

# IMPACT

## Statistical Report on Catastrophic Event

### NIAS SELATAN EARTHQUAKE - 14 March 2022

#### EARTHQUAKE DETAILS

##### General Information

Seismic Source Zone:  
**Sumatera Megathrust - Siberut**  
 Segment Mentawai - Siberut  
 Date of Event  
**14 March 2022**  
 04:29:21 Local Time



##### Magnitude

6.9 M  
**Depth**  
 25 km  
**Epicenter**  
 0.66°S; 98.45°E

Source: <https://www.bmkg.go.id/gempabumi/gempabumi-dirasakan.bmkg>



##### Magnitude

6.7 Mw  
**Depth**  
 28 km  
**Epicenter**  
 0.671°S; 98.586°E

<https://earthquake.usgs.gov/earthquakes/eventpage/us6000h48c>



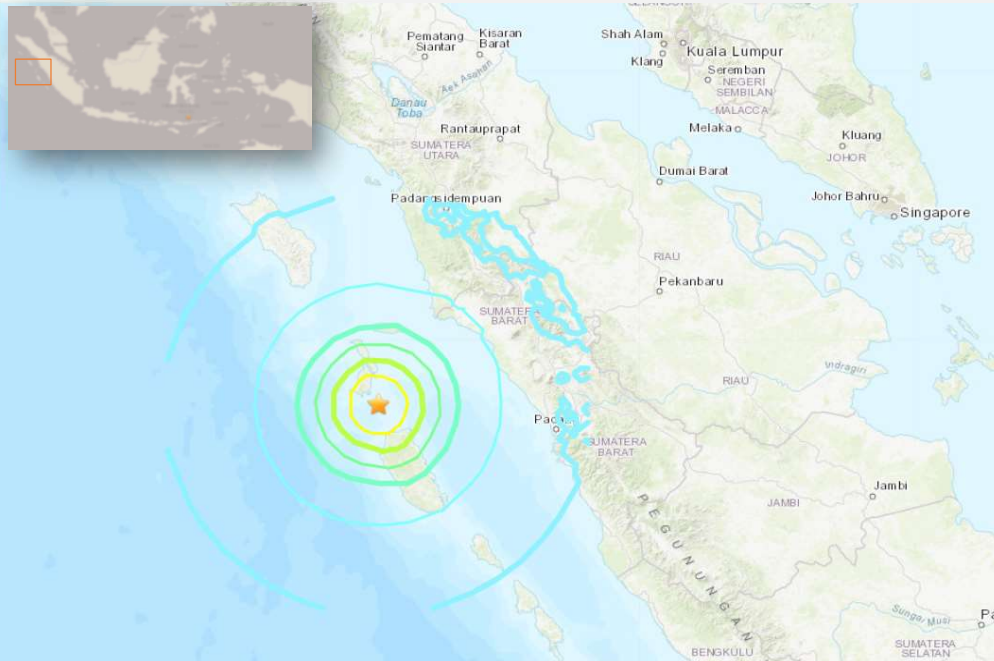
##### Magnitude

6.7 Mw  
**Depth**  
 19 km  
**Epicenter**  
 0.59°S; 98.62°E

Source: <http://http://geofon.gfz-potsdam.de/cqinfo/event.php?id=gfz2022fbip>

#### AFFECTED CITIES

as reported by USGS (accessed at <http://earthquake.usgs.gov> - latest update on 14 March 2022 at 12.26 PM Jakarta local time)



#### SOUTH NIAS EARTHQUAKE - 14 MARCH 2022

An earthquake with magnitude **6.9M** (BMKG) or **6.7mww** (USGS), occurred in West Sumatera area on Friday morning at 04.29 WIB, March 14<sup>th</sup>, 2022. The epicenter of the earthquake was 161 kilometers Southeast of Kabupaten Nias Selatan at a depth of 25 kilometers. The earthquake resulted from the Sumatera Megathrust activities, in the Mentawai - Siberut Segment.

The earthquake occurred in the seismic gap zone, which the latest historical earthquake generated by this segment was ~8.5M on 10 February 1797 (while the theoretical maximum magnitude from this segment is 8.9M). The 1797 earthquake was widely felt on Sumatera island and generated significant tsunami as reported in the City of Padang (Newcomb and McCann, 1987).

Based on MCM1 simulation, the areas affected with VI intensity (MMI) is Kab. Nias Selatan. Meanwhile Kab. Kepulauan Mentawai is experienced the earthquake intensity at V MMI. According to the MAIPARK databased (from the earthquake insurance policy cession), insurance exposure is considerably low. Total affected portpolio in the VI MMI is only 74 billion rupiah (76 risks).

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

#### ACCUMULATION SUMMARY - INDONESIA EQ INSURANCE on-risk as at 14 March 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
<b>Number of Risk</b>		~	~	10,948	29	76	-	-	-
<b>Total Exposure (billion IDR)</b>		~	~	21.886,82	63,59	74,46	-	-	-
Per Interest (billion IDR)		II	III	IV	V	VI	VII	VIII	IX+
Building		~	~	15.265,52	51,23	46,18	-	-	-
Machinery		~	~	1.608,40	4,18	3,44	-	-	-
Stock		~	~	3.151,32	2,75	2,20	-	-	-
Others		~	~	1.680,32	5,43	22,64	-	-	-
Business Interruption		~	~	181,25	-	-	-	-	-
Per Occupation (billion IDR)		II	III	IV	V	VI	VII	VIII	IX+
Agriculture		~	~	36,56	-	-	-	-	-
Commercial		~	~	8.689,66	54,31	69,60	-	-	-
Industrial		~	~	8.991,44	-	0,26	-	-	-
Residential		~	~	4.169,15	9,28	4,60	-	-	-

## IMPACT-Statistical Report on Catastrophic Event

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## Statistical Report on Catastrophic Event

### 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
<b>VI</b>	KAB. NIAS SELATAN	76	140,33	-	69,60	0,26	4,60	74,46
<b>V</b>	KAB. KEPULAUAN MENTAWAI	29	132,10	-	54,31	-	9,28	63,59
<b>IV</b>	KAB. LIMA PULUH KOTA	454	499,41	-	59,92	188,57	8,89	257,39
	KAB. MANDAILING NATAL	102	866,84	0,61	10,35	454,20	4,83	469,98
	KAB. NIAS	14	36,58	-	17,48	-	2,02	19,50
	KAB. PASAMAN BARAT	215	579,02	-	77,79	197,02	31,12	305,93
	KOTA BUKITTINGGI	500	1.699,93	-	561,61	4,03	191,26	756,90
	KOTA PADANG	8606	30.657,11	34,66	7.426,64	4.704,86	3.558,20	15.724,35
	KOTA PADANG PANJANG	115	206,33	-	74,90	0,00	25,42	100,32
	KOTA PADANGSIDIMPUAN	155	304,75	-	106,40	17,50	33,83	157,73
	KOTA PARIAMAN	242	308,14	-	84,19	8,68	33,77	126,64
	KOTA PAYAKUMBUH	270	269,81	11,30	105,84	4,56	57,94	179,64
	KOTA SAWAH LUNTO	83	6.373,67	-	10,01	3.410,78	3,71	3.424,51
	KOTA SOLOK	192	615,16	-	154,54	1,23	208,16	363,93
	<b>TOTAL</b>	<b>11.053</b>	<b>42.689,19</b>	<b>46,56</b>	<b>8.813,58</b>	<b>8.991,70</b>	<b>4.173,03</b>	<b>22.024,87</b>

\* on risk as at 14 March 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)					
			Building	Machinery	Stock	Others	BI	Total
VI	KAB. NIAS SELATAN	76	46,18	3,44	2,20	22,64	-	74,46
V	KAB. KEPULAUAN MENTAWAI	29	51,23	4,18	2,75	5,43	-	63,59
IV	KAB. LIMA PULUH KOTA	454	74,41	38,57	39,21	105,19	-	257,39
	KAB. MANDAILING NATAL	102	92,40	286,96	12,98	77,64	-	469,98
	KAB. NIAS	14	7,53	0,24	8,85	2,87	-	19,50
	KAB. PASAMAN BARAT	215	134,03	65,22	40,09	54,98	11,60	305,93
	KOTA BUKITTINGGI	500	507,18	2,79	121,47	84,81	40,65	756,90
	KOTA PADANG	8606	10.378,11	1.196,71	2.796,78	1.224,13	128,62	15.724,35
	KOTA PADANG PANJANG	115	73,49	1,44	20,66	4,73	-	100,32
	KOTA PADANGSIDIMPUAN	155	71,33	1,78	52,18	32,05	0,38	157,73
	KOTA PARIAMAN	242	95,45	4,96	10,09	16,13	-	126,64
	KOTA PAYAKUMBUH	270	107,14	6,14	27,44	38,92	-	179,64
	KOTA SAWAH LUNTO	83	3.418,02	0,53	3,24	2,73	-	3.424,51
KOTA SOLOK	192	306,41	3,06	18,32	36,13	-	363,93	
	<b>TOTAL</b>	<b>11.053</b>	<b>15.362,93</b>	<b>1.616,02</b>	<b>3.156,27</b>	<b>1.708,40</b>	<b>181,25</b>	<b>22.024,87</b>

\* on risk as at 14 March 2022  
 Earthquake intensity (MMI) simulated using Maipark Cat Model (MCM) ver. 2.1

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