

DAFTAR PUSTAKA

- Abu-Bakr, H. A. E. A. (2020). Groundwater vulnerability assessment in different types of aquifers. *Agricultural Water Management*, 240, 106275.
- Aji, T. W. P., Amarrohman, F. J., & Sudarsono, B. (2019). Analisis Perubahan Penggunaan Lahan Di Ungaran Timur dan Ungaran Barat Pasca Pembangunan Jalan Tol Semarang–Solo. *Jurnal Geodesi Undip*, 9(1), 115-125.
- Alcántara, I., & Goudie, A. S. (Eds.). (2010). *Geomorphological hazards and disaster prevention*. Cambridge University Press.
- Alsharhan, A. S., Rizk, Z. E., Alsharhan, A. S., & Rizk, Z. E. (2020). Geomorphology and geology and their influence on water resources. *Water resources and integrated management of the United Arab Emirates*, 65-111.
- Alzahrani, H., Abdelrahman, K., & Hazaea, S. A. (2022). Use of geoelectrical resistivity method for detecting near-surface groundwater potential zones at Riyadh city, Saudi Arabia. *Journal of King Saud University-Science*, 34(7), 102253.
- Asai, K., Satake, H., & Tsujimura, M. (2009). Isotopic approach to understanding the groundwater flow system within an andesitic stratovolcano in a temperate humid region: case study of Ontake volcano, central Japan. *Hydrological Processes: An International Journal*, 23(4), 559-571.
- Asmaranto, R., Lufira, R. D., Prasetyorin, L., Chandrasasi, D., Hidayat, M. N., & Asterina, Y. (2021). *Geologi Teknik Dan Pendugaan Geofisika Bidang Sumber Daya Air*. Deepublish.
- Atsamari, A. A., & Pigawati, B. (2024). Pengaruh Perubahan Penggunaan Lahan terhadap Perkembangan Kota Ungaran. *Jurnal Pengembangan Kota*, 12(1), 13-22.
- Auge, M. P. (1986). Hydrodynamic Behavior of the Puelche Aquifer in Matanza River Basin a. *Groundwater*, 24(5), 636-642.
- Badan Pusat Statistik (2024). Data Jumlah Penduduk Jawa Tengah per Kabupaten. BPS
- Baiocchi, A., Dragoni, W., Lotti, F., Luzzi, G., & Piscopo, V. (2006). Outline of the hydrogeology of the Cimino and Vico volcanic area and of the interaction between groundwater and Lake Vico (Lazio Region, Central Italy). *Bollettino-Societa Geologica Italiana*, 125(2), 187.
- Baud, B., Lachassagne, P., Dumont, M., Toulhier, A., Hendrayana, H., Fadillah, A., & Dorfliger, N. (2024). Andesitic aquifers—hydrogeological conceptual models and insights relevant to applied hydrogeology. *Hydrogeology Journal*, 32(5), 1259-1286.
- Bernard, J., Leite, O., & Vermeersch, F. (2011). *Multi-Electrode Resistivity Imaging for Environmental and Mining Application*. Orleans: IRIS.

- Bertassello, L. E., Rao, P. S. C., Jawitz, J. W., Aubeneau, A. F., & Botter, G. (2020). Wetlandscape hydrologic dynamics driven by shallow groundwater and landscape topography. *Hydrological Processes*, 34(6), 1460-1474.
- Bogie, I. dan Mackenzie, K.M., (1998). The application of a volcanic facies models to an andesitic stratovolcano hosted geothermal system at Wayang Windu, Java, Indonesia. *Proceedings of 20th NZ Geothermal Workshop*, h.265-276.
- Bonanno, E., Blöschl, G., & Klaus, J. (2021). Flow directions of stream-groundwater exchange in a headwater catchment during the hydrologic year. *Hydrological Processes*, 35(8), e14310.
- Bregasnia, W., Suwarsito, S., & Sarjanti, E. (2020). Kajian pola aliran air tanah di area kampus utama Universitas Muhammadiyah Purwokerto. *Sainteks*, 17(1), 19-25.
- Bronto, S. (2006). Fasies gunung api dan aplikasinya. *Indonesian Journal on Geoscience*, 1(2), 59-71.
- Budiastiwi, V. A., Hidayat, Z., & Rengga, A. (2015). Implementasi Perda Nomor 13 Tahun 2010 Tentang Kerjasama Daerah Kabupaten Semarang (Studi Kasus: Kerjasama Dalam Pengelolaan Air Bersih Antara Pdam Kabupaten Semarang Dengan PT Sarana Tirta Ungaran). *Journal of Public Policy And Management Review*, 4(2), 168-178.
- Cahyadi, T. A., Riyadi, F. A., Saputro, K. J., Linggasari, S., Suharyadi, H., & Lusantono, O. W. (2024). Groundwater potential identification using electrical resistivity tomography method in Sendangrejo Village, Minggir District, Sleman Regency, Special Region of Yogyakarta. In *IOP Conference Series: Earth and Environmental Science* (Vol. 1339, No. 1, p. 012014). IOP Publishing
- Claproth, R., Petrography and Geochemistry of Volcanic Rocks from Ungaran, Central Java, Indonesia, *Doctor of Philosophy Thesis*, Department of Geology, University of Wollongong, 1989.
- de Oliveira, M. V. G., Moreira, C. A., Netto, L. G., do Nascimento, M. M. P. F., & Sampaio, B. V. (2022). Geophysical and geological surveys to understand the hydrogeological behavior in an outcrop area of the Guarani Aquifer System, in Brazil. *Environmental Challenges*, 6, 100448.
- Desifatma, E., Pratomo, P. M., & Taufik, A. (2019). Interpretasi Data Ves Geolistrik Untuk Identifikasi Airtanah Di Daerah Batujajar, Kabupaten Bandung Jawa Barat. *Phydogic: Jurnal Fisika dan Pembelajarannya*, 1(2), 41-48.
- Ebong, E. D., Abong, A. A., Ulem, E. B., & Ebong, L. A. (2021). Geoelectrical resistivity and geological characterization of hydrostructures for groundwater resource appraisal in the Obudu Plateau, Southeastern Nigeria. *Natural Resources Research*, 30, 2103-2117.
- Fadillah, A., Harijoko, A., Hendrayana, H., Wibowo, H. E., Baud, B., Lachassagne, P., ... & Dörfliger, N. (2023). Hydrogeological interpretation using electrical resistivity tomography: methodology and conceptual model in andesitic volcanic context. *GEOMATE Journal*, 24(106), 25-36.

- Faturrahman, M. L., Rattyandanda, N. P., Rijani, S., & Maryanto, S. (2022). Analisis Geologi dan Geomorfologi Kuantitatif Daerah Vulkanik Menggunakan Citra Landsat 8 dan TerraSAR-X (Studi Kasus Gunungapi Ungaran). *Jurnal Geologi dan Sumberdaya Mineral*, 23(1), 53-60.
- Febriarta, E., Suswanti, S., & Novindaru, S. (2020). Interpretasi electrical resistivity tomography (ERT) untuk pendugaan airtanah dangkal pada formasi Gunungapi muda. *Jurnal Nasional Teknologi Terapan (JNTT)*, 3(1), 21-34.
- Fetter, C. W. & Kremer, D. (2022). *Applied Hydrogeology. Fifth Edition*. Waveland Press. United States of America
- Fitts, C. R. (2002). *Groundwater Science*. Elsevier Scientific Publishers, Amsterdam.
- Grinevskii, S. O. (2014). The effect of topography on the formation of groundwater recharge. *Moscow University Geology Bulletin*, 69, 47-52.
- Hao, C., Wang, Y., He, K., & Gui, H. (2022). Seasonal distribution of deep groundwater fluoride, geochemical factors and ecological risk for irrigation in the Shendong mining area, China. *Frontiers in Environmental Science*, 10, 1024797.
- Herlambang, A., & Indriatmoko, R. H. (2005). Pengelolaan airtanah dan intrusi air laut. *Jurnal Air Indonesia*, 1(2)
- Hunt, R.E., (2005). *Geotechnical Engineering Investigation Handbook, Second Edition*. CRC Press, Taylor & Francis.
- Ihsan, H. M., Arrasyid, R., Darsiharjo, D., & Ruhimat, M. (2023). The use of Geographic Information System (GIS) and Remote Sensing (RS) for potential unconfined groundwater in structural and volcano landforms. *Geodesy and Cartography*, 49(2), 125-132.
- Irawan, D. E., & Puradimaja, D. J. (2006). The hydrogeology of the volcanic spring belt, east slope of Gunung Ciremai, West Java, Indonesia. In *Proceeding of IAEG Conference*.
- Irawan, D. E., Puradimaja, D. J., Notosiswoyo, S., & Soemintadiredja, P. (2009). Hydrogeochemistry of volcanic hydrogeology based on cluster analysis of Mount Ciremai, West Java, Indonesia. *Journal of hydrology*, 376(1-2), 221-234.
- Irianto, S., Kusumayudha, S. B., Prasetyadi, C., & Yatini, Y. (2024). Analysis Of The Potential Of Volcanic Aquifers In Supporting The Development Of Groundwater Resources In Bogor District, West Java. *OPSearch: American Journal of Open Research*, 3(6), 114-129.
- Jac, F. D.G, (2022). *Large Aquifer Systems Around the World*. The Groundwater Project, Guelph, Ontario, Canada
- Jasim, A., Hemmings, B., Mayer, K., & Scheu, B. (2019). Groundwater flow and volcanic unrest. *Volcanic unrest: From science to society*, 83-99.
- Jaupart, C. (1991). Effects of compressibility on the flow of lava. *Bulletin of volcanology*, 54(1), 1-9.

- Kementerian Desa, Pembangunan Daerah Tertinggal dan Transmigrasi. (2015). Indeks Desa Membangun. Jakarta Selatan: Kementerian Desa, Pembangunan Daerah Tertinggal dan Transmigrasi.
- Kohno, Y. (2006). Geological and geochemical study on the Ungaran geothermal field, Central Java, Indonesia: an implication in genesis and nature of geothermal water and heat source. In Proceedings of 4th International Workshop on Earth Science and Technology, Fukuoka, 2006 (pp. 367-374).
- Kuang, X., Jiao, J. J., Zheng, C., Cherry, J. A., & Li, H. (2020). A review of specific storage in aquifers. *Journal of Hydrology*, 581, 124383.
- Kurniawan, A. (2014). Sifat Resistivitas Rendah Mineral Lempung. *Masyarakat Ilmu Bumi Indonesia*, 1(2), 1–9.
- Laitupa, K., Pangkung, Y. G., & Supit, J. M. (2014). Aplikasi Metode Geolistrik Untuk Menentukan Akuifer Airtanah Di Kampung Horna Baru Dan Kampung Muturi Distrik Manimeri Kabupaten Teluk Bintuni Provinsi Papua Barat. *JISTECH: Journal of Information Science and Technology*, 6(1).
- Li, P., Karunanidhi, D., Subramani, T., & Srinivasamoorthy, K. (2021). Sources and consequences of groundwater contamination. *Archives of environmental contamination and toxicology*, 80, 1-10.
- Liu, F., Yeh, T. C. J., Wang, Y. L., Song, X., Lei, X., Wen, J. C., & Hao, Y. (2020). Potential of hydraulic tomography in identifying boundary conditions of groundwater basins. *Water Resources Research*, 56(12), e2020WR028331.
- Lowrie, W. (2007). *Fundamentals of Geophysics, Second edition*. Cambridge University Press.
- Maheswari, A. S., Putra, D. P. E., Handini, E., Wilopo, W., & Susatio, R. (2023). Karakteristik Hidrokimia dan Model Konseptual Sistem Akuifer di Sumberarum, Tempuran, Magelang, Jawa Tengah. *Majalah Geografi Indonesia*, 37(2), 138-146.
- Marin, J., Harijoko, A., Pramuwijoyo, S., dan Humaida, H., (2015). Studi Geomorfologi Gunungapi dan Petrogenesis Batuan untuk Memahami Evolusi Vulkanotektonik pada Gunungapi Ungaran, Jawa Tengah. *Proceeding Seminar Nasional Kebumihan ke-8, 15-16 Oktober 2015, Ghra Sabha Pramana, Yogyakarta*
- Manyoe, I. N., & Hutagalung, R. (2020). Subsurface shallow modelling based on resistivity data in the hot springs area of Libungo Geothermal, Gorontalo, Indonesia. *Journal of Geoscience, Engineering, Environment, and Technology*, 5(2), 75-80.
- Minarto, E., Christy, N. N., & Ruchimat, A. (2021). Identification of groundwater potential using Wenner configuration 2D resistivity method (Kupang, Nusa Tenggara Timur). In *Journal of Physics: Conference Series* (Vol. 1805, No. 1, p. 012034). IOP Publishing.
- Moustafa, M. (2017). Groundwater flow dynamic investigation without drilling boreholes. *Applied Water Science*, 7(1), 481-488.

- Muhardi, M., Perdhana, R., & Nasharuddin, N. (2019). Identifikasi Keberadaan Airtanah Menggunakan Metode Geolistrik Resistivitas Konfigurasi Schlumberger (Studi Kasus: Desa Clapar Kabupaten Banjarnegara). *Prisma Fisika*, 7(3), 331-336.
- Muiz. (2021, Agustus).Protes Kekurangan Air, FKP PDAM Datangi Sumber Kalidoh Ungaran. *JATENGPOS.CO.ID*. Diambil dari <https://jatengpos.co.id/protes-kekurangan-air-fkp-pdam-datangi-sumber-kalidoh-ungaran/muis/>
- Muhtarom, N. K., & Purwanti, E. (2018). Analisis Indeks Desa Membangun Untuk Mengetahui Pola Perkembangan Pembangunan Desa di Kecamatan Gadingrejo Kabupaten Pringsewu. Inovasi Pembangunan. *Jurnal Kelitbangan*, 6(2), 179-190.
- Nathania, J., Subiyanto, S., & Suprayogi, A. (2017). Analisis Perubahan Lahan dan Zona Nilai Tanah di Kecamatan Ungaran Timur Akibat Pembangunan Jalan Tol Semarang-Solo (Tahun 2008–2017). *Jurnal Geodesi Undip*, 6(4), 433-442.
- Németh, K., & Palmer, J. (2019). Geological mapping of volcanic terrains: Discussion on concepts, facies models, scales, and resolutions from New Zealand perspective. *Journal of Volcanology and Geothermal Research*, 385, 27-45.
- Nugraha, B., Ghozi, M., Fadillah, A., Muhammad, A. S., Iskandarsyah, T. Y. W. M., & Hendarmawan, H. (2023). Geological and Morphometric Characteristics of Quaternary Pyroclastic Aquifers in Salak and Pangrango Stratovolcano. *Journal of Geoscience, Engineering, Environment, and Technology*, 8(1), 27-38.
- Nugraha, G. U., Nur, A. A., Sudrajat, Y., Arifin, J., Bakti, H., Lubis, R. F., & Rulyadi, A. D. (2023). Sub-surface configuration in the northern part of Lembang groundwater basin recharge area. *Applied Water Science*, 13(10), 204.
- Orecchia, C., Giambastiani, B. M., Greggio, N., Campo, B., & Dinelli, E. (2022). Geochemical characterization of groundwater in the confined and unconfined aquifers of the Northern Italy. *Applied Sciences*, 12(15), 7944.
- Park, S. G., Shin, S. W., Lee, D. K., Kim, C. R., & Son, J. S. (2016). Relationship between electrical resistivity and physical properties of rocks. In *Near Surface Geoscience 2016-First Conference on Geophysics for Mineral Exploration and Mining* (Vol. 2016, No. 1, pp. 1-5). European Association of Geoscientists & Engineers.
- Paramita, N., Fatturakhman, M. L., Maryanto, S., & Rijani, S. (2021). Stratigrafi dan sedimentologi formasi kerek di sepanjang lintasan kalikayen, Ungaran Timur, Provinsi Jawa Tengah. *Jurnal Geologi dan Sumberdaya Mineral*, 22(2), 81-87.
- Peng, M., Lu, Z., Zhao, C., Motagh, M., Bai, L., Conway, B. D., & Chen, H. (2022). Mapping land subsidence and aquifer system properties of the Willcox

Basin, Arizona, from InSAR observations and independent component analysis. *Remote Sensing of Environment*, 271, 112894.

Peraturan Daerah Kabupaten Semarang Nomor 2 Tahun 2024 Tentang Pengelolaan Sumberdaya Air

Phanjaya, H., Parnadi, W. W., & Santoso, D. (2022). Electrical resistivity survey for groundwater investigation in Padalarang, West Java. In *IOP Conference Series: Earth and Environmental Science* (Vol. 1031, No. 1, p. 012006). IOP Publishing.

Prabowo, I. A., & De Jesus, A. A. (2023). Aquifer Potential Analysis Based On Hydrostratigraphy and Geological Lineament In Kokap Region, Kulon Progo, Yogyakarta, Indonesia. *International Journal of Hydrological and Environmental for Sustainability*, 2(2), 50-64.

Prayogo, T. B., Bisri, M., Fadhia, K. F., & Martius, A. F. (2024). Aquifer potential investigation applying vertical electrical sounding in Bango sub-catchment area. In *IOP Conference Series: Earth and Environmental Science* (Vol. 1311, No. 1, p. 012038). IOP Publishing.

Purnama, S., Cahyadi, A., Sekaranom, A. B., Febriarta, E., Firmansyah, A. J., & Riyanto, I. A. (2023). Aquifer characteristics and groundwater potential for domestic requirements in Kediri Regency, Indonesia. *Journal of Degraded & Mining Lands Management*, 10(2).

Raza, I., Khalid, P., Ahmad, Q. A., Muhammad, S., Ehsan, M. I., Farooq, B., & Qureshi, J. (2024). Integrated study of quaternary aquifer for hydrostratigraphy and groundwater quality assessment in central Thal Doab, Punjab, Pakistan. *Plos one*, 19(6), e0302442.

Rustadi, R., Darmawan, I., Nandi Haerudin, N. H., Agus Setiawan, A., & Suharno, S. (2022). Groundwater exploration using integrated geophysics method in hard rock terrains in Mount Betung Western Bandar Lampung, Indonesia. *Journal of Groundwater Science and Engineering*, 10(1), 10-18.

Safitri, A. A., Andaresta, E. F., & Suaidi, D. A. (2022). Identifikasi lapisan hidrotermal dengan menggunakan metode geolistrik resistivitas konfigurasi Wenner (studi kasus wilayah panas bumi Cangar). *Jurnal MIPA dan Pembelajarannya*, 2(4), 291-299.

Schwartz, F. W., & Zhang, H. (2024). *Fundamentals of groundwater*. John Wiley & Sons.

Selles, A., Defontaine, B., Hendrayana, H., & Violette, S. (2015). The eastern flank of the Merapi volcano (Central Java, Indonesia): Architecture and implications of volcanoclastic deposits. *Journal of Asian Earth Sciences*, 108, 33-47.

Sethi, R., & Di Molfetta, A. (2019). *Basic Concepts In: Groundwater Engineering* . Springer Tracts in Civil Engineering .

Setyawan, A., Ehara, S., Fujimitsu, Y., Nishijima, J., Saibi, H., & Aboud, E. (2009). The gravity anomaly of Ungaran volcano, Indonesia: Analysis and interpretation. *Journal of the Geothermal Research Society of Japan*, 31(2), 107-116.

- Shahinuzzaman, M., Khan, M. N. U., Islam, M. K., & Islam, M. Z. (2020). Identification of Potential Groundwater Bearing Zones by Hydrostratigraphic Analysis in the Eastern Part of Kushtia District. GUB. *Journal of Science and Engineering*, 36-41.
- Shi, F., Zhao, C., Zhao, X., Zhou, X., Li, X., & Zhu, J. (2021). Spatial variability of the groundwater exploitation potential in an arid alluvial-diluvial plain using GIS-based Dempster-Shafer theory. *Quaternary International*, 571, 127-135.
- Shishaye, H. A., & Abdi, S. (2016). Groundwater exploration for water well site locations using geophysical survey methods. *Hydrol. Curr. Res*, 7(1).
- Shoji, S., Nanzyo, M., & Dahlgren, R. A. (1994). *Volcanic ash soils: genesis, properties and utilization* (Vol. 21). Elsevier.
- Silohadi, S. I. T., Kusumayudha, S. B., Prasetyadi, C., & Karmadi, M. A. (2025). The interconnection of the Volcanic Aquifer Layers Influences the Interaction of Hydrogeological and Hydrology Systems on Cisadane River. In *IOP Conference Series: Earth and Environmental Science* (Vol. 1451, No. 1, p. 012017). IOP Publishing.
- Simpem, I. N. (2022). Estimation of the position and potential of aquifers using geoelectrical methods in the framework of drill wells in volcanic areas. *International Journal of Physical Sciences and Engineering*, 6(2), 119-127.
- Suhendro, I., Al Aro, A. S., Rahim, A. P., & Sari, L. R. (2023). On the formation of lava flows and lava domes in mafic-intermediate magmas (Mount Ungaran, Central Java, Indonesia). *Journal of Volcanology and Seismology*, 17(3), 228-245.
- Sukarasa, I. K., & Paramarta, I. B. A. (2020). Identification of the groundwater existence by geoelectrical method. *International Journal of Physical Sciences and Engineering*, 4(2), 36-42.
- Supriyadi, Nur Fitrianto, T. & Susanto, H. (2020). Vertical Electrical Sounding Survey to Determine Groundwater Potential in Sekaran, Gunungpati, Semarang, Indonesia. In *Proceedings of the 7th Engineering International Conference on Education, Concept and Application on Green Technology – EIC*.
- Suring, L.H. (2020). Freshwater: Groundwater and Aquifers. *Encyclopedia of the World's Biomes*, 4, 177-181.
- Tarmidzi, F., & Setyawan, A. (2014). Study of fluid flow in gedongsongo temple manifestation geothermal based on the data of geophysics. *Energy Procedia*, 47, 101-107.
- Thanden, R.E., Sumadirdja, H., Richards, P.W., Sutisna, K., dan Amin, T.C., (1996). *Peta Geologi Lembar Magelang dan Semarang, Jawa. Skala 1:100.000*. Pusat Penelitian dan Pengembangan Geologi, Bandung.
- Toulier A (2019) Multidisciplinary study for the characterization of volcanic aquifers hydrogeological functioning: case of Bromo Tengger volcano (East Java, Indonesia) (Hydrology). *Thesis*. Université de Montpellier, Montpellier, France

- Telford, W.M., Geldart, L.P., Sheriff, R.E. (2004) *Applied Geophysics, Second Edition*. Cambridge University Press.
- Thouret, J. C. (1999). Volcanic geomorphology an overview. *Earth-science reviews*, 47(1-2), 95-131.
- Undang-Undang Nomor 17 Tahun 2019 Tentang Sumber Daya Air.
- Wintolo, D., Arifianto, I., & Wibowo, J. P. (2017). Resistivity Survey for Groundwater Explorationin Tiron Village, Kediri, East Jawa. *Peran Penelitian Ilmu Kebumihan Dalam Pembangunan Infrastruktur Di Indonesia*.
- Van Zuidam R.A. (1983). *Guide to Geomorphologic Aerial Photographic Interpretation & Mapping*. Netherlands: International Institute for Aerial Survey and Earth Sciences (ITC).
- Varade, A. M., Shende, R., Lamsoge, B., Dongre, K., & Rajput, A. (2014). Efficacy of Kumarswamy method in determining aquifer parameters of large-diameter dugwells in deccan trap region, Nagpur District, Maharashtra. *Journal of Indian Geophysical Union*, 18(4), 461-468.
- Vittecoq, B., Reninger, P. A., Lacquement, F., Martelet, G., & Violette, S. (2019). Hydrogeological conceptual model of andesitic watersheds revealed by high-resolution heliborne geophysics. *Hydrology and Earth System Sciences*, 23(5), 2321-2338.
- Yudiantoro, D. F., Ratnaningsih, D. R., Pramudihadi, E. W., Kurnianto, A. G. B., Alfian, D. G., & Abdurrahman, M. (2018). Overview of the petrophysical and geochemical properties of the Ungaran Quarternary Volcano in relation to geothermal potential. In *IOP Conference Series: Earth and Environmental Science* (Vol. 212, No. 1, p. 012055). IOP Publishing.
- Zahidah, A., Putra, D. P. E., Wilopo, W., & Mareta, N. (2025). Hydrochemical characteristics of groundwater and the implications for conceptual models of aquifers: a study of Cangkringan, Yogyakarta, Indonesia. *Hydrological Sciences Journal*, 70(5), 761-774.