

DAFTAR PUSTAKA

- Advokaat, E. L., Bongers, M. L. M., Rudyawan, A., BouDagher-Fadel, M. K., Langereis, C. G., & van Hinsbergen, D. J. J. (2018). Early Cretaceous Origin of the Woyla Arc (Sumatra, Indonesia) on the Australian Plate. *Earth and Planetary Science Letters*, 498, 348–361. <https://doi.org/10.1016/j.epsl.2018.07.001>
- Ahmed, N., Ghazi, S., & Khalid, P. (2016). On the variation of b-value for Karachi region, Pakistan through Gumbel's extreme distribution method. *Acta Geodaetica et Geophysica*, 51, 227–235. <https://doi.org/10.1007/s40328-015-0122-8>
- Aki, K. (1965). Maximum Likelihood Estimate of b in the Formula $\log N = a - bM$ and its Confidence Limits. *Bulletin of the Earthquake Research Institute*, 43, 237–239.
- Alemayehu, Letamo., Kavitha, B., & Tezeswi, T. P. (2023). Seismicity Pattern of African Regions from 1964–2022: b-value and Energy Mapping Approach. *Geomatics, Natural Hazards and Risk*, 14(1). <https://doi.org/10.1080/19475705.2023.2197104>
- Atsu, J. U. (2023). Modelling of Earthquake b-and a-Values Using Least Squares and Maximum Likelihood Estimate Methods in Different Tectonic Regions of the World. *Asian Research Journal of Mathematics*, 19(11), 52–60. <https://doi.org/10.9734/arjom/2023/v19i11752>
- Aydan, O., Imamura, F., Suzuki, T., Febrin, I., Hakam, A., Mera, M., & Devi, P. R. (2007). *A Reconnaissance Report on The Bengkulu Earthquake of September 12, 2007*. https://www.jsce.or.jp/report/45/files/sumatra_Final0.pdf
- Bird, P. (2003). An Updated Digital Model of Plate Boundaries. *Geochemistry, Geophysics, Geosystems*, 4(3). <https://doi.org/10.1029/2001GC000252>
- Cattin, R., Chamot-Rooke, N., Pubellier, M., Rabaute, A., Delescluse, M., Vigny, C., Fleitout, L., & Dubernet, P. (2009). Stress change and effective friction coefficient along the Sumatra-Andaman-Sagaing Fault System After the 26 December 2004 ($M_w = 9.2$) and the 28 March 2005 ($M_w = 8.7$) Earthquakes. *Geochemistry, Geophysics, Geosystems*, 10. <https://doi.org/10.1029/2008GC002167>
- Chan, C.-H., Kao, J.-C., & Chen, D.-Y. (2024). Spatial–temporal Variations of b-values Prior to Medium-to-Large Earthquakes in Taiwan and the Feasibility of Real-time Precursor Monitoring. *Earth, Planets and Space*, 76. <https://doi.org/10.1186/s40623-024-02065-w>

- Chasanah, U., Madlazim, & Prastowo, T. (2013). Analisis Tingkat Seismisitas dan Periode Ulang Gempa Bumi di Wilayah Sumatera Barat Pada Periode 1961-2010. *Jurnal Fisika*, 02(02).
- Dewi, E. A., & Prastowo, T. (2021). Studi Seismisitas Melalui Penentuan Parameter a-value dan b-value di Wilayah Sumatera Barat. *Jurnal Inovasi Fisika Indonesia (IFI)*, 10, 48–58.
- El-Isa, Z. H., & Eaton, D. W. (2014). Spatiotemporal Variations in the b-value of Earthquake Magnitude-Frequency Distributions: Classification and Causes. *Tectonophysics*, 615–616, 1–11. <https://doi.org/10.1016/j.tecto.2013.12.001>
- Ernandi, F. N., & Madlazim. (2020). Analisis Variasi a-value dan b-value dengan menggunakan Software Zmap V.6 sebagai Indikator Potensi Gempa Bumi di Wilayah Nusa Tenggara Barat. *Jurnal Inovasi Fisika Indonesia*, 09(03), 24–30. <https://earthquake.usgs.gov/earthquakes/search>.
- Hall, R. (2009). Indonesia, Geology. Dalam *Encyclopedia of Islands* (hlm. 454–460). https://earthjay.com/earthquakes/20190714_halmahera/hall_2009_geology_Indonesia_Islands.pdf
- Hall, R. (2012). Late Jurassic-Cenozoic Reconstructions of the Indonesian Region and the Indian Ocean. *Tectonophysics*, 570–571, 1–41. <https://doi.org/10.1016/j.tecto.2012.04.021>
- Hamilton, W. (1979). *Tectonics of the Indonesian Region*. DC: United States Government Printing Office. <https://doi.org/10.3133/pp1078>
- Hanafi, R., Dewi, I. K., & Ngatijo. (2024). Pemetaan Magnitude of Completeness (Mc) untuk Gempa di Wilayah Bengkulu. *Jurnal Geofisika Eksplorasi (JGE)*, 10(02), 121–138. <https://doi.org/10.23960/jge.v9i2.250>
- Hidayat, N., & Santoso, E. W. (1997). Gempa Bumi dan Mekanismenya. *Alami: Jurnal Teknologi Reduksi Risiko Bencana*, 2(3).
- Houston, H. (2015). Deep Earthquakes. Dalam S. Gerald (Ed.), *Treatise on Geophysics: Second Edition* (Vol. 4, hlm. 329–354). Elsevier. <https://doi.org/10.1016/B978-0-444-53802-4.00079-8>
- Husna, A., Syafriani, A., & Hamdi & Dwiridal, L. (2024). Analysis of Seismicity and Return Period of Earthquakes in South Pesisir Regency West Sumatra Province Using the Likelihood Method. *Jurnal Pendidikan, Sains, Geologi, dan Geofisika (GeoScienceEd)*, 6(1), 196–202. <https://doi.org/10.29303/geoscienceed.v6i1.589>

- Hutchings, S. J., & Mooney, W. D. (2021). The Seismicity of Indonesia and Tectonic Implications. *Geochemistry, Geophysics, Geosystems*, 22(9). <https://doi.org/10.1029/2021GC009812>
- Irsyam, M. I., Widiyantoro, S., Natawidjaja, D. H., Meilano, I., Rudiyanto, A., Hidayati, S., Triyoso, W., Hanifa, N. R., Djarwadi, D., & Faizal, L. (2017). *Peta Sumber dan Bahaya Gempa Indonesia Tahun 2017*. Pusat Penelitian dan Pengembangan Perumahan dan Permukiman, Badan Penelitian dan Pengembangan, Kementerian Pekerjaan Umum.
- Kayal, J. R. (2008). *Microearthquake Seismology and Seismotectonics of South Asia*. Springer.
- Khalqillah, A., & Umar, M. (2023). Temporal Change and Spatial Distribution Analysis of b-value and a-value in Sumatra. *E3S Web of Conferences*, 447. <https://doi.org/10.1051/e3sconf/202344701016>
- Kulhánek, O. (2005). *Seminar on b-value*. Department of Geophysics, Charles University, December 10–19, 2005, Prague <https://www.researchgate.net/publication/242598429>
- Lai, Y. M., Chung, S. L., Ghani, A. A., Murtadha, S., Lee, H. Y., & Chu, M. F. (2021). Mid-Miocene Volcanic Migration in the Westernmost Sunda Arc Induced by India-Eurasia Collision. *Geological Society of America: GEOLOGY*, 49(6), 713–717. <https://doi.org/10.1130/G48568.1>
- Lange, D., Tilmann, F., Rietbrock, A., Collings, R., Natawidjaja, D. H., Suwargadi, B. W., Barton, P., Henstock, T., & Ryberg, T. (2010). The Fine Structure of the Subducted Investigator Fracture Zone in Western Sumatra as Seen by Local Seismicity. *Earth and Planetary Science Letters*, 298, 47–56. <https://doi.org/10.1016/j.epsl.2010.07.020>
- Lay, T., & Wallace, T. C. (1995). *Modern Global Seismology*. Academic Press.
- Linda, Ihsan, N., & Palloan, P. (2019). Analisis Distribusi Spasial dan Temporal Seismotektonik berdasarkan Nilai b-value dengan Menggunakan Metode Likelihood di Pulau Jawa. *Jurnal Sains dan Pendidikan Fisika (JSPF)*, 15, 80–95. <http://ojs.unm.ac.id>
- Liu, S., Suardi, I., Xu, X., Yang, S., & Tong, P. (2020). The Geometry of the Subducted Slab Beneath Sumatra Revealed by Regional and Teleseismic Traveltime Tomography. *Journal of Geophysical Research: Solid Earth*, 126(1). <https://doi.org/10.1029/2020JB020169>
- Lusiani, E., Anwar, S., & Nugraha, M. F. (2018). Penentuan Tingkat Seismisitas Wilayah Propinsi Aceh dengan Metode Gutenberg Richter (Nilai a dan Nilai b). *Jurnal Meteorologi dan Geofisika*, 19(2), 71–79.

- Madlazim, & Lestari, N. I. D. (2022). Analisis Seismisitas dan Potensi Bahaya Bencana Seismik Pulau Sumatera berdasarkan Data Gempa 1970-2020. *Jurnal Inovasi Fisika Indonesia (IFI)*, 11.
- Maidiawati, & Sanada, Y. (2008). Investigation and Analysis of Buildings Damaged during the September 2007 Sumatra, Indonesia Earthquakes. *Journal of Asian Architecture and Building Engineering*, 7(2).
- McCaffrey, R. (2009). The Tectonic Framework of the Sumatran Subduction Zone. *The Annual Review of Earth and Planetary Sciences*, 37, 345–366. <https://doi.org/10.1146/annurev.earth.031208.100212>
- Mertikasari, R., & Choiruddin, A. (2020). Pemodelan Risiko Gempa Bumi di Pulau Sumatera Menggunakan Model Inhomogeneous Nyeman-Scott Cox Process. *Jurnal Sains dan Seni ITS*, 9. <https://doi.org/10.12962/j23373520.v9i2.52318>
- Metcalf, I. (2011). Tectonic Framework and Phanerozoic Evolution of Sundaland. *Gondwana Research*, 19(1), 3–21. <https://doi.org/10.1016/j.gr.2010.02.016>
- Metcalf, I. (2017). Tectonic Evolution of Sundaland. *Bulletin of the Geological Society of Malaysia*, 63, 27–60.
- Mignan, A., & Woessner, J. (2012). Estimating the Magnitude of Completeness for Earthquake Catalogs. *Community Online Resource for Statistical Seismicity Analysis*. <https://doi.org/10.5078/corssa-00180805>
- Mulyana, B. (2006). Extension Tektonik Selat Sunda. *Bulletin of Scientific Contribution*, 137–145.
- Mustafa, B. (2010). Analisis Gempa Nias dan Gempa Sumatera Barat dan Kesamaannya yang Tidak Menimbulkan Tsunami. *Jurnal Ilmu Fisika (JIF)*, 2(1).
- Najam, F. A., & Warnitchai, P. (2020). *Basic Seismology and Seismic Hazard Assessment*. <https://fawadnajam.com/wp-content/uploads/2021/11/Basic-Seismology-and-Seismic-Hazard-Analysis-Handouts.pdf>.
- Nalbant, S. S., Steacy, S., Sieh, K., Natawidjaja, D., & McCloskey, J. (2005). Seismology: Earthquake risk on the Sunda trench. *Nature*, 435(7043), 756–757. <https://doi.org/10.1038/nature435756a>
- Natawidjaja, D. H. (2018). Updating Active Fault Maps and Sliprates Along the Sumatran Fault Zone, Indonesia. *IOP Conference Series: Earth and Environmental Science*, 118(1). <https://doi.org/10.1088/1755-1315/118/1/012001>
- Natawidjaja, D. H., & Triyoso, W. (2007). The Sumatran Fault Zone-from Source to Hazard. *Journal of Earthquake and Tsunami*, 1(1), 21–47.

- Nuannin, P. (2006). *The Potential of b-value Variations as Earthquake Precursors for Small and Large Events* [Digital Comprehensive, Uppsala University (Ph.D. thesis)]. <https://www.researchgate.net/publication/260568500>
- Nuannin, P., Kulhanek, O., & Persson, L. (2005). Spatial and Temporal b value Anomalies Preceding the Devastating Off Coast of NW Sumatra Earthquake of December 26, 2004. *Geophysical Research Letters*, 32(11), 1–4. <https://doi.org/10.1029/2005GL022679>
- Öztürk, S. (2012). Statistical Correlation between b-value and Fractal Dimension Regarding Turkish Epicentre Distribution. *Earth Sciences Research Journal*, 16(2), 103–108.
- Popandopoulos, G. A., & Chatziioannou, E. (2014). Gutenberg-Richter Law Parameters Analysis Using the Hellenic Unified Seismic Network Data Through FastBee Technique. *Earth Sciences*, 3(5), 122–131. <https://doi.org/10.11648/j.earth.20140305.12>
- Prasad, S., & Singh, C. (2015). Evolution of b-values before Large Earthquakes of $m_b \geq 6.0$ in the Andaman Region. *Geologica Acta: an international earth science journal*, 13(3), 205–210.
- Qian, X., Jin, S., Bai, T., Yu, X., Sheldrick, T. C., Gan, C., Mustapha, K. A., Murtadha, S., & Wang, Y. (2025). Triassic Tectonic Affinity to Indochina-East Malaya Block for West Sumatra and Paleo-Tethys Implications: Constraints From Late Triassic Igneous Rocks. *Geochemistry, Geophysics, Geosystems*, 26(3). <https://doi.org/10.1029/2024GC012030>
- Ramdhan, M., Priyobudi, Imananta, R. T, Muzli, R., Supendi, P., Perdana, Y. H., Nugraha, J., Jatnika, J., Ali, Y. H., Panjaitan, A. L., Nugraha, M. F., Kristyawan, S., Sembiring, A. S., Setyahagi, A. R., & Yogaswara, D. S. (2021). *Katalog Gempabumi Indonesia: Relokasi Hiposenter dan Implikasi Tektonik* (Daryono, Ed.). Bidang Informasi Gempabumi dan Peringatan Dini Tsunami, Pusat Gempabumi dan Tsunami, Badan Meteorologi Klimatologi dan Geofisika.
- Rehman, A., & Zhang, H. (2024). Seismicity and Return Period Investigation of Destructive Earthquake in Makran Subduction Zone. *Discover Geoscience*, 2. <https://doi.org/10.1007/s44288-024-00047-9>
- Rohadi, S., Grandis, H., & Ratag, M. A. (2008). Studi Potensi Seismotektonik sebagai Precursor Tingkat Kegempaan di Wilayah Sumatera. *Jurnal Meteorologi dan Geofisika*, 9(2), 101–108.
- Salman, R., Lindsey, E. O., Feng, L., Bradley, K., Wei, S., Wang, T., Daryono, M. R., & M.Hill, E. (2020). Structural Controls on Rupture Extent of Recent

Sumatran Fault Zone Earthquakes, Indonesia. *Journal of Geophysical Research: Solid Earth*, 125(2). <https://doi.org/10.1029/2019JB018101>

Scholz, C. H. (1968). The Frequency-Magnitude Relation of Microfracturing in Rock and Its Relation to Earthquakes. *Bulletin of the Seismological Society of America*, 58(1), 399–415. <https://doi.org/10.1785/BSSA0580010399>

Scholz, C. H. (2015). On the Stress Dependence of the Earthquake b value. *Geophysical Research Letters*, 42, 1399–1402. <https://doi.org/10.1002/2014GL062863>

Shapiro, N. M., Ritzwoller, M. H., & Robert Engdahl, E. (2008). Structural Context of the Great Sumatra-Andaman Islands Earthquake. *Geophysical Research Letters*, 35. <https://doi.org/10.1029/2008GL033381>

Sharma, V., & Biswas, R. (2024). b-value as a Seismic Precursor: The 2021 Mizoram Earthquake Mw 6.1 in the Indo-Burma Subduction Zone. *Pure and Applied Geophysics*, 181, 2475–2493. <https://doi.org/10.1007/s00024-024-03530-z>

Shi, Y., & Bolt, B. A. (1982). The Standard Error of the Magnitude-Frequency b value. *Bulletin of the Seismological Society of America*, 72(5), 1677–1687. <https://doi.org/10.1785/BSSA0720051677>

Sieh, K., & Natawidjaja, D. (2000). Neotectonics of the Sumatran fault, Indonesia. *Journal of Geophysical Research: Solid Earth*, 105(B(12)), 28295–28326. <https://doi.org/10.1029/2000jb900120>

Styron, R., & Pagani, M. (2020). The GEM Global Active Faults Database. *Earthquake Spectra*, 36(1_suppl), 160–180. <https://doi.org/10.1177/8755293020944182>

Sutrisno, Tjahjono, A., & Ramadhan Putra, F. (2023). Analysis of Return Period and Seismic Risk of Shallow Earthquake Occurrence in Cianjur and Surrounding Areas. *Journal of Natural Sciences and Mathematics Research*, 9(2), 109–116.

Taruna, R. M., & Pratiwi, A. (2021). Konversi Empiris Summary Magnitude, Local Magnitude, Body-Wave Magnitude, Surface Magnitude, dan Moment Magnitude Menggunakan Data Gempabumi 1922-2020 di Nusa Tenggara Barat. *Jurnal Sains Teknologi dan Lingkungan*, 7(1), 1–12. <https://doi.org/10.29303/jstl.v7i1.198>

Udias, A., & Buforn, E. (2000). *Principles of Seismology*. Cambridge University Press.

Utama, W., & Garini, S. A. (2020). *Pengolahan Data Micro-Earthquake Pengantar Evaluasi Reservoir Panas Bumi*. ITS Press, Surabaya.

- Van Stiphout, T., Zhuang, J., & Marsan, D. (2012). *Seismicity Declustering*. <http://www.corssa.org>. <https://doi.org/10.5078/corssa>
- Vijay, R. K., Nanda, S. J., & Sharma, A. (2025). A review on Clustering Algorithms for Spatiotemporal Seismicity Analysis. *Artificial Intelligence Review*, 58. <https://doi.org/10.1007/s10462-025-11229-3>
- Wessel, P., Luis, J. F., Uieda, L., Scharroo, R., Wobbe, F., Smith, W. H. F., & Tian, D. (2019). The Generic Mapping Tools Version 6. *Geochemistry, Geophysics, Geosystems*, 20, 5556–5564. <https://doi.org/10.1029/2019GC008515>
- Wiemer, S. (2001). A Software Package to Analyze Seismicity: ZMAP. *Seismological Research Letters*, 72(3), 374–383. <https://doi.org/10.1785/gssrl.72.3.373>
- Wiemer, S., & Wyss, M. (2000). Minimum Magnitude of Completeness in Earthquake Catalogs: Examples from Alaska, the Western United States, and Japan. *Bulletin of the Seismological Society of America*, 90(4), 859–869. <https://doi.org/10.1785/0119990114>
- Woessner, J., & Wiemer, S. (2005). Assessing the Quality of Earthquake Catalogues: Estimating the Magnitude of Completeness and Its Uncertainty. *Bulletin of the Seismological Society of America*, 95(2), 684–698. <https://doi.org/10.1785/0120040007>
- Yuliyanti, M., Natalia, K. R., Pradani, C. P., Anggraeni, D., Astuti, S. P., & Setyaningrum, I. F. (2023). Earthquake Disaster Mitigation Strategy: Lessons Learned from Indonesia. *International Summit on Science Technology and Humanity*. <https://doi.org/https://doi.org/10.23917/iseth.4328>