

DAFTAR PUSTAKA

- Adji, T.N. and Sudarmadji. 2008. Hydrological Properties of Bribin Underground River System (Experience Learned for Seropan River System Project). *Proceeding of Integrated Water Resources Management Seminar*. Yogyakarta: Universitas Gadjah Mada.
- Adji, T.N. 2009. Kajian Variasi Spasial-Temporal Hidrogeokimia dan Sifat Aliran untuk Karakterisasi Perilaku Sistem Karst Dinamis (SKD) Sepanjang Sungai Bawah Tanah (SBT) Bribin. *Disertasi*. Yogyakarta: Program Pascasarjana Fakultas Geografi, Universitas Gadjah Mada.
- Adji, T.N. 2013. Kondisi Daerah Tangkapan Sungai Bawah Tanah Karst Gunungsewu dan Kemungkinan Dampak Lingkungannya Terhadap Sumberdaya Air (Hidrologis) Karena Aktivitas Manusia. dalam Sudarmadji, Haryono, E., Adji, T.N., Widyastuti, M., Harini, R., Nurjani, E., Cahyadi, A. dan Nugraha, H. (eds). *Ekologi Lingkungan Kawasan Karst Indonesia: Menjaga Asa Kelestarian Kawasan Karst Indonesia*. Yogyakarta: Deepublish.
- Adji, T.N. 2015. Nilai Ekonomi Air di Daerah Karst. disampaikan dalam *Lokakarya Nasional Ekosistem Karst*, 16 Desember 2015. Jakarta: Direktorat Bina Pengelolaan Ekosistem Essensial Kemeterian Lingkungan Hidup dan Kehutanan Republik Indonesia.
- Adji, T.N. and Bahtiar, I.G. 2016. Rainfall-discharge Relationship and Karst Flow Components Analysis for Karst Aquifer Characterization in Petoyan Spring, Java, Indonesia. *Environmental Earth Sciences Journal*, 75(735): 1-10.
- Adji, T.N.; Haryono, E.; Mujib, A.; Fatchurohman, H. and Bahtiar, I.G. 2017. Assessment of Aquifer Karstification Degree in Some Karst Sites on Java Island, Indonesia. *Carbonates Evaporites*, 34: 53 - 66.
- Agniy, R.F. 2016. Kajian Hidrogeologi Karst Sistem Gua Pindul, Kecamatan Karangmojo, Kabupaten Gunungkidul. *Skripsi*. Yogyakarta: Fakultas Geografi, Universitas Gadjah Mada.
- Agniy, R.F.; Adji, T.N.; Cahyadi, A.; Nurkholis, A. and Haryono, E. 2021. Artificial Tracer Test for Characterisation and Conservation of Karst Water

- in Jonggrangan Karst. Java Island, Indonesia. *International Journal of Conservation Science*, 12(4): 1483-1502.
- Akmaluddin, D.L.; Setijadji, K.; Watanabe and T. Itaya. 2005. New Interpretation on Magmatic Belts Evolution during the Neogene-Quaternary Periods as Revealed from Newly Collected K-Ar Ages from Central-East Java – Indonesia. *Proceeding of Joint Convention IAGI-HAGI-PERHAPI*, Surabaya 2005.
- Aldrian, E. 2001. Pembagian Iklim Indonesia Berdasarkan Pola Curah Hujan dengan Metoda “*Double Correlation*”. *Jurnal Sains & Teknologi Modifikasi Cuaca*, 2(1), 11–18.
- Al-Ghozali, M.Q. 2021. Studi Transport Parameter Melalui Artificial Tracer Test di Sebagian Kawasan Karst Gombang Selatan, Kabupaten Kebumen. *Skripsi*. Yogyakarta: Fakultas Geografi, Universitas Gadjah Mada.
- Alley, W.M.; Winter, T.C.; Harvey, J.W. and Franke, O.L. 1998. *Groundwater and Surface Water: A Single Resources*. USGS Publication No. 79. <https://doi.org/10.3389/fpsyg.2012.00044>.
- Altin, T.B. and Altin, B.N. 2011. Drainage Morphometry and Its Influence on Landforms in Volcanic Terrain, Central Anatolia, Turkey. *Procedia Social and Behavioral Sciences*, 19: 732-740.
- Appelo, C. and Postma, D. 2005. *Geochemistry, Groundwater and Pollution*, 2nd Edition. Rotterdam: Balkema.
- Andreo, B. 2012. Introductory Editorial: Advances in Karst Hydrogeology. *Environmental Earth Sciences*, 65: 2.219–2.220.
- Arhananta; Kusumayudha, S.B. dan Harjanto, A. 2022. Pengaruh Litologi dan Struktur Geologi terhadap Air Tanah di Daerah Wediombo, Kecamatan Girisubo, Kabupaten Gunungkidul, Provinsi Daerah Istimewa Yogyakarta. *Jurnal Sumberdaya Bumi Berkelanjutan*, 1(1), 13-24.
- Asnani, G.C. 1993. *Tropical Meteorology*. Pashan, India: STD Computers.
- Atkinson, T.C. and Smith, D.I. 1976. The Erosion of Limestones, in Ford, T.D. and Cullingford, C.H.D. (Eds). 1976. *The Science of Speleology*. London: Academic Press.
- Aubert, D. 1967. Estimation de la Dissolution Superficielle dans le Jura. *Bulletine*

de la Societe Vaudoise des Sciences Naturelles, 69(8): 365-376.

- Auler, A.S. 2013. Sources of Water Aggressiveness - The Driving Forces of Karstification. In Shroder, J.F. (ed). 2013. *Treatise on Geomorphology*. London: Elsevier, Inc.
- Babu, K.J., Sreekumar, S. and Aslam. A. 2016. Implication of Drainage Basin Parameters of A Tropical River Basin of South India. *Applied Water Science*, 6: 67-75.
- Bahtiar, I.Y. 2015. Kajian Respon Debit Mataair Ngeleng terhadap Curah Hujan untuk Karakterisasi Akuifer Karst. *Skripsi*. Yogyakarta: Faculty of Geography, Universitas Gadjah Mada.
- Balazs, D. 1968. *Karst Regions in Indonesia: Karszt-Es Barlangkutatas*, Volume V. Budapest.
- Bappeda Kabupaten Gunungkidul. 2007. Penyusunan Neraca Air Kabupaten Gunungkidul, Daerah Istimewa Yogyakarta. *Laporan Penelitian*. Wonosari: Bappeda Kabupaten Gunungkidul.
- Barianto, D.H., Margono, U., Husein, S., Novian, M.I. dan Permana, A.K. 2017. *Peta Geologi Lembar Wonosari (1408-31), Jawa*. Bandung: Badan Geologi, Kementerian Energi dan Sumber Daya Mineral.
- Behrens, H.; Beims, U.; Dieter, H.; Dietze, G.; Eikmann, T.; Grummt, T.; Hanisch, H.; Henseling, H.; Käss, W.; Kerndorff, H.; Leibundgut, C.; Müller-Wegener, U.; Rönnefahrt, I.; Scharenberg, B.; Schleyer, R.; Schloz, W. and Tilkes, F. 2001. Toxicological and Ecotoxicological Assessment of water Tracer. *Hydrogeology Journal*, 9: 321-325.
- Benische, R. 2000. *Application of Tracer Methods in the Hydrogeologic Investigation of Karst Systems of Gunung Sewu, Yogyakarta Special Province, Indonesia*. Schlussbericht: Institut für Hydrologie und Geothermie, Joanneum Research GmbH, Graz.
- Benischke, R.; Goldscheider, N. dan Smart, C. (2007). *Tracer Techniques*. dalam Goldscheider, N. dan Drew, D. (2007). *Methods in Karst Hydrogeology*. London: Taylor & Francis Group.
- Blumstock, M.; Tetzlaff, D.; Malcolm, I.A.; Nuetzmann, G. and Soulsby, C. 2015. Baseflow Dynamics: Multi-tracer surveys to Assess Variable Groundwatre

Contributions to Montane Streams Under Low Flows. *Journal of Hydrology*, 527: 1021-1033.

- Boer, R.; Faqih, A.; and Ariani, R. 2014. Relationship Between Pacific and Indian Ocean Sea Surface Temperature Variability and Rice Production, Harvesting Area and Yield in Indonesia. *Proceeding of EEPSA Conference on the Economics of Climate Change*, 27-28 February. Siem Reap, Cambodia.
- Bogli, A. 1960. Kalklösung und Karrenbildung. *Z. Geomorph., Suppl.2. Internationale Beitrage zur Karstmorphologie*: 4-21.
- Bogli, A. 1980. *Karst Hydrology and Physical Speleology*. Berlin: Springer-Verlag.
- Bonacci, O. 2004. Ponors. In Gunn, J. 2004. *Encyclopedia of Caves and Karst Science*. New York: Taylor and Francis Group.
- Bouchez, J.; Moquet, J.S.; Espinoza, J.C.; Martinez, J.M.; Guyot, J.L.; Lagane, C.; Filizola, N.; Noriega, L.; Sanchez, L.H. and Pombosa, R. 2017. River Mixing in the Amazon as a Driver of Concentration-Discharge Relationships. *Water Resources Research*, 53(11), 8660-8685.
- Bronto, S.; Mulyaningsih, S.; Hartono, G., dan Astuti, B. 2009. Waduk Parangjoho dan Songputri: Alternatif Sumber Erupsi Formasi Semilir di Daerah Eromoko Kabupaten Wonogiri, Jawa Tengah. *Jurnal Geologi Indonesia*, 4(2): 79 – 92.
- Brunsch, A.; Adji, T.N.; Stoffel, D.; Ikhwan, M.; Oberle, P. and Nestmann, F. 2011. Hydrological Assessment of A Karst Area in Southern Java with Respect to Climate Phenomena. dalam Haryono, E., Adji, T.N. and Suratman. 2011. *Proceeding of Asian Trans-Disciplinary Karst Conference*. Yogyakarta: Fakultas Geografi, Universitas Gadjah Mada.
- Budiyanto, E. dan Lestari, E.P. 2019. Sensitivitas Mata Air Karst Goa Gremeng terhadap Hujan di Area Tangkapannya. *Jurnal Geografi: Geografi dan Pengajarannya*, 17(1): 63 – 70.
- Burca, S. and Indolean, C. 2018. Ionic Exchange Studies for Correcting Water Quality Indicators. *Studia UBB Chemia, LXIII(3)*: 155-170.

- Cao, M.; Jiang, Y.; Chen, Y.; Fan, J. and He, Q. 2020. Variation of Soil CO₂ Concentration and P_{CO2} in Cave Stream on Different Time Scales in Subtropical Climate Regime. *Catena*, 185, 104280. <https://doi.org/10.1016/j.catena.2019.104280>
- Cartwright, I. 2020. Concentration vs Streamflow (C-Q) Relationships of Major Ions in South-Eastern Australian Rivers: Sources and Fluxes of Inorganic Ions and Nutrients. *Applied Geochemistry*, 120, 104680.
- Chandrashekar, H., Lokesh, V.K., Sameena, M., Roopa, J. and Ranganna, G. 2015. GIS-Based Morphometric Analysis of Two Reservoir Catchments of Arkavati River, Ramanagaram District, Karnataka. *Aquatic Procedia*, 4, 1345–1353.
- Chang, Y.; Hartmann, A.; Liu, L.; Jiang, G. and Wu, J. 2021. Identifying More Realistic Model Structures by Electrical Conductivity Observations of the Karst Spring. *Water Resources Research*, 57(4): 1-21.
- Christanto, N.; Setiawan, M. A.; Nurkholis, A.; Sartohadi, J. and Hadi, M. P. 2020. The Use of Global Datasets in the SWAT Model for Tropical Watershed with Limited Ground Data: A Case Study in Serayu Upper Catchment. *Taiwan Water Conservancy*, 68(3), 18–27.
- Clark, I. 2015. *Groundwater Geochemistry and Isotopes*. London: Taylor and Francis.
- Cook, P.G. 2013. Estimating Groundwater Discharge to Rivers from River Chemistry Surveys. *Hydrological Processes*, 27(25): 3694-3707.
- Culver, D.C. 2005. Microbes. In: Culver, D.C. and White, W.B. (Eds.). 2005. *Encyclopedia of Caves*. Burlington: Elsevier.
- Dile, Y.T. and Srinivasan, R. 2014. Evaluation of CFSR Climate Data for Hydrologic Prediction in Data-Scarce Watersheds: An application in The Blue Nile River Basin. *Journal of the American Water Resources Association*, 50(5), 1.226–1.241.
- Dipayana, G.A.; Cahyadi, A.; Mutaqin, B.W. and Nurjani, E. 2012. Dampak Perubahan Iklim Terhadap Nilai Erosivitas di DAS OPAK Berdasarkan Skenario Perubahan Iklim HadCM3 skenario A2 dan B2. *Proceedings of*

the Science, Engineering and Technology. Malang: Fakultas Teknik, Universitas Brawijaya.

- Dipayana, G.A.; Nurjani, E.; and Adji, T. 2012. Estimasi Distribusi Spasial Imbuhan Airtanah Menggunakan Model Water-Budget dan Geographic Information System (GIS) di DAS Opak, DIY. *Proceedings of the Science, Engineering and Technology*. Malang: Fakultas Teknik, Universitas Brawijaya.
- Do, H.K.; Yun, S.T.; Yu, S.; Ryuh, Y.G. and Choi, H.S. 2020. Evaluation of Long-Term Impacts of CO₂ Leakage on Groundwater Quality using Hydrochemical Data from a Natural Analogue Site in South Korea. *Water*, 12(5): 1457. <https://doi.org/10.3390/w12051457>
- Domenico, P.A. and Schwartz, F.W. 1990. *Physical and Chemical Hydrogeology*. New York: John Wiley and Sons.
- Dörfliger, N.; Fleury, P. and Ladouche, B. 2009. Inverse Modeling Approach to Allogenic Karst System Characterization. *Ground Water*, 47(3): 414-426.
- Dreybrodt, W. and Gabrovsek, F. 2000. Dynamics of the Evolution of a Single Karst Conduit. in Klimchouk, A.; Ford, D.; Palmer, A.N. and Dreybrodt, W. (eds). 2000. *Speleogenesis: Evolution of Karst Aquifers*. Huntsville, Alabama: National Speleology Society.
- Drew, D. 1995. *Karst Processes and Landforms*. London: Manmillan Education LTD.
- Drew, D. 1999. Introduction. dalam Drew, D. and Hötzl, H (eds). 1999. *Karst Hydrogeology and Human Activities: Impacts, Consequences and Implications*. Rotterdam: A.A. Balkema.
- Dub, O. and Němec, J. 1969. *Hydrologie*. Praha: Česká Matice Technická.
- Eiche, E.; Hochschild, M.; Haryono, E. and Neumann, T. 2016. Characterization of Recharge and Low Behaviour of Different Water Sources in Gunung Kidul and Its Impact on Water Quality Based on Hydrochemical and Physico-Chemical Monitoring. *Applied Water Science*, 6: 293 -307.
- Engel, A.S.; Stern, L.A. and Bennett, P.C. 2004. Microbial Contributions to Cave Formation: New Insights Into Sulfuric Acid Speleogenesis. *Geology*, 32, 369–372.

- Fakultas Kehutanan, Universitas Gadjah Mada. 1993. Penyusunan Arah Konservasi Tanah dan Air di Daerah Tangkapan Air Gua Bribin Kabupaten Gunung Kidul, D.I. Yogyakarta. *Laporan Penelitian*. Yogyakarta: Dinas Kehutanan, Provinsi Daerah Istimewa Yogyakarta.
- Fatchurohman, H. dan Adji, T.N. 2013. Penilaian Kapasitas Penetralkan Asam: Studi Kasus Mataair Karst Ngeleng, Purwosari, Gunungkidul. dalam Cahyadi, A.; Prabawa, B.A.; Tivianton, T. dan Nugraha, H. 2013. *Ekologi Lingkungan Kawasan Karst Indonesia, Edisi 2*. Yogyakarta: Deepublish.
- Fatchurohman, H. 2017. Characterization and Management of Karst Drainage System Based in Hydrograph Analysis in Gunungsewu Karst Area. *M.Sc. Thesis*. Yogyakarta: Master Program in Planning and Management of Coastal Area and Watershed, Faculty of Geography, Universitas Gadjah Mada.
- Fetter, C.W., 1988. *Applied Hydrogeology*. New York: Mac Millan Publishing.
- Field, M. 2002. *A Lexicon of Cave and Karst Terminology with Special Reference to Environmental Karst Hydrology*. Washington D.C.: United States Environmental Protection Agency.
- Filipponi, M.; Jeannin, P. and Tacher, L. 2010. Understanding Cave Genesis along Favourable Bedding Planes: the Role of the Primary Rock Permeability. *Zeitschrift für Geomorphologie*, 54(2): 91 – 114.
- Fitzpatrick, F.A. 2016. Watershed Geomorphological Characteristics. In Singh, V.P. 2016. *Handbook of Applied Hydrology*. New York: McGraw-Hill Education.
- Flathe, H. and Pfeiffer, D. 1965. Grundzuge der morphologie, Geology und Hydrogeologie im Karstgebiet Gunung Sewu (Java, Indonesien). *Geologisches Jahrbuch*, 83: 533–562.
- Ford, D. and Williams, P. 2007. *Karst Geomorphology and Hydrology*. West Sussex: John Wiley and sons, inc.
- Ford, D.C. and Williams, P.W. 2011. Geomorphology Underground: The Study of Karst and Karst Processes. In Gregory, K.J. and Goudie, A.S (eds). 2011. *The SAGE Handbook of Geomorphology*. London: SAGE Publications Ltd.

- Fourie, F.; Dennis, I.; Dennis, R.; Veltman, S.; Titus, R. and Persons, R. 1998. *The Groundwater Dictionary: A Comprehensive Reference of Groundwater Related Terminology*. Cape Town: Department of Water Affairs Republic of South Africa.
- Frumkin, A. 2013. New Development of Karst Geomorphology Concepts. dalam Shroder, J.F. (ed). 2013. *Treatise on Geomorphology*. London: Elsevier, Inc.
- Fuka, D.R.; Walter, M.T.; Macalister, C.; Degaetano, A.T.; Steenhuis, T.S. and Easton, Z.M. 2014. Using the Climate Forecast System Reanalysis as Weather Input Data for Watershed Models. *Hydrological Processes*, 28(22), 5.613–5.623.
- Gabrovsek, F. and Dreybordt, W. 2000. Role of Mixing Corrosion in Calcite-Aggressive $H_2O-CO_2CaCO_3$ Solutions in the Early Evolution of Karst Aquifers in Limestone. *Water Resources Research*, 36(5): 1179 – 1188.
- Gibbs, J.R. 1970. Mechanisms Controlling World Water Chemistry. *Science*, 170: 1.088-1.090.
- Gilli, E.; Mangan, C. dan Mudry, J. 2012. *Hydrogeology: Objectives, Methods, Applications*, diterjemahkan dari Bahasa Perancis oleh Chloe Fandel. Boca Raton: CRC Press.
- Gilli, E. 2015. *Karstology - Karst, Caves and Springs: Elements of Fundamental and Applied Karstology*. Boca Raton: CRC Press.
- Gillieson, D. 1996. *Caves: Processes, Development, and Management*. British: Blackwell Publishers.
- Goldscheider, N. and Drew, D. (eds) 2007. *Methods in Karst Hydrogeology*. London: Taylor & Francis.
- Goldscheider, N.; Drew, D. and Worthington, S. 2007. Introduction. dalam Goldscheider, N. and Drew, D. (eds) 2007. *Methods in Karst Hydrogeology*. London: Taylor & Francis.
- Goldscheider, N.; Meiman, J.; Pronk, M and Smart, C. 2008. Tracer Tests in Karst Hydrogeology and Speleology. *International Journal of Speleology*, 37 (1): 27-40.

- Golterman, H.L. and Meyer, M.L. 1985. The Geochemistry of Two Hard Water Rivers, the Rhine and the Rhone: Part 3: The Relations between Calcium, Bicarbonate, Sulphate and pH. *Hydrobiologia*, 126: 21-24.
- Guan, T.; Xue, B.; Yinglan, A.; Lai, X.; li, X.; Zhang, H.; Wang, G. and Fang, Q. 2022. Contribution of Nonpoint Source Pollution from Baseflow of a Typical Agriculture-Intensive Basin in Northern China. *Environmental Research*, 212, 113589, <https://doi.org/10.1016/j.envres.2022.113589>
- Gulley, J.D.; Martin, J.B.; Moore, P.J. and Murphy, J. 2013. Formation of Phreatic Caves in an Eogenetic Karst Aquifer by CO₂ Enrichment at Lower Water Tables and Subsequent Flooding by Sea Level Rise. *Earth Surface Processes and Landforms*, 38(11): 1210-1224.
- Gulley, J.D.; Martin, J.B.; Moore, P.J.; Brown, A.; Spellman, P.D. and Ezell, J. 2015. Heterogenous Distributions of CO₂ may be more Important for Dissolution and Karstification in Coastal Eogenetic Limestone than Mixing Dissolution. *Earth Surface and Landforms*, 40(8): 1057-1071.
- Gunawan, T. 2001. Kontribusi Foto Udara dalam Identifikasi Karakteristik Hidrologi di Daerah Parangtritis dan Sekitarnya Kabupaten Bantul Daerah Istimewa Yogyakarta. *Majalah Geografi Indonesia*, 15(1): 17-44.
- Gunawan, T. 2013. Kontribusi Citra Penginderaan Jauh dalam Kajian Batas Daerah Aliran Sungai (DAS) dalam Rangka Pengelolaan Sumber Daya Air (Kasus di Gunungkidul Daerah Istimewa Yogyakarta). *Laporan Penelitian*. Yogyakarta: Fakultas Geografi, Universitas Gadjah Mada.
- Gunn, J. 1981. Limestone Solution Rates and Processes in the Waitomo District, New Zealand. *Earth Surface Processes and Landforms*, 6,: 427-445.
- Gunn, J. 1986. Solute Processes and Karst Landforms. In Trudgill, S.T. (ed). 1986. *Solute Processes*. Chichester: Wiley.
- Gunn, J. 2004. Karst. dalam Gunn, J. (Ed). 2004. *Encyclopedia of Caves and Karst Science*. New York: Taylor and Francis Books, Inc.
- Gunn, J. 2004. *Encyclopedia of Caves and Karst Science*. New York: Taylor and Francis Books, Inc.
- Halliday, W.R. Pseudokarst in the 21st Century. *Journal of Cave and Karst*, 69(1), 103-113.

- Hamada J.I.; Yamanaka M.D.; Matsumoto J.; Fukao S.; Winarso P.A.; and Tien S. 2002. Spatial and Temporal Variations of the Rainy Season over Indonesia and Their Link to ENSO. *Journal of the Meteorological Society of Japan*, 80, 285–310.
- Handayani, L. 2019. Active Fault Zones of the 2006 Yogyakarta Earthquake Inferred from Tilt Derivative Analysis of Gravity Anomalies. *Riset Geologi dan Pertambangan*, 29(1), 1-11.
- Hartmann, A.; Goldscheider, N.; Wagener, T.; Lange, J. and Weller, M. 2014. Karst Water Resources in a Changing World: Review of Hydrological Modelling Approaches. *AGU Publications, Reviews of Geophysics*, 1 – 25.
- Hartono, G. 2000. Studi Gunung Api Tersier: Sebaran Pusat Erupsi dan Petrologi di Pegunungan Selatan Yogyakarta. *Tesis*. Bandung: Institut Teknologi Bandung.
- Hartono, G. dan Bronto, S. 2007. Asal usul pembentukan Gunung Batur di Daerah Wediombo, Gunungkidul, Yogyakarta. *Jurnal Geologi Indonesia*, 7(3): 143-158.
- Haryono, E. dan Adji, T.N. 2004. *Geomorfologi dan Hidrologi Karst*. Yogyakarta: Fakultas Geografi, Universitas Gadjah Mada.
- Haryono, E. and Day, M. 2004. Landform Differentiation within the Gunung Kidul Kegelkarst, Java, Indonesia. *Journal of Cave and Karst Studies*, 66(2): 62-69.
- Haryono, E., Nurcahyo, A.D., Gunawan, T., and Purwanto, H.P. 2005. Underground River Networks Modeling from Lineaments and Fracture Traces by Means of Remote Sensing and Geographic Information System. In Stevanovic, Z. and Milanovic, P. *Proceeding of International Conference 'Water Resources and Environmental Problems in Karst'*. Belgrade-Kotor.
- Haryono, E. 2008. Model Perkembangan Karst Berdasarkan Morfometri Jaringan Lembah di Karang Bolong, Gunung Sewu, Blambangan dan Rengel. *Disertasi*. Yogyakarta: Program Pascasarjana Fakultas Geografi, Universitas Gadjah Mada.
- Haryono, E.; Adji, T.N. and Widyastuti, M. 2009. Environmental Problems of *Telaga* (Doline Pond) in Gunungsewu Karst, Java Indonesia. dalam White,

- W.B. 2009. *Proceeding 15th International Congress of Speleology, Volume II*. Texas: UIS.
- Haryono, E. 2011. *Introduction to Gunungsewu Karst: Field Guide of Asian Trans-Disciplinary Karst Conference*. Yogyakarta: Karst Research Group, Faculty of Geography, Universitas Gadjah Mada.
- Haryono, E., Suryono, T., Harindito, G., Budisetiawan, J., Noviyani, P., Hadi, S., Mulantosi, Z., Setitit, Y., Subekti, Setiawan, P., Triyono, S., Fitriyanto, A., Sukanto, Umam, N., Putra, B.M. 2013. Laporan Investigasi Kecelakaan Luweng Serpeng 2, Dusun Serpeng, Desa Pacar Rejo, Kecamatan Semanu, Kabupaten Gunungkidul, DIY. *Laporan Penelitian*. Yogyakarta: Tim Investigasi Kecelakaan Luweng Serpeng 2.
- Haryono, E. 2015. Paleohidrografi dan Speleogenesis Gua Serpeng dan Sekitarnya. *Laporan Penelitian*. Yogyakarta: Fakultas Geografi, Universitas Gadjah Mada.
- Haryono, E.; Widartono, B.S.; Lukito, H. and Kusumayudha, S.B. 2016. A Comparison of Lineament and Fracture Trace Extraction from LANDSAT ETM+ Panchromatic Band and Panchromatic Aerial Photograph in Gunungsewu Karst Area, Java-Indonesia. *IOP Conference Series: Earth and Environmental Science*, 47: 1-10.
- Haryono, E. 2017. Speleogenesis Sistem Perguaan Kalisuci, Kecamatan Semanu, Kabupaten Gunungkidul. *Laporan Penelitian*. Yogyakarta: Fakultas Geografi Universitas Gadjah Mada.
- Haryono, E.; Barianto, D.H.; Cahyadi, A. 2017. *Petunjuk Kegiatan Lapangan Hidrogeologi Kawasan Karst Gunungsewu*. Yogyakarta: Perhimpunan Ahli Airtanah Indonesia.
- Haryono, E., Cahyadi, A., Nurrohman, M.A., Adzan, G., Nasution, L.A., Diah, H. dan Septianingrum, R.S. 2020. Dinamika Luweng Belimbing, Kawasan Karst Gunungsewu Pasca Siklon Tropis Cempaka Tahun 2017. *Jurnal Geografi*, 12(1), 39-45.
- Hastuti, M.S. 2015. Geokimia Airtanah di Kawasan Karst Gunungsewu. *Skripsi*. Yogyakarta: Fakultas Teknik, Universitas Gadjah Mada.

- Hattanji, T.; Ueda, M.; Song, W.; Ishii, N.; Hayakawa, Y.S.; Takaya, Y. and Matsukura, Y. 2014. Field and Laboratory Experiments on High Dissolution Rates of Limestone in Stream Flow. *Geomorphology*, 204: 485-492.
- Hem, J.D., 1970. *Study and Interpretation of the Chemical Characteristic of Natural Water*. Washington D.C.: United State Government Printing Office.
- Hidayat, R. dan Ando, K. 2014. Variabilitas Curah Hujan Indonesia dan Hubungannya dengan ENSO/IOD: Estimasi Menggunakan Data JRA-25/JCDAS. *Jurnal Agromet*, 28(1), 1 – 8.
- Hiscock, K.M. 2005. *Hydrogeology: Principles and Practice*. Oxford: Blackwell Publishing.
- Hoaghia, M. A., Moldovan, A., Kovacs, E., Mirea, I.C., Kenesz, M., Brad, T., Cadar, O., Micle, V., Levei, E.A., and Moldovan, O.T. (2021). Water Quality and Hydrogeochemical Characteristics of Some Karst Water Sources in Apuseni Mountains, Romania. *Water*, 13(6). <https://doi.org/10.3390/w13060857>
- Horton, R. E. 1932. Drainage basin characteristics. *Transactions of the American Geophysical Union*, 13: 350–361.
- Huang, F., Tang W., Wang J., Cao J. and Yin J. 2011. The Influence of Allogenic Water on Karst Carbon Sink: A Case Study in the Maocun Subterranean River in Guilin, China. *Carsologica Sinica*, (4): 417-421.
- Husein, S. 2007. Tinjauan Aspek Kegempaan Pegunungan Selatan. *Prosiding Seminar Potensi Geologi Pegunungan Selatan dalam Pengembangan Wilayah*. Yogyakarta: Fakultas Teknik, Universitas Gadjah Mada.
- Husein, S. dan Srijono. 2007. Tinjauan Geomorfologi Pegunungan Selatan DIY/Jawa Tengah: Telaah Peran Faktor Endogenik dan Eksogenik dalam Proses Pembentukan Pegunungan. *Prosiding Seminar Potensi Geologi Pegunungan Selatan dalam Pengembangan Wilayah*, 27-28 November 2007. Yogyakarta: Pusat Survei Geologi.
- Husein, S.; Sudarno, Ign. and Nugraha, A. 2007. Megascale Paleo-landslide at Parangtritis, as Deducted from Geological and Geophysical Data. *Proceeding Joint Convention Annual Conference and Exhibition 2007*. Denpasar: HAGI, IAGI, IATMI.

- Husein, S.; Sudarno, Ign.; Pramumijoyo, S. and Karnawati, D. 2010. Paleostress Analysis to Interpret the Landslide Mechanism: A Case Study in Parangtritis, Yogyakarta. *Journal of Southeast Asian Applied Geology*, 2(2): 104-109.
- Husein, S. dan Srijono. 2010. Peta Geomorfologi Daerah Istimewa Yogyakarta. *Prosiding Simposium Geologi Yogyakarta*. Yogyakarta: Ikatan Ahli Geologi Indonesia Pengurus Daerah (Pengda) Daerah Istimewa Yogyakarta.
- Jankowski, J. and Jacobson, G. 1990. Hydrochemical Processes in Groundwater Discharge Playas, Central Australia. *Hydrological Processes*, 4: 59-70.
- Jankowski, J. 2002. *Short Course Note Hydrochemistry*. New South Wales: UNSW Groundwater Center.
- Jarsjö, J. and Destouni, G. 2010. Degassing of Deep Groundwater in Fractures Rock Around Boreholes and Drift. *Subsurface Hydrology*, 36(9): 2477-2492.
- Jasechko, S.; Kirchner, J.W.; Welker, J.M. and McDonnell, J.J. 2016. Substantial Proportion of Global Streamflow Less Than Three Months Old. *Nature Geoscience*, 10: 424-429.
- Jiang, Y.; Yuan, D.; Zhang, C.; Zhang, G. and He, R. 2008. Impact of Land Use Change on Groundwater Quality in A Typical Karst Watershed of Southwest China. *Hydrogeology Journal*, 16(4): 727-735.
- Jennings, J.N. 1972. The Blue Waterholes, Coleman Plain, N.S.W. the Problem of Karst Denudation Rate Determination. *Transactions of the Cave Research Group of Great Britain*, 14: 109-117.
- Jennings, J.N. 1985. *Karst Geomorphology*. Oxford: Basil Blackwell.
- Joji, V.S., Nair, A.S.K. and Baiju, K.V. 2013. Drainage Basin Delineation and Quantitative Analysis of Panamaram Watershed of Kabani River Basin, Kerala Using Remote Sensing and GIS. *Journal Geological Society of India*, 82: 1-11.
- Jones, W.K. and White, W.B. 2012. Karst. dalam White, W.B. and Culver, D.C. (eds). 2012. *Encyclopedia of Caves, Second Edition*. Amsterdam: Elsevier.

- Kabite, G. and Gessesse, B. 2018. Hydro-geomorphological Characterization of Dhidhessa River Basin, Ethiopia. *International Soil and Water Conservation Research*, 6: 175-183.
- Karimi, H.; Raeisi, E. And Zare, M. 2003. Hydrodynamic Behavior of the Gilan Karst Spring. West of Zagros, Iran. *BCRA Cave and Karst Science*, 30(1): 15-22.
- Klimchouk, A. and Ford, D.C. 2000. Types of Karst and Evolution of Hydrogeologic Settings. In Klimchouk, A.; Ford, D.C.; Palmer, A.N. and Dreybordt, W. (eds.). 2000. *Speleogenesis: Evolution of Karst Aquifers*. Huntsville: National Speleological Society.
- Klimchouk, A. 2015. The Karst Paradigm: Changes, Trends and Perspectives. *Acta Carsologica*, 44(3): 289-313.
- Kresic, N. 2013. *Water in Karst: Management, Vulnerability and Restoration*. New York: McGraw Hill.
- Kuhn, W.L.; Solemslie, B.W.; Hihn, J.Y. and Dahlhaug, O.G. 2023. Evaluating Degassing in a River to Create a Baseline for Comparison to Technical Degassing Methods. *Journal of Physics: Conference Series*, 2629, 012032. <https://doi.org/10.1088/1742-6596/2629/1/012032>
- Kumar, A.; Tripathi, V.K.; Sachan, P.; Rakshit, A.; Singh, R.M.; Shukla, S.K.; Pandey, R.; Vishwakarma, A. and Panda. K.C. 2022. Sources of Ions in the River Ecosystem. dalam Madhav, S.; Kanhaiya, S.; Srivastav, A.L.; Singh, V.B. and Singh, P. 2022. *Ecological Significance of River Ecosystems: Challenges and Management Strategies*. Elsevier. <https://www.sciencedirect.com/book/9780323850452/ecological-significance-of-river-ecosystems#book-description>
- Kusky, T. 2010. *Encyclopedia of Earth and Space Science*. New York: Facts on File, Inc.
- Kusumayudha, S.B. and Santosa, A. 1998. Undergrounderiver of Gunungsewu Based on Gravity Anomaly and the Geologic Structure Pattern. *Proceeding of Pekan Ilmiah Tahunan Himpunan Ahli Geofisika Indonesia XXIII*. Himpunan Ahli Geofisika Indonesia: Bandung.

- Kusumayudha, S.B. 2000. Kuantifikasi Sistem Hidrogeologi dan Potensi Airtanah Daerah Gunungsewu, Pegunungan Selatan, DIY (Didekati dengan Analisis Geometri Fraktal). *Disertasi*. Bandung: Institut Teknologi Bandung.
- Kusumayudha, S.B. 2005. *Hidrogeologi Karst dan Geometri Fraktal di Daerah Gunungsewu*. Yogyakarta: Adicita.
- Kusumayudha, S.B. 2009. Detecting Springs in the Coastal Area of the Gunungsewu Karst Terrain, Yogyakarta Special Province, Indonesia using Fractal geometry Analysis. *Majalah Iptek*, 20(4): 169 – 176.
- Kusumayudha, S.B.; Setiawan, J.; Ciptahening, A.N. and Septianta, P.D. 2015. Geomorphologic Model of Gunungsewu Karst, Gunung Kidul Regency, Yogyakarta Special Territory, Indonesia: The Role of Lithologic Variation and Geologic Structure. *Journal of Geological Resource and Engineering*, 1: 1-7.
- Langelier, W.F. 1936. The Analytical Control of Anti-corrosion Water Treatment. *Journal of American Waterworks Association*, 28: 1500-1521.
- LaMoreaux, P.E. 1991. Hystory of Karst Hydrogeological Studies. *Proceedings of the International Conference on Environmental Changes in Karst Areas*. Universita di Padova, Italia.
- Lauritzen, S.E. 1990. Allogenic and Autogenic Denudation in Carbonate Karst by the Multiple Basin Method: an Exampel from Svartisen, North Norway. *Earth Surface Processes and Landforms*, 15: 157-167.
- Leibundgut, C.; Gunn, J. dan Dassargues, A. 1998. *Karst Hydrology*. Wallingford, United Kingdom: International Association of Hydrological Science Press.
- Leibundgut, C.; Maloszewski, P. dan Külls, C. 2009. *Tracer Hydrology*. New York: Wiley-Blackwell.
- Lestari, Y., Haryono, E. dan Fatchurohman, H. 2014. Identifikasi Tingkat Kekritisan Daerah Tangkapan Air sebagai Penentuan Arahana Pengelolaan: Studi Kasus Daerah Tangkapan Mataair Beton, Ponjong, Gunungkidul. dalam Cahyadi, A., Prabawa, B.A., Tivianton, T.A. dan Nugraha, H. (eds.). *Ekologi Lingkungan Kawasan Karst Indonesia: Menjaga Asa Kelestarian Kawasan Karst Indonesia, Second Edition*. Yogyakarta: Deepublish.

- Li, Q.; Wu, P.; Wang, S.; Huang, J.; Lu, W.; Tan, D.; Gu, S. and Fan, B. 2023. The Non-coevolution of DIC and Alkalinity and the CO₂ Degassing in a Karst River Affected by Acid Mine Drainage in Southwest, China. *Science of the Environment*, 900, 165856. <https://doi.org/10.j.scitotenv.2023.165856>
- Liu, Z.; Groves, C.; Yuan, D. and Meiman, J. 2004. South China Karst Aquifer Strom-Scale Hydrochemistry. *Groundwater*, 4(4): 491-499.
- Liu, Z.; Li, Q.; Sun, H. and Wang, J. 2007. Seasonal, Diurnal and Storm-scale Hydrochemical Variations of Typical Epikarst Springs in Subtropical Karst Area of SW China: Soil CO₂ and Dillution Effects. *Journal of Hydrology*, 337: 207-223.
- MacDonald and Partners. 1984. Greater Yogyakarta Groundwater Study. *Laporan Penelitian*. Direktorat Jenderal Pengembangan Sumberdaya Air, Kementerian Pekerjaan Umum, Republik Indonesia.
- Malik, P. 2007. Assessment of Regional Karstification Degree and Groundwater Sensitivity to Pollution Using Hydrograph Analysis in the Velka Fatra Mts. Slovakia. *Environmental Geology*, (51): 707–711.
- Malik, P. and Vojtkova, S. 2012. Use of Recession-Curve Analysis for Estimation of Karstification Degree and Its Application in Assessing Overflow/Underflow Conditions in Closely Spaced Karstic Springs. *Environmental Earth Sciences Journal*, 65 (8): 2245-2257.
- Malik, P. 2015. Evaluating Discharge Regimes of Karst Aquifer. In Stevanović, Z. (Ed.), *Karst Aquifers–Characterization and Engineering, Professional Practice in Earth Sciences* (pp. 205–249). Switzerland: Springer International Publishing.
- Manakos, A.; Ntona, M.M.; Kazakis, N. and Chalikakis, K. 2019. Enhanced Characterization of the Krania-Elassona Structure and Functioning Allogenic Karst Aquifer in Central Greece. *Geoscience*, 9(1): 15. <https://doi.org/10.3390/geosciences9010015>
- Marandi, A. and Shand, P. 2018. Groundwater Chemistry and The Gibbs Diagram. *Applied Geochemistry*, 97: 209-212.
- Milanovic, P.T. 1981. *Karst Hydrogeology*. Colorado, USA: Water Resources Publication.

- Milanovic, P.T. 2004. *Water Resources Engineering in Karst*. Boca Raton: CRC Press.
- Minvielle, S.; Lastennet, R.; Denis, A. and Peyraube, N. 2015. Characterization of Karst Systems Using SIc – P_{CO2} Method Coupled with PCA and Frequency Distribution Analysis: Application to Karst System in the Vaucluse County (Southern France). *Environmental Earth Sciences*, 74: 7593-7604.
- Monroe, W.H. 1972. *A Glossary of Karst Terminology*. Washington D.C.: Department of The Interior, United States of America.
- Nag, S.K. 1998. Morphometric Analysis using Remote Sensing Techniques in the Chaka Sub Basin, Purulia District, West Bengal. *Journal of Indian Society of Remote Sensing*, 26(1), 69–76.
- Naufal, M. 2019. Karakteristik Perkembangan Akuifer Karst Gunungsewu Melalui Analisis Master Recesson Curve (MRC). *Skripsi*. Yogyakarta: Fakultas Geografi, Universitas Gadjah Mada.
- Nestmann, F.; Oberle, P.; Ikhwan, M. and Klingel, P. 2010. Adaptive Water Resources Management under Extreme Climatic and Hydrogeological Conditions: Interdisciplinary Research Activities in Karst Region of South East Asia. In Steusloff (ed.) *Conference Proceedings of Integrated Water Resources Management Karlsruhe 2010*. Karlsruhe: KIT Scientific Publishing.
- Netopil, R. 1971. The Classification of Water Springs on the Basis of the Variability of Yield. *Studia Geographica*, 22: 145-150.
- Notosiswoyo, S. and Kusumayudha, S.B. 1999. Hydrogeology of the Gunungsewu Karstic Area, Central Java, Indonesia: A Conceptual Model. *Geological Society of Malaysia Bulletin*, 45: 551-558.
- Nurjanah, Y. dan Setianto, A. 2016. Pemetaan Kerawanan Gerakan Massa dengan metode Frequency Ration Daerah Kecamatan Kretek, Pundong dan Purwosari, Kabupaten bantul dan Kabupaten Gunungkidul, Daerah Istimewa Yogyakarta. *Laporan Penelitian*. Yogyakarta: Departemen Teknik Geologi, Fakultas Teknik, Universitas Gadjah Mada.
<http://mitgeo.ft.ugm.ac.id/2016/10/26/pemetaan-kerawanan-gerakan-massa-dengan-metode-frequency-ratio-daerah-kecamatan-kretek-pundong->

[dan-purwosari-kabupaten-bantul-dan-kabupaten-gunung-kidul-daerah-istimewa-yogyakarta/](#)

- Nurteisa, Y.T.; Cahyadi, A.; Fatchurohman, H. dan Dwiatmaja, E. 2018. Tanggapan terhadap Amblesan Tanah di Kawasan Karst Kabupaten Gunungkidul. *Laporan Penelitian*. Yogyakarta: PT Mitra Geotama Indonesia. <https://www.mitrageotama.com/tanggapan-amblesan-tanah-di-kawasankarst-kabupaten-gunungkidul>
- Palmer, A.N. 1975. The Origin of Maze Caves. *National Speleology Society Bulletin*, 37: 56 – 76.
- Palmer, A.N. 1984. Geomorphic Interpretation of Karst Features. In LaFleur, R.G. 1984. *Groundwater as a Geomorphic Agent*. London: Allen and Unwin.
- Palmer, A.N. 2000. Digital modelling of Individual Solution conduits. In Klimchouk, A.; Ford, D.; Palmer, A.N. and Dreybordt, W. (eds). 2000. *Speleogenesis: Evolution of Karst Aquifers*. Huntsville, Alabama: National Speleology Society.
- Palmer, A.N. 2001. Dynamics of Cave Development by Allogenic Water. *Acta Carsologica*, 30(2): 13-32.
- Palmer, A.N. 2005. Passage Growth and Development. In Culver, D.C. and White, W.B. (Eds). 2005. *Encyclopedia of Caves*. Amsterdam: Elsevier Academic Press.
- Palmer, A.N. 2007. *Cave Geology*. Dayton, Ohio: Caves Books.
- Pannekoek, A.J. 1949. *Outline of The Geomorphology of Java*. Leiden: EJ Brill.
- Pères, E.S.; Pidal, I.M. and Rosales, R.S. 2013. Interaction Between Karstic Aquifers and Allogenic Rivers: The Aquifer of The National Park of The Ephemeral River Lobos Canyon (Spain). *Natural Science*, 5(2): 296-312.
- Pitty, A.F. 1968. The Scale and Significance of Solutional Loss from the Limestone Tract of the Southern Pennines. *Proceedings of the Geologist's Association*, 79(2): 153-157.
- Pivetta, T.; Carla, B.; Gabrovsek, F.; Gabriel, G. and Meurers, B. 2022. Hydrodynamics of an Allogenic Karstic System from Coupled Gravimetric and Hydrologic Observations. *EGU General Assembly 2022*. <https://doi.org/10.5194/egusphere-egu22-11539>

- Plan, L. 2005. Factors Controlling Carbonate Dissolution Rates Quantified in a Field Test in Austrian Alps. *Geomorphology*, 68(3): 153-177.
- Poehls, D.J. and Smith, G.J. 2009. *Encyclopedic Dictionary of Hydrogeology*. Amsterdam: Academic Press.
- Poucher, S. and Copeland, R. 2006. *Speleological and Karst Glossary of Florida and the Caribbean*. Florida: University Press of Florida.
- Pracny, P.; Faimon, J. and Vsiansky, D. 2017. Evolution of Mg/Ca Ratios During Limestone Dissolution Under Epikarstic Conditions. *Aquatic Geochemistry*, 23: 119-139.
- Prabawa, B.A. 2017. Karakteristik Iklim Mikro Gua Kalisuci dan banjir Sub DAS Jirak untuk Pengelolaan Wisata Berbasis Daya Dukung Gua. *Tesis*. Yogyakarta: Magister Pengelolaan Pesisir dan Daerah Aliran Sungai, Fakultas Geografi, Universitas Gadjah Mada.
- Pratama, A.D. 2019. Kajian Spasio-temporal Hidrodinamika dan Hidrogeokimia untuk Karakterisasi Akuifer Karst Jonggrangan, Kabupaten Kulon Progo – Purworejo (Studi Kasus Sungai Bawah Tanah (SBT) Gua Anjani, Kiskendo dan Mataair Mudal). *Skripsi*. Yogyakarta: Fakultas Geografi, Universitas Gadjah Mada.
- Pratiwi, E.S. 2013. Kelemahan dan Kendala Penerapan Metode EPIK dalam Menentukan Zonasi Kerentanan Airtanah Intrinsik di Kawasan Karst Gunungsewu, Indonesia. dalam Sudarmadji, Haryono, E., Adji, T.N., Widyastuti, M., Harini, R., Nurjani, E., Cahyadi, A. dan Nugraha, H. (eds). *Ekologi Lingkungan Kawasan Karst Indonesia: Menjaga Asa Kelestarian Kawasan Karst Indonesia*. Yogyakarta: Deepublish.
- Priambada, A.P. 2021. Studi Peruntan (*Water Tracing*) pada Beberapa Aliran Sungai Bawah Tanah di Kawasan Karst Karangbolong Bagian Barat, Kabupaten Kebumen, Jawa Tengah. *Skripsi*. Yogyakarta: Fakultas Geografi, Universitas Gadjah Mada.
- Prihatmoko, S.; Hendratno, A. and Harijoko, A. 2005. Mineralization and Alteration Systems in Pegunungan Seribu, Gunungkidul and Wonogiri. *Proceeding of JCS HAGI XXX-IAGI XXXIV-PERHAPI XIV*. Surabaya, HAGI-IAGI-PERHAPI.

- Pu, J.; Yuan, D.; Zhao, H. and Shen, L. 2014. Hydrochemical and PCO₂ Variations of Cave Stream in a Subtropical Karst Area, Chongqing, SW China: Piston Effects, Dilution Effects, Soil CO₂ and Buffer Effects. *Environmental Earth Sciences*, 71: 4039 – 4049.
- Pu, J.; Wang, A.; Yin, J.; Shen, L. and Yuan, D. 2018. PCO₂ Cave Air and Cave Water in a Subtropical Cave, SW China. *Carbonate and Evaporites*, 33: 477-487.
- Pudjijanto. 2000. Kontrol Struktur Geologi Terhadap Pembentukan Topografi Kars dan Kontribusinya pada Penataan Lingkungan: Studi Kasus Daerah Pantai Baron dan Rejosari, Kabupaten Gunung Kidul, Yogyakarta. *Tesis*. Yogyakarta: Magister Teknik, Program Studi Teknik Geologi, Jurusan Teknik Geologi, Fakultas Teknik, Universitas Gadjah Mada.
- Rahmawati, N. 2019. Karakterisasi Akuifer Karst atas Dasar Sifat Aliran dan Respon Debit Mataair Guntur, Girijati, Purwosari, Gunungkidul, DIY. *Skripsi*. Yogyakarta: Fakultas Geografi, Universitas Gadjah Mada.
- Ramdhani, M.A.A. 2014. Studi Neraca Air dalam Menentukan Daerah Tangkapan Air (DTA) Mataair Karst (Studi Kasus Mataair Ngeleng, Giritirto, Purwosari, Gunungkidul). *Skripsi*. Faculty of Geography, Universitas Gadjah Mada.
- Ramadhan, F. 2019. Hubungan Karakteristik Aliran dengan Hidrogeokimia Mataair Guntur di Kawasan Karst Gunungsewu. *Skripsi*. Yogyakarta: Fakultas Geografi, Universitas Gadjah Mada.
- Ramage, C. 1968. Role of A Tropical “Marine Continent” in The Atmospheric Circulation. *Monthly Weather Review*, 96(6), 365–370.
- Rashed, K.A. 2012. Assessing Degree of Karstification: A New Method of Classifying Karst Aquifers. *Sixteenth International Water Technology Conference, Istanbul, April 12–15*. pp. 121–129.
- Ravbar, N. 2007. *The Protection of Karst Water*. Postojna: ZRC Publishing.
- Reddy, G.P.O., Maji, A.K. and Gajbhiye, K.S. 2004. Drainage Morphometry and Its Influence on Landform Characteristics in Basaltic Terrain, Central India - A Remote Sensing and GIS Approach. *International Journal of Applied Earth Observation and Geoinformation*, 6: 1-16.

- Ren, C. and Zhang, Q. 2020. Groundwater Chemical Characteristics and Controlling Factors in a Region of Northern China with Intensive Human Activity. *International Journal of Environmental Research and Public Health*, 17, 9126, <https://doi.org/10.3390/ijerph17239126>
- Richards, K. and Clifford, N.J. 2014. The Nature of Explanation in Geomorphology. In Gregory, K.J. and Goudie, A.S (eds). 2011. *The SAGE Handbook of Geomorphology*. London: SAGE Publications Ltd.
- Riyanto, I.A.; Cahyadi, A.; Adji, T.N.; Haryono, E.; Widyastuti, M.; Agniy, R.F.; Fathoni, W.A.; Rahmawati, N. dan Baskoro, H. 2018. Analisis Konektivitas dan karakterisasi Pelorongan dengan Uji Peruntutan pada Mataair Epikarst Sub-sistem Panggang, Kawasan Karst Gunungsewu. *Proceeding of The 3rd PIT PAAI*. Jakarta, 07 – 08 November 2018.
- Riyanto, I.A.; Pratama, A.R.; Bachtiar, H.; Fauzi, N.A.; Widyastuti, M.; Widiyastuti, A.N. and Rahmawati, N. 2020. Local Wisdom and Karst Spring Management in Playen District, Gunungkidul Regency, Indonesia. *Geographica: Science and Education Journal*, 1(2): 62-70.
- Samodra, H. 2007. Korelasi Antara Morfogenesis dan Perkembangan Lembah Sadeng Dengan Pola Arah Struktur Geologi Akibat Tektonik di Kawasan Kars Gunung Sewu, Kabupaten Gunungkidul, Yogyakarta. *Tesis*. Bandung: Fakultas Teknik Geologi, Universitas Padjadjaran.
- Schulz, E.F. 1976. *Problems in Applied Hydrology*. Colorado, USA: Water Resources Publication.
- Schumm, S.A. 1956. Evolution of Drainage Systems and Slopes in Badlands at Pert Amboy, New Jersey. *Bulletin of The Geological Society of America*, 57: 597-646.
- Schumm, S.A. and Hadley, R.F. 1957. Arroyos and the Semiarid Cycle of Erosion. *American Journal of Science*, 255: 161-174.
- Schumm, S.A. and Lichty, R.W. 1965. Time, Space, and Causality in Geomorphology. *American Journal of Science*, 263: 110- 119.
- Septianingrum, R.S. 2020. Analisis Karakteristik Aliran Sungai Alogenik Serpeng dan Sumurup dengan Bantuan Perangkat Lunak Sistem Informasi Geografis

di Ledok Wonosari, Gunungkidul. *Skripsi*. Yogyakarta: Fakultas Geografi Universitas Gadjah Mada.

- Setiawan, T.; Isnaini, S.; Asghaf, N.M.A. dan Effendi, I. 2019. Karakteristik Interaksi Air – CO₂ – CaCO₃ dan Analisis Sistem Air Tanah Karst Musim Kemarau di Kabupaten Gunungkidul, Daerah Istimewa Yogyakarta. *Jurnal Riset Geologi dan Pertambangan*, 29(2): 171-183.
- Shan, X.; Liu, P.; Zhang, L.; Qin, X.; Cao, J.; Yu, D.; Yao, X. And liu, W. 2019. Hydrochemical Characteristics and Karst Carbon Sink Estimation under the Influence of Allogenic Water. *Carbonates and Evaporites*, 34: 1855-1963.
- Shi, Z.; Hu, S.; Li, R and Lu, Y. 2023. Dissolution and Precipitation Processes. In Goss, M.J. and Oliver, M. 2023. *Encyclopedia of Soils in the Environment, Second Edition*. Amsterdam, Netherlands: Elsevier.
- Sidauruk, P.; Pujiinditanti, E.R. and Satrio. 2015. Subsurface Flow and Surface Water Interactions Quantification in Gunung Kidul Karst Area using Hydro-chemical and Stabel Isotopes Data Variations. *Jurnal Ilmiah Aplikasi Isotop dan Radiasi*, 11(1): 65-72.
- Sidauruk, P.; Satrio; Pujiindiyati, E.R. and Aliyanta, B. 2017. Upstream Hydraulic Interconnection Study of Gunungkidul Karst Area Underground Rivers. *Eksplorium*, 38(2): 81-88.
- Sidauruk, P.; Prasetyo, R. and Satrio. 2018. Hydraulic Interconnections Study of Seropan-Ngreneng-Bribin Underground Rivers in Gunung Kidul Karst Area Using Tracer Technique. *International Journal of Water*, 12(1): 39-53.
- Singh, P., Gupta, A. and Singh, M. 2014. Hydrological Inferences from Watershed Analysis for Water Resource Management using Remote Sensing and GIS Techniques. *The Egyptian Journal of Remote Sensing and Space Sciences*, 17: 111–121.
- Smith, D.I. 1972. The Solution of Limestone in An Arctic Environment. In Sugden (Ed). 1972. *Polar Gemorphology*. London: Institute of British Geographers.
- Soedomo, M. 1999. *Pencemaran Udara*. Bandung: ITB Press.

- Srijono dan Untung, S. 1981. Perpetaan Geomorfologi Metode ITC – dengan Contoh Studi Daerah Parangtritis. *Prosiding Pekan Ilmiah Tahunan X Ikatan Ahli Geologi Indonesia (IAGI)*. Bandung: Badan Geologi.
- Strahler, A. N. 1957. Quantitative Analyses of Watershed Geomorphology. *Transactions American Geophysical Union Journal*, 38 (6): 913–920.
- Stanley, N.D.; Thomson, G.M.; Bentley, H.W. and Styles, G. 1980. Groundwater Tracer: A Short Review. *Groundwater Journal*, 18(1): 14-21.
- Sudarmadji; Suprayogi, S. dan Setiadi. 2012. Pengelolaan Mataair Berbasis Masyarakat di Kabupaten Gunungkidul. *Laporan Penelitian*. Yogyakarta: Sekolah Pascasarjana, Universitas Gadjah Mada.
- Sudarno, I. 1997. Kendala Tektonik di Pegunungan Selatan. *Tesis*. Bandung: Magister Teknik, Program Studi Geologi, Institut Teknologi Bandung.
- Sukristiyanti, S.; Maria, R. and Lestiana, H. 2018. Watershed-based Morphometric Analysis: A Review. *IOP Conference Series: Earth and Environmental Science*, 118, 012028.
- Summerfield, M.A. 1991. *Global Geomorphology*. John Wiley and Sons: New York.
- Suprayogi, S.; Cahyadi, A.; Tivianton, T.A.; Riyadi, S.; Fajri, A.A.; Sasongko, T.R. and Arida, V. 2014. Analisis Dampak Perubahan Iklim Terhadap Curah Hujan Tahunan Menggunakan Skenario Iklim HadCM3 dengan Skenario Emisi A2 dan B2 Analisis di DAS Progo Hulu. *Prosiding Pekan Ilmiah Tahunan Ikatan Geograf Indonesia Tahun 2014*. Yogyakarta: Jurusan Pendidikan Geografi, Universitas Negeri Yogyakarta.
- Sunarto; Cahyadi, A.; Marfai, M.A.; Murti, S.H.; Fatchurohman, H.; Malawani, M.N. 2017. Karakteristik Akuifer Wilayah Kepesisiran Parangtritis, Kabupaten Bantul. *Prosiding Seminar Nasional Geografi II*. Yogyakarta: Badan Penerbit Fakultas Geografi Universitas Gadjah Mada.
- Surono, B.T.; Sudarno, I. dan Wiryosujono, S. 1992. *Peta Geologi Lembar Surakarta-Giritontro, skala 1:100,000*. Bandung: Badan Geologi.
- Surono. 2008a. Sedimentasi Formasi Semilir di Desa Sendang, Wuryantoro, Wonogiri, Jawa Tengah. *Jurnal Sumber Daya Geologi*, 28(1): 29-41.

- Surono 2008b. Stratigrafi dan Sedimentasi Formasi Kebo dan Formasi Butak di Pegunungan Selatan, Jawa Bagian Selatan. *Jurnal Geologi Indonesia*, 3(4): 183-193.
- Surono. 2009. Litostratigrafi Pegunungan Selatan Bagian Timur Daerah Istimewa Yogyakarta dan Jawa Tengah. *Jurnal Sumber Daya Geologi*, 19(3): 209-221.
- Suryono, T. 2006. Pengelolaan Sumber Air Bawah Tanah Sungai Bribin. *Gunung Sewu Indonesian Cave and Karst Journal*, 2(1): 37-52.
- Sweeting, M.M. 1966. The Weathering of Limestones, with Particular Reference to the Carboniferous Limestones of Northern England. In Dury, G.H. (Ed). 1966. *Essays in Geomorphology*. London: Heinemann.
- Sweeting, M.M. 1972. *Karst Landforms*. London: Macmillan.
- Sweeting, M.M. 1980. Karst and Climate: A Review. *Zeitschrift für Geomorphologie N.F., Supplementbande 36*: 203–216.
- Tjia, H.D. 2013. Morphostructural Development of Gunungsewu Karst, Jawa Island. *Indonesian Journal of Geology*, 8(2): 75-88.
- Todd, D.K. dan Mays, L.W. 2004. *Groundwater Hydrology, Third Edition*. New York: John Wiley and Sons.
- Toha, B. and Barianto, D.H. 2015. *Geological Excursion Guide Book of Petroleum System and Carbonate Reservoir*. Yogyakarta: Department of Geological Engineering, Universitas Gadjah Mada.
- Toran, L. and Roman, E. 2006. CO₂ Outgassing in a Combined Fracture and Conduit Karst Aquifer near Lititz Spring, Pennsylvania. In Hormon, R.S. and Wicks, C. (eds). 2006. *Perspectives on Karst Geomorphology, Hydrology and Geochemistry- A Tribute Volume to Derek C. Ford and William B. White*. Geological Society of America.
- Trudgill, S.T. 1985. *Limestone Geomorphology*. London: Longman.
- Ulloa-Cedamanos, J.; Probst, J.L.; Binet, S.; Camboulive, T.; Payre-Suc, V.; Pautot, C.; Bakalowicz, M.; Beranger, S. and Probst, A. 2020. A Forty-Year Karstic Critical Zone Survey (Baget Chactment, Pyreness-France): Lithologic and Hydroclimatic Controls on Seasonal and Inter-Annual Variations of Stream

- Water Chemical Composition, P_{CO_2} , and Carbonate Equilibrium. *Water*, 12, 1227. <https://doi.org/10.3390/w12051227>
- Urushibara-Yoshino, K. and Yoshino, M. 1997. Palaeoenvironmental Change in Java Island and Its Surrounding Areas. *Journal of Quaternary Science*, 12(5): 435–442.
- van Bemmelen, R.W. 1949. *The Geology of Indonesia, Vol. 1A: General Geology*. The Hague, Netherland: Martinus Nijhoff.
- van Geldern, R.; Shulte, P.; Mader, M.; Baier, A. and Barth, J.A.C. 2015. Spatial and Temporal Variations of P_{CO_2} Dissolved Inorganic Carbon and Stable Isotopes along a Temperate Karst Watercourse. *Hydrological Processes*, 29(15), 3423-3440.
- Vengosh, A.; Spivack, A.J.; Artzi, Y. and Ayalon, A. 1999. Geochemical and Boron, Strontium, and Oxygen Isotopic Constraints on the Origin of the Salinity in Groundwater from the Mediterranean Coast of Israel. *Water Resources Research*, 35(6): 1877-1894.
- Veni, G. 2005. Passages. In Culver, D.C. and White, W.B. (Eds). 2005. *Encyclopedia of Caves*. Amsterdam: Elsevier Academic Press.
- Veress, M. 2000. *Covered Karst Evolution in the Northern Bakony Mountains, West Hungary*. Zirc, Hungary: Bakonyi Természettudományi Múzeum.
- Veress, M., Németh, I., Unger, Z., Kéri, P. 2013. Predicting Potential Sites of Covered Karstification. *Journal of Geography and Geology*, 5(1): 1–18.
- Veress, M. 2016. *Covered Karst*. Dordrecht: Springer Science+Business Media.
- Verstappen, H.T. 1969. The State of Karst Research in Indonesia. In Stelcl, O. (ed.). 1969. *Problems of the Karst Research*. Brno: Ceskoslovenska Akademia Sciencias.
- Vesper, D.J. and White, W.B. 2004. Strom Pulse Chemograph of Saturation Index and Carbondioxide Pressure: Implication for ShiftingRecharge Resources During Storm Events in the Karst Aquifer at Fort Chambel, Kentucky/Tennessee, USA. *Hydrogeology Journal*, 12: 135-143.
- Vittala, S.S., Govindaiah, S. and Gowda, H.H. 2004. Morphometric Analysis of Sub-Watersheds in the Pavagada Area of Tumkur District, South India

- using Remote Sensing and GIS Techniques. *Journal of the Indian Society of Remote Sensing*, 32(4): 351-362.
- Waele, J.D. and Gutierrez, F. 2022. *Karst Hydrogeology, Geomorphology and Caves*. West Sussex: Wiley Blackwell.
- Waltham, A.C.; Smart, P.L.; Friederich, H.; Eavis, A.J. and Atkinson, T.C. 1983. The Caves of Gunung Sewu, Java. *Cave Science*, 10(2): 55–96.
- Whitaker, F.F. and Smart, P.L. 2007. Geochemistry Meteoric Diagenesis in Carbonate Islands of the Northern Bahamas: 2. Geochemical Modelling and Budgetting of Diagenesis. *Hydrological Processes*, 21(7): 967-982.
- White, W.B. 1988. *Geomorphology and Hydrology of Karst Terrains*. New York: Oxford University Press.
- White, W.B. 2002. Karst hydrology: Recent Developments and Open Questions. *Engineering Geology*, 65: 85–105.
- White, W.B. 2004. Thermodynamic Equilibrium, Kinetics, Activation Barriers and Reaction Mechanisms for Chemical Reactions in Karst Terrains. *Environmental Geology*, 30: 46-58.
- White, W.B. 2006. Fifty Years of Karst Hydrology and Hydrogeology: 1953-2003. In Hormon, R.S. and Wicks, C. (eds). 2006. *Perspectives on Karst Geomorphology, Hydrology and Geochemistry- A Tribute Volume to Derek C. Ford and William B. White*. Geological Society of America.
- Widijono, B.S. dan Setyanta, B. 2007. Anomali Gaya Berat, Kegempaan Serta Kelurusan Struktur Geologi Daerah Jogjakarta dan Sekitarnya. *Jurnal Sumber Daya Geologi*, 17(2): 74-90.
- Widyastuti, H. 2007. Pengaruh Penambangan Batugamping Terhadap Air Tanah Desa Bedoyo, Kecamatan Ponjong, Kabupaten Gunungkidul Daerah Istimewa Yogyakarta. *Tesis*. Yogyakarta: Sekolah Pascasarjana, Universitas Gadjah Mada.
- Widyastuti, M. 2014. Kajian Kerentanan Airtanah Terhadap Pencemaran di Daerah Karst Gunungsewu (studi di Daerah Aliran Sungai Bawah Tanah Bribin Kabupaten Gunungkidul dan Wonogiri). *Disertasi*. Yogyakarta: Program Pascasarjana Fakultas Geografi, Universitas Gadjah Mada.

- Widyastuti, M.; Riyanto, I.A.; Naufal, M.; Ramadhan, F. and Rahmawati, N. 2019. Catchment Area Analysis of Guntur Karst Spring Gunung Kidul Regency, Java, Indonesia. *IOP Conrence Series: Earth and Environmental Science*, 256: 1-11.
- Williams, P.W. 1963. An Initial Estimate of the Speed of Limestone Solution in County Clare. *Irish Geography*, 4: 432-441.
- Williams, P.W. 1993. Environmental Change and Human Impact on Karst Terrains: An Introduction. *Catena Supplement*, 25: 1 – 19.
- Williams, P.W. and Dowling, R.K. 1979. Solution of Marble in the Karst of the Pikikiruna Range, Northwest Nelson, New Zealand. *Earth Surface Processes*, 4: 15-36.
- Wu, G.; Zhang, J.; Li, Y.; Liu, Y.; Ren, H, and Yang, M. 2024. Revealing Temporal Variation of Baseflow and Its Underlying Casuses in the Source Region of the Yangtze River (China). *Hydrology Research*, 55(3): 392-411.
- Xiaojing, S.; Liu, P.; Zhang, L.; Qin, X.; Cao, J.; Yu, D.; Yao, X. And Liu, W. 2019. Hydrochemical Characteristics and Karst Carbon Sink Estimation under the Influence of Allogenic Water. *Carbonates and Evaporites*, 34(4): 1855-1863.
- Xu, Y.; Jin, Z.; Gou, L.F.; Bouchez, J.; Jin, C.; Li, C.; Liu-Lu, B. and Deng, L. 2023. Cation Exchange Controls Riverine Magnesium Isotopes in Extremely-High-Erosion Catchments. *Geochimica et Cosmochimica Acta*, 363: 1-14.
- Younger, P.L. 2007. *Groundwater in The Environment*. Oxford, United Kindom: Blackwell Publishing.
- Yuan, D. 1997. A Global Perspective of Lunan Stone Forest: Stone Forest a Treasure of Natural Heritage. *Proceedings of International Symposium for Lunan Shilin to Apply for World Natural Heritage Status*, 68-70.
- Yuan, D. 2001. *Guidebook for Ecosystems of Semiarid Karst in North China and Subtropical Karst in Southwest China*. IGCP Report No. 448. Guilin, Karst Dynamic Laboratory.

Zai-Hua, L. 2000. Field Experimental Research on the Corrosion Kinetics of Limestone and Dolomite in Allogenic Water - Case From Yaoshan Mt., Guilin. *Carsologica Sinica*, (1): 1-4.

Zhang, Z. 1980. Karst Types in China. *GeoJournal*, 4(6):541–570.

Zhang, B.; Zhao, D.; Zhou, P.; Qu, S.; Liao, F. and Wang, G. 2020. Hydrochemical Characteristics of Groundwater and Dominant Water–Rock Interactions in the Delingha Area, Qaidam Basin, Northwest China. *Water*, 12, 836.

<https://doi.org/10.3390/w12030836>