>TOTAL</b>	<b>9,960</b>	<b>84,612.14</b>	<b>81.58</b>	<b>9,603.68</b>	<b>6,570.35</b>	<b>18,911.46</b>	<b>35,167.06</b>

\* on risk as at 29 August 2022

Earthquake intensity (MMI) simulated using Maipark Cat Model (MCM) ver. 2.1

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### Annex 2 - Affected Portfolio per Interest

Intensity Scale MMI	City / Kabupaten	Number of Risk	Exposure per Interest (billion IDR)					Total
			Building	Machinery	Stock	Others	BI	
<b>V - VI</b>	KAB. KEPULAUAN MENTAWAI	43	52.27	5.44	2.75	9.94	1.67	72.06
<b>III - IV</b>	KAB. AGAM	256	225.58	27.60	41.20	90.15	2.61	387.14
	KAB. PADANG PARIAMAN	182	1,066.44	1,002.10	217.19	73.52	-	2,359.24
	KAB. PASAMAN BARAT	179	121.58	68.25	39.94	44.48	3.05	277.31
	KOTA BUKITTINGGI	481	595.10	2.24	127.38	62.26	60.45	847.42
	KOTA PADANG	8,645	24,917.04	1,368.62	3,325.48	1,266.03	232.59	31,109.75
	KOTA PARIAMAN	174	78.08	8.07	10.55	17.44	-	114.14
	<b>TOTAL</b>	<b>9,960</b>	<b>27,056.08</b>	<b>2,482.32</b>	<b>3,764.49</b>	<b>1,563.81</b>	<b>300.36</b>	<b>35,167.06</b>

\* on risk as at 29 August 2022

Earthquake intensity (MMI) simulated using Maipark Cat Model (MCM) ver. 2.1

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