

# IMPACT

## Statistical Report on Catastrophic Event

### RUTENG EARTHQUAKE - 21 February 2022

#### EARTHQUAKE DETAILS

##### General Information

Seismic Source Zone:

Flores Back-Arc Thrust

Date of Event

21 February 2022

20:35:57 Local Time



Magnitude

5.8 M

Depth

10 km

Epicenter

8.12°S; 120.7°E

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



Magnitude

5.8 mww

Depth

10 km

Epicenter

8.204°S; 120.619°E

Source: <https://earthquake.usgs.gov/earthquake/event/page/7000gmbb/executive>



Magnitude

5.9 Mw

Depth

10 km

Epicenter

8.26°S 120.74°E

Source: <http://geo.fon.gfz-potsdam.de/eqinfo/event.php?id=gfz2022dqdp>

#### AFFECTED CITIES

as reported by USGS (accessed at <http://earthquake.usgs.gov> - latest update on 22 February 2022 at 18.50 PM Jakarta local time)



#### RUTENG EARTHQUAKE - 21 FEBRUARY 2022

An earthquake with magnitude **5.8M** (BMKG) or **5.8mww** (USGS), occurred in Ruteng area on Monday evening at 20:35 WITA, February 21<sup>st</sup>, 2022. The epicenter of the earthquake was 60 kilometers Northeast of Ruteng at a depth of 10 kilometers. The earthquake resulted from the Flores Back-Arc Thrust System, which seismically potential to generate 7.5M earthquake.

Based on MCM<sup>1</sup> simulation, the areas affected with VI intensity (MMI) are Kec. Lamba Leda & Kec. Sambi Ramps in Kabupaten Manggarai. Meanwhile Kec. Cibal, Kec. Reok (Kab. Manggarai) and Kec. Ponoranaka (Kab. East Manggarai) experienced the earthquake intensity at V MMI.

The region between Manggarai and Flores was also identified as a seismic gap. Latest big earthquake in this region was occurred in April 14th, 1855. Since then, this region is relatively passive. According to the MAIPARK database (from the earthquake insurance policy cession), insurance exposure is considerably low. Total affected portfolio in the V-VI MMI is IDR 8.51 billion rupiah (13 risks).

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

#### ACCUMULATION SUMMARY - INDONESIA EQ INSURANCE

on-risk as at 21 February 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                      |                      | -         | -          | 206        | 11       | 2              | -              | -           | -          |
| Total Exposure (billion IDR)        |                      | -         | -          | 1,067.95   | 7.62     | 0.89           | -              | -           | -          |
| <b>Per Interest (billion IDR)</b>   |                      | <b>II</b> | <b>III</b> | <b>IV</b>  | <b>V</b> | <b>VI</b>      | <b>VII</b>     | <b>VIII</b> | <b>IX+</b> |
| Building                            |                      | -         | -          | 370.13     | 4.85     | 0.70           | -              | -           | -          |
| Machinery                           |                      | -         | -          | 13.52      | 0.08     | 0.00           | -              | -           | -          |
| Stock                               |                      | -         | -          | 59.24      | 0.09     | 0.00           | -              | -           | -          |
| Others                              |                      | -         | -          | 581.37     | 2.60     | 0.19           | -              | -           | -          |
| Business Interruption               |                      | -         | -          | 43.69      | -        | -              | -              | -           | -          |
| <b>Per Occupation (billion IDR)</b> |                      | <b>II</b> | <b>III</b> | <b>IV</b>  | <b>V</b> | <b>VI</b>      | <b>VII</b>     | <b>VIII</b> | <b>IX+</b> |
| Agriculture                         |                      | -         | -          | -          | -        | -              | -              | -           | -          |
| Commercial                          |                      | -         | -          | 933.83     | 6.27     | -              | -              | -           | -          |
| Industrial                          |                      | -         | -          | 89.86      | -        | -              | -              | -           | -          |
| Residential                         |                      | -         | -          | 44.25      | 1.36     | 0.89           | -              | -           | -          |

## IMPACT-Statistical Report on Catastrophic Event

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## Statistical Report on Catastrophic Event

### Annex 1 - Affected Portfolio per Occupation

| Intensity Scale<br>MMI | City /<br>Kabupaten                      | Number<br>of Risk | Premium<br>(million IDR) | Exposure per Occupation (billion IDR) |               |              |              |                 |
|------------------------|--|-------------------|--------------------------|---------------------------------------|---------------|--------------|--------------|-----------------|
|                        |  |                   |                          | Agriculture                           | Commercial    | Industrial   | Residential  | Total           |
| VI                     | KAB. MANGGARAI TIMUR (KEC. LAMBA LEDA)   | 1                 | 0.46                     | -                                     | -             | -            | 0.46         | 0.46            |
|                        | KAB. MANGGARAI TIMUR (KEC. SAMBI RAMPAS) | 1                 | 0.43                     | -                                     | -             | -            | 0.43         | 0.43            |
| V                      | KAB. MANGGARAI (KEC. CIBAL)              | 2                 | 0.53                     | -                                     | -             | -            | 0.53         | 0.53            |
|                        | KAB. MANGGARAI (KEC. REOK)               | 7                 | 7.81                     | -                                     | 6.27          | -            | 0.44         | 6.71            |
|                        | KAB. MANGGARAI TIMUR (KEC. POCORANAKAN)  | 2                 | 0.38                     | -                                     | -             | -            | 0.38         | 0.38            |
| IV                     | KAB. MANGGARAI                           | 78                | 96.97                    | -                                     | 76.20         | 5.70         | 12.43        | 94.33           |
|                        | KAB. MANGGARAI BARAT                     | 65                | 1,369.81                 | -                                     | 835.72        | 61.95        | 14.82        | 912.48          |
|                        | KAB. MANGGARAI TIMUR                     | 10                | 12.19                    | -                                     | 0.69          | 10.00        | 1.49         | 12.19           |
|                        | KAB. NAGEKEO                             | 30                | 14.13                    | -                                     | 2.03          | 7.48         | 4.66         | 14.17           |
|                        | KAB. NGADA                               | 23                | 34.78                    | -                                     | 19.19         | 4.74         | 10.85        | 34.78           |
|                        | <b>TOTAL</b>                             | <b>219</b>        | <b>1,537.49</b>          | -                                     | <b>940.10</b> | <b>89.86</b> | <b>46.50</b> | <b>1,076.46</b> |

\* on risk as at 21 February 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<br>MMI | City /<br>Kabupaten                      | Number<br>of Risk | Exposure per Interest (billion IDR) |              |              |               |              | BI              | Total |
|------------------------|--|-------------------|-------------------------------------|--------------|--------------|---------------|--------------|-----------------|-------|
|                        |  |                   | Building                            | Machinery    | Stock        | Others        |              |                 |       |
| VI                     | KAB. MANGGARAI TIMUR (KEC. LAMBA LEDA)   | 1                 | 0,36                                | -            | -            | 0,10          | -            | 0,46            |       |
|                        | KAB. MANGGARAI TIMUR (KEC. SAMBI RAMPAS) | 1                 | 0,34                                | -            | -            | 0,10          | -            | 0,43            |       |
| V                      | KAB. MANGGARAI (KEC. CIBAL)              | 2                 | 0,41                                | -            | -            | 0,12          | -            | 0,53            |       |
|                        | KAB. MANGGARAI (KEC. REOK)               | 7                 | 4,16                                | 0,08         | 0,09         | 2,37          | -            | 6,71            |       |
|                        | KAB. MANGGARAI TIMUR (KEC. POCORANAKAN)  | 2                 | 0,28                                | 0,00         | 0,00         | 0,10          | -            | 0,38            |       |
| IV                     | KAB. MANGGARAI                           | 78                | 50,01                               | 3,46         | 25,14        | 15,71         | -            | 94,33           |       |
|                        | KAB. MANGGARAI BARAT                     | 65                | 286,50                              | 3,32         | 19,29        | 559,68        | 43,69        | 912,48          |       |
|                        | KAB. MANGGARAI TIMUR                     | 10                | 9,53                                | 2,00         | 0,04         | 0,61          | -            | 12,19           |       |
|                        | KAB. NAGEKEO                             | 30                | 9,35                                | 0,06         | 3,69         | 1,07          | -            | 14,17           |       |
|                        | KAB. NGADA                               | 23                | 14,73                               | 4,68         | 11,07        | 4,30          | -            | 34,78           |       |
|                        | <b>TOTAL</b>                             | <b>219</b>        | <b>375,68</b>                       | <b>13,60</b> | <b>59,32</b> | <b>584,16</b> | <b>43,69</b> | <b>1.076,46</b> |       |

\* on risk as at 21 February 2022

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

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