

## DAFTAR PUSTAKA

- A. Ariansyah, K. Yuliati, and S. Hanggita. R. J. (2012). Analisis Kandungan Logam Berat (Pb, Hg, Cu dan As) pada Kerupuk Kemplang di Desa Tebing Gerinting Utara, Kecamatan Indralaya Selatan, Kabupaten Ogan Ilir, *Fishtech.* I (1). pp. 69-77.
- Acharyya, N., Deb, B., Chattopadhyay, S., & Maiti, S. (2015). Arsenic-induced antioxidant depletion, oxidative dna breakage, and tissue damages are prevented by the combined action of folate and vitamin b12. *Biological Trace Element Research*, 168(1), 122-132. <https://doi.org/10.1007/s12011-015-0324-5>.
- Adhani, A., & Husaini. (2017). Logam Berat Sekitar Manusia. Banjarmasin: Lambung Mangkurat University Press.
- Adjie. G. (2021). Pencemaran Lingkungan Akibat Operasional Pertambangan Emas Skala Kecil ( Pesk). vol. 10, no. 1, pp. 7–11.
- Agustina, I. (2018). Penurunan Kadar Arsen Pada Selada Keriting (*Lactuca Sativa Crispula*) Menggunakan Air Perasan Jeruk Nipis (*Citrus Aurantifolia Swingle*). Gema Lingkungan Kesehatan.
- Agustina, T. (2010). Kontaminasi Logam Berat Pada Makanan Dan Dampaknya Pada Kesehatan. Volume 2.
- Ahmed, S. M. (2024). Impact of zinc and copper on antibiotic resistance and conjugative plasmid transfer in bacteria isolated from wastewater treatment plants.. <https://doi.org/10.32920/25260832.v1>
- Ali, I., Isaac, I. O., Ahmed, F., Aslam, F., Ali, S. I., Imran, M., ... & Hameed, A. (2019). Acridine-thiosemicarbazones-stabilized silver nanoparticles as a selective sensor for copper(ii)-ion in tap water. *Chemistry Select*, 4(30), 8757-8763. <https://doi.org/10.1002/slct.201901381>
- Ali, I., Isaac, I. O., Ahmed, F., Aslam, F., Ali, S. I., Imran, M., ... & Hameed, A. (2019). Acridine-thiosemicarbazones-stabilized silver nanoparticles as a selective sensor for copper(ii)-ion in tap water. *ChemistrySelect*, 4(30), 8757-8763. <https://doi.org/10.1002/slct.201901381>
- Almeida, C. C. d., Baião, D. d. S., Rodrigues, P. d. A., Saint'Pierre, T. D., Hauser-Davis, R. A., Leandro, K. C., ... & Conté-Júnior, C. A. (2022). Toxic metals and metalloids in infant formulas marketed in brazil, and child health risks according to the target hazard quotients and target cancer risk. *International Journal of Environmental Research and Public Health*, 19(18), 11178. <https://doi.org/10.3390/ijerph191811178>

- Anggraini, F., Anwar, A., & Risva, R. (2019). Analisis Risiko Kesehatan Lingkungan Non-Karsinogenik Tembaga pada Ikan Nila Keramba yang dikonsumsi dan dibudidayakan Masyarakat di Desa Jembayan. *HIGIENE: Jurnal Kesehatan Lingkungan*, 5(1), 14-21.
- Arief, Latar Muhammad. (2016). Pengolahan Limbah Industri Dasar Dasar Pengetahuan dan Aplikasi di Tempat Kerja, Andi Offset, Yogyakarta
- Aryani, L., Biyatmoko, D., Hadi, A., & Asyari, M. (2023). Kajian Status Mutu Kualitas Air Sungai Dan Kualitas Kimia Tanah Pada Pertambangan Rakyat. *EnviroScienteae*, 19(3), 171-182.
- Aswal, R. S., Prasad, M., Patel, N. K., Srivastav, A. L., Egbueri, J. C., Kumar, G., ... & Ramola, R. C. (2023). Occurrences, sources and health hazard estimation of potentially toxic elements in the groundwater of garhwal himalaya, india. *Scientific Reports*, 13(1). <https://doi.org/10.1038/s41598-023-40266-7>
- Aswal, R. S., Prasad, M., Patel, N. K., Srivastav, A. L., Egbueri, J. C., Kumar, G., ... & Ramola, R. C. (2023). Occurrences, sources and health hazard estimation of potentially toxic elements in the groundwater of garhwal himalaya, india. *Scientific Reports*, 13(1). <https://doi.org/10.1038/s41598-023-40266-7>
- ATSDR (2004). Public Health Statement Copper. Available at: [www.atsdr.cdc.gov](http://www.atsdr.cdc.gov)
- Awliahasanah, R., Sari, D. N. S. N., Yanti, D., Azrinindita, E. D., Ghassani, D., Maulidia, N. S., & Sulistiyorini, D. (2021). Analisis risiko kesehatan lingkungan kandungan mangan pada air sumur warga kota Depok. *Jurnal Sanitasi Lingkungan*, 1(2), 80-86.
- Azizah, R.N., Indriani, N.E., Annisa, P.N., Binurika, M.B.A., Pratama, M.R., Hidayat, M.R., Sulistiyorini, D. (2022). Analisis Risiko Logam Berat Cr dan Cu pada DAS Cileungsi. *JSLS*. Vol 2 (1) DOI: <https://doi.org/10.36086/jsl.v2i1.1141>
- Badan Standar Nasional. (2008). SNI 6989-59-2008 tentang Pengambilan Sampel Air sumur
- Barokah, G. R., Dwiyitno, D., & Nugroho, I. (2019). Kontaminasi logam berat (hg, pb, dan cd) dan batas aman konsumsi kerang hijau (perna virdis) dari perairan teluk jakarta di musim penghujan. *Jurnal Pascapanen Dan Bioteknologi Kelautan Dan Perikanan*, 14(2), 95. <https://doi.org/10.15578/jpbkp.v14i2.611>
- Barra, L. and Greco, S. (2023). The potential of microalgae in phycoremediation. Microalgae - Current and Potential Applications. <https://doi.org/10.5772/intechopen.1003212>
- Basmar, E., Purba, B., Nugraha, N. A., Purba, E., Krisnawati, L., Damanik, D., Sahir, S. H. (2021). Perekonomian dan bisnis indonesia: Yayasan Kita Menulis

- Besedin, J. A., Khudur, L. S., Netherway, P., & Ball, A. S. (2023). Remediation opportunities for arsenic-contaminated gold mine waste. *Applied Sciences*, 13(18), 10208. <https://doi.org/10.3390/app131810208>
- Besedin, J. A., Khudur, L. S., Netherway, P., & Ball, A. S. (2023). Remediation opportunities for arsenic-contaminated gold mine waste. *Applied Sciences*, 13(18), 10208. <https://doi.org/10.3390/app131810208>
- Cao, Y., Wang, R., Liu, Y., Li, Y., Liu, J., Yang, Q., ... & Riaz, L. (2023). Improved calculations of heavy metal toxicity coefficients for evaluating potential ecological risk in sediments based on seven major chinese water systems. *Toxics*, 11(8), 650. <https://doi.org/10.3390/toxics11080650>
- Chan, W., Routh, J., Luo, C., Dario, M., Miao, Y., Luo, D., ... & Wei, L. (2021). Metal accumulations in aquatic organisms and health risks in an acid mine-affected site in south china. *Environmental Geochemistry and Health*, 43(11), 4415-4440. <https://doi.org/10.1007/s10653-021-00923-0>
- Chan, W., Routh, J., Luo, C., Dario, M., Miao, Y., Luo, D., ... & Wei, L. (2021). Metal accumulations in aquatic organisms and health risks in an acid mine-affected site in south china. *Environmental Geochemistry and Health*, 43(11), 4415-4440. <https://doi.org/10.1007/s10653-021-00923-0>
- Chen, S., Wu, P., Zha, X., Zhou, B., Liu, J., & En, L. (2023). Arsenic and heavy metals in sediments affected by typical gold mining areas in southwest china: accumulation, sources and ecological risks. *International Journal of Environmental Research and Public Health*, 20(2), 1432. <https://doi.org/10.3390/ijerph20021432>
- Chen, S., Wu, P., Zha, X., Zhou, B., Liu, J., & En, L. (2023). Arsenic and heavy metals in sediments affected by typical gold mining areas in southwest china: accumulation, sources and ecological risks. *International Journal of Environmental Research and Public Health*, 20(2), 1432. <https://doi.org/10.3390/ijerph20021432>
- Cheng, X. et al. (2018). Characteristics, Sources, and Health Risk Assessment of Trace Elements in PM 10 at an Urban Site in Chengdu, Southwest China. *Aerosol and Air Quality Research*, pp. 357–370. doi: 10.4209/aaqr.2017.03.0112
- Coryell, M., McAlpine, M., Pinkham, N. V., McDermott, T. R., & Walk, S. T. (2018). The gut microbiome is required for full protection against acute arsenic toxicity in mouse models. *Nature Communications*, 9(1). <https://doi.org/10.1038/s41467-018-07803-9>
- Darmono. (2001). Lingkungan Hidup dan Pencemaran Hubungannya Dengan Toksikologi Senyawa Logam. Jakarta: UI Press
- Diao, S., Wang, Y., & Jin, H. (2020). Electronucleation mechanism of copper in wastewater by controlled electrodeposition analysis. *RSC Advances*, 10(63), 38683-38694. <https://doi.org/10.1039/d0ra07380f>
- Direktorat Jenderal PP dan KL. (2012). *Pedoman Analisis Risiko Kesehatan Lingkungan (ARKL)*

- Ediputri, V. A., Andarari, P. and Wardhana, I. W. (2017). Analisis Risiko Logam Berat (Pb DAN Cu) Dalam Total Suspended Particulate (TSP) Terhadap Kesehatan Siswa dan Guru di Sekolah Dasar (Studi Kasus: SDN Pandean Lamper 01 dan SDN Srondol Wetan 03)', *Universitas Diponegoro*, pp. 1–13.
- Elkhatat, A. M., Soliman, M., Ismail, R., Ahmed, S. A., Abounahia, N., Mubashir, S., ... & Khraisheh, M. (2021). Recent trends of copper detection in water samples. Bulletin of the National Research Centre, 45(1). <https://doi.org/10.1186/s42269-021-00677-w>
- Fahrurrobin. (2018). Pengelolaan Limbah Pertambangan Secara Biologis: Biological Management of Mining Waste. Makassar: Celebes Media Perkasa
- Fu, F. and Wang, Q. (2011). Removal of heavy metal ions from wastewaters: a review. Journal of Environmental Management, 92(3), 407-418. <https://doi.org/10.1016/j.jenvman.2010.11.011>
- Fu, Q., Li, L., Achal, V., An-ying, J., & Liu, Y. (2014). Concentrations of heavy metals and arsenic in market rice grain and their potential health risks to the population of fuzhou, china. Human and Ecological Risk Assessment: An International Journal, 21(1), 117-128. <https://doi.org/10.1080/10807039.2014.884398>
- Gani, P. R., Abidjulu, J., & Wuntu, A. D. (2017). Analisis Air sumur Pertambangan Emas Tanpa Izin Desa Bakan Kecamatan Lolayan Kabupaten Bolaang Mongondow. *Jurnal MIPA UNSRAT Online*, 6 (2), 6-11.
- Ghafoori, L., Darabi, H., & Rahmati, S. (2021). Sources and ecological risk mapping of trace elements in multi-contaminated soils of gold mine employing gis methods - muthe gold mine, iran.. <https://doi.org/10.21203/rs.3.rs-999830/v1>
- Ginting, E. E. 2018. Analisis Arsen Pada Berbagai Jenis Beras Yang Beredar Di Kota Medan Dengan Spektrofotometri Serapan Atom.
- Gropper, SAS; Smith, JL; Groff, JL. (2005). Nutrisi tingkat lanjut dan metabolisme manusia ; Thomson/Wadsworth: Victoria, Australia,; hal 446-456
- Guo, X., Liu, M., Zhong, H., Li, P., Chen, F., Wei, D., ... & Zhao, T. (2020). Potential of myriophyllum aquaticum for phytoremediation of water contaminated with tetracycline antibiotics and copper. Journal of Environmental Management, 270, 110867. <https://doi.org/10.1016/j.jenvman.2020.110867>
- Han, J. L., Pan, X. D., & Chen, Q. (2022). Distribution and safety assessment of heavy metals in fresh meat from zhejiang, china. Scientific Reports, 12(1). <https://doi.org/10.1038/s41598-022-07214-3>
- Han, L., Zhai, Y., Chen, R., Fan, Y., Liu, Z., Zhao, Y., ... & Xia, L. (2023). Characteristics of soil arsenic contamination and the potential of pioneer

- plants for arsenic remediation in gold mine tailings. *Toxics*, 11(12), 1025. <https://doi.org/10.3390/toxics11121025>
- Hamzar, H., Suprapta, S. dan Amal, A. (2021) "Analisis Kualitas Air Tanah Dangkal Untuk Keperluan Air Minum Di Kelurahan Bontonompo Kecamatan Bontonompo Kabupaten Gowa," *Jurnal Environmental Science*, 3(2). doi:10.35580/jes.v3i2.20048.
- Haque, M. M., Niloy, N. M., Khirul, A., Alam, M. F., & Tareq, S. M. (2021). Appraisal of probabilistic human health risks of heavy metals in vegetables from industrial, non-industrial and arsenic contaminated areas of bangladesh. *Helion*, 7(2), e06309. <https://doi.org/10.1016/j.heliyon.2021.e06309>
- Harliyanti, Safitri M., Saminingsih, A., Nugraha, W.D. (2016). Analisis Risiko Logam Berat Fe, Cr Dan Cu Pada Aliran Sungai Garang." *Jurnal Teknik Lingkungan*, vol. 5, no. 2, , pp. 1-8.
- Hărmănescu, M., Alda, L. M., Bordean, D., Gogoașă, I., & Gergen, I. (2011). Heavy metals health risk assessment for population via consumption of vegetables grown in old mining area; a case study: banat county, romania. *Chemistry Central Journal*, 5(1). <https://doi.org/10.1186/1752-153x-5-64>
- Henrianto, A., Okalia, D., & Mashadi, M. (2019). Uji beberapa sifat fisika tanah bekas tambang emas tanpa izin (peti) di tiga kecamatan di daratan sepanjang sungai kuantan. *Jurnal Agronomi Tanaman Tropika*, 1(1), 19-31
- Hossain, M. M., Jahan, I., Al Nahian, A., Zhuang, Z., Maxwell, S. J., Ali, M. Y., ... & Zhu, D. (2023). Immediate health risk: concentration of heavy metals in contaminated freshwater fishes from the river channel of turag-tongi-balu. *Environmental Toxicology*, 39(1), 120-134. <https://doi.org/10.1002/tox.23959>
- Hossain, M. M., Jahan, I., Al Nahian, A., Zhuang, Z., Maxwell, S. J., Ali, M. Y., ... & Zhu, D. (2023). Immediate health risk: concentration of heavy metals in contaminated freshwater fishes from the river channel of turag-tongi-balu. *Environmental Toxicology*, 39(1), 120-134. <https://doi.org/10.1002/tox.23959>
- Ibrahim, H. et al. (2021) "Pollutant removal from mining processing wastewater by electrochemical method", *Global NEST Journal*, 23(2). Available at: <https://doi.org/10.30955/gnj.003683>.
- Ibrahim, I., Sutarna, I. T., Abdullah, I., & Kamaluddin, K. (2019). Faktor penghambat dan pendukung badan usaha milik desa pada kawasan pertambangan emas di sumbawa barat. *Jurnal Sosiohumaniora*, 21(3), 349- 354
- Illatou, O. E. F. M., Casiot, C., Vinches, M., Resongles, E., Freydier, R., Marie, M., ... & Ousmane, B. (2022). Arsenic and other trace elements in groundwaters and surface waters in the gold mining region of the nigerien liptako (southwestern

- niger). Environmental Earth Sciences, 81(23). <https://doi.org/10.1007/s12665-022-10639-8>
- IPCS (2004) IPCS Risk Assessment Terminology. Genewa: World Health Organization
- Islam, M. S., Ahmed, M. K., & Habibullah-Al-Mamun, M. (2014). Heavy metals in cereals and pulses: health implications in bangladesh. Journal of Agricultural and Food Chemistry, 62(44), 10828-10835. <https://doi.org/10.1021/jf502486q>
- Islam, S., Ahmed, M. K., Habibullah-Al-Mamun, M., Islam, K. N., Ibrahim, K., & Masunaga, S. (2014). Arsenic and lead in foods: a potential threat to human health in bangladesh. Food Additives & Contaminants: Part A, 31(12), 1982-1992. <https://doi.org/10.1080/19440049.2014.974686>
- Istarani Festri dan Ellina S. Pandebesie. (2014). Studi Dampak Arsen (As) dan Kadmium (Cd) terhadap Penurunan Kualitas Lingkungan. *Jurnal Teknik Pomits*, 3(1), 1–6.
- Ito, T., Uenoyama, K., Kobayashi, K., Kakumoto, M., Mizumoto, H., Katsura, T., ... & Onoue, M. (2022). Decreased serum copper concentrations by zinc administration in preterm infants with hypozincemia are associated with a lower postmenstrual age: a single-center retrospective observational study. *Yakugaku Zasshi*, 142(9), 999-1004. <https://doi.org/10.1248/yakushi.22-00083>
- Jacob, A. A. (2008) 'Evaluation of Lead and Copper content in hair of workers from oil product distribution companies in Iraq', pp. 1–6.
- Kagbagnan, K., Adjoumani, R. K., Ehouman, A. D., Yao, B., & Adouby, K. (2023). Evaluation of metal contamination of sediments around an industrial gold mine in côte d'ivoire: the example of arsenic. *Journal of Applied Sciences and Environmental Management*, 27(8), 1627-1632. <https://doi.org/10.4314/jasem.v27i8.3>
- Khairuddin, K., Yamin, M., & Kusmiyati, K. (2022). Analysis of cd and cu heavy metal content in climbing perch (*Anabas testudineus*) derived from rawa taliwang lake, west sumbawa regency. *Jurnal Biologi Tropis*, 22(1), 186-193. <https://doi.org/10.29303/jbt.v22i1.3105>
- Kone, K. and Kouakou, A. R. (2023). Assessment of soil contamination and human health risk around an industrial gold mine in côte d'ivoire: the case of arsenic. *Open Journal of Soil Science*, 13(07), 329-339. <https://doi.org/10.4236/ojss.2023.137014>
- Kram, W., Rebl, H., Cruz, J. E. d. I., Haag, A., Renner, J., Epting, T., ... & Hakenberg, O. W. (2022). Interactive effects of copper-doped urological implants with tissue in the urinary tract for the inhibition of cell adhesion and encrustation in the animal model rat. *Polymers*, 14(16), 3324. <https://doi.org/10.3390/polym14163324>

- Kulkarni, B. (2016) 'Management of moderate and severe acute malnutrition in children', *Proceedings of the Indian National Science Academy*, 82(5), pp. 1519–1528. doi: 10.16943/ptinsa/2016/48884
- Kurnia, U. & N. Sutrisno 2008. Strategi Pengelolaan Lingkungan Pertanian. *Jurnal Sumberdaya Lahan* Vol. 2.
- Kurniawan, B., Riniarti, M., & Yuwono, S. B. J. J. S. L. (2019). Kemampuan adaptasi tanaman mahoni (*swietenia macrophylla*) terhadap cemaran merkuri pada tailing penambangan emas skala kecil (adaptation ability of mahogany (*swietenia macrophylla*) against mercury contamination from artisanal and small-scale gold mining). 7(3), 359-369.
- Kusuma, R. C., Budianta, W. and Arifudin. (2017). Kajian Kandungan Logam Berat di Lokasi Penambangan Emas Tradisional di Desa Sangon, Kecamatan Kokap, Kabupaten Kulon Progo," Pros. Semin. Nas. XII Rekayasa Teknol. Ind. dan Informasi", pp. 322–327
- Lai, Z., Datir, S., Weber, J., Belford, E., & Regan, S. (2023). Differential response of *senna occidentalis* to arsenic and cadmium contaminated soil.. <https://doi.org/10.1101/2023.10.26.564171>
- Lear, L., Padfield, D., Hesse, E., Kay, S., Buckling, A., & Vos, M. (2023). Copper reduces the virulence of bacterial communities at environmentally relevant concentrations.. <https://doi.org/10.1101/2023.06.02.543412>
- Li, B., Deng, J., Li, Z., Chen, J., Zhan, F., He, Y., ... & Li, Y. (2022). Contamination and health risk assessment of heavy metals in soil and ditch sediments in long-term mine wastes area. *Toxics*, 10(10), 607. <https://doi.org/10.3390/toxics10100607>
- Li, J., Ma, J., Dai, R., Wang, X., Chen, M., Waite, T. D., ... & Wang, Z. (2020). Self-enhanced decomplexation of cu-organic complexes and cu recovery from wastewaters using an electrochemical membrane filtration system. *Environmental Science & Technology*, 55(1), 655-664. <https://doi.org/10.1021/acs.est.0c05554>
- Liu, C. (2023). Heavy metal content and health risk assessment of some commercial foods in jiaozuo city. *Academic Journal of Science and Technology*, 5(2), 67-73. <https://doi.org/10.54097/ajst.v5i2.6052>
- Liu, J., Wu, J., Feng, W., & Li, X. (2020). Ecological risk assessment of heavy metals in water bodies around typical copper mines in china. *International Journal of Environmental Research and Public Health*, 17(12), 4315. <https://doi.org/10.3390/ijerph17124315>
- Liu, Y., Zhao, Y., & Yang, X. (2023). Ecotoxicological impacts of copper pollution on aquatic ecosystems: A review. *Environmental Pollution*, 287, 117548. <https://doi.org/10.1016/j.envpol.2021.117548>
- Lourrinx, E. (2022) *Epidemiologi Lingkungan*. Edited by M. Sari. Sumatera Barat: PT

Global Eksekutif Teknologi.

Louvar, J.F.L. dan B.D. (1998) *Health and Environmental Risk Analysis: Fundamentals with Applications*. Prentice Hall.

Lucas, H., Stopić, S., Xakalashe, B., Ndlovu, S., & Friedrich, B. (2021). Synergism red mud-acid mine drainage as a sustainable solution for neutralizing and immobilizing hazardous elements. *Metals*, 11(4), 620. <https://doi.org/10.3390/met11040620>

Luo, G., Han, Z., Xiong, J., He, Y., Liao, J., & Wu, P. (2021). Heavy metal pollution and ecological risk assessment of tailings in the qinglong dachang antimony mine, china. *Environmental Science and Pollution Research*, 28(25), 33491-33504. <https://doi.org/10.1007/s11356-021-12987-7>

Lyu, Y., Yang, G., Ye, H., Yang, L., Han, S., Tian, J., ... & Chen, L. (2021). Quantifying the life cycle environmental impacts of water pollution control in a typical chemical industrial park in china. *Journal of Industrial Ecology*, 25(6), 1673-1687. <https://doi.org/10.1111/jiec.13149>

Mabuat, J. C., Maddusa, S.S., & Boky, H. (2017). Analisis Kandungan Logam Berat Arsen (As) Pada Air, Ikan, Kerang, Dan Sedimen Di Daerah Aliran Sungai Tondano Tahun 2017. *Jurnal KESMAS*, 6(3).

Maddusa, S. S., et al. 2017. Kandungan Logam Berat Timbal (Pb), Merkuri (Hg), Zink (Zn) Dan Arsen (as) Pada Ikan Dan Air Sungai Tondano, Sulawesi Utara. *Al-sihah: The Public Health Science Journal*

Makris, K. C., Christophi, C. A., Paisi, M., & Ettinger, A. S. (2012). A preliminary assessment of low level arsenic exposure and diabetes mellitus in cyprus. *BMC Public Health*, 12(1). <https://doi.org/10.1186/1471-2458-12-334>

Mallongi, A. (2019) Dinamika Polutan dan Risiko Kesehatan Lingkungan. pertama. Yogyakarta: Gosyen Publishing.

Mallongi, A. et al. (2018) 'Risks Assessment due to the Exposure of Copper and Nitrogen Dioxide in the Goldsmith in Malimongan Makassar', *Journal of Physics: Conference Series*, 1028(1). doi: 10.1088/1742-6596/1028/1/012036.

Mallongi, A., Dullah A.A.M. 2014. Teknik Penyehatan Lingkungan. Yogyakarta: Smart Writing an Kesehatan. Jakarta: Kencana Prenada Media Group.

Mariyam, S., Zuhara, S., Al-Ansari, T., Mackey, H. R., & McKay, G. (2022). Novel high capacity model for copper binary ion exchange on e-waste derived adsorbent resin. *Adsorption*, 28(3-4), 185-196. <https://doi.org/10.1007/s10450-022-00360-0>

Maulidah, (2015).Kajian Indeks Pencemar Air Pada Area Pertambangan Rakyat Intan dan Emas di Kecamatan Cempaka Kota Banjarbaru. *Jurnal Enviro Scientiae*, 11,102 –110

- Maurya, P. K., Malik, D. S., Yadav, K. K., Kumar, A., Kumar, S., & Kamyab, H. (2019). Bioaccumulation and potential sources of heavy metal contamination in fish species in river ganga basin: possible human health risks evaluation. *Toxicology Reports*, 6, 472-481. <https://doi.org/10.1016/j.toxrep.2019.05.012>
- Miclean, M. and Cadar, O. (2021). Dietary metals (pb, cu, cd, zn) exposure and associated health risks in baia mare area, northwestern romania. *Journal of Biomedical Research & Environmental Sciences*, 2(7), 580-592. <https://doi.org/10.37871/jbres1280>
- Miladil Fitra et al (2022) 'Analisis Risiko Kesehatan Lingkungan (ARKL)', in M. Sari (ed.) Cetakan 2. Sumatera Barat: PT Global Eksekutif Teknologi, pp. 7–10
- Palilingan, R.A. (2023) *Dasar Kesehatan Lingkungan*. Edited by F. Fadhila. Serang Banten: PT Sada Kurnia Pustaka
- N'goran, K. P. D. A., Fato, T. P., Kouassi, N. L. B., & Diabate, D. (2023). Ecological and human health risks assessment of arsenic in sediments around gold mining areas in northern côte d'ivoire. *Asian Journal of Chemical Sciences*, 13(6), 234-247. <https://doi.org/10.9734/ajocs/2023/v13i6277>
- Natalia, F. and Prasetyo, A. H. (2022). Rancangan implementasi manajemen risiko operasional pada sekolah menengah kejuruan pariwisata di jakarta 2023-2024. *Jurnalku*, 2(4), 463-481. <https://doi.org/10.54957/jurnalku.v2i4.294>
- Neamtiu, I. A., Bloom, M. S., Gati, G., Goessler, W., Surdu, S., Pop, C., ... & Gurzău, E. (2015). Pregnant women in timis county, romania are exposed primarily to low-level (<10 $\mu$ g/l) arsenic through residential drinking water consumption. *International Journal of Hygiene and Environmental Health*, 218(4), 371-379. <https://doi.org/10.1016/j.ijheh.2015.01.004>
- Notoatmodjo, S. (2010). Metodelogi Penelitian Kesehatan. Jakarta. Penerbit: Rineka Cipta
- Nurchi, V. M., et al. 2020. Arsenic Toxicity: Molecular Targets and Therapeutic Agents. *Biomolecules*, 10, 235
- Nurdin, M., Azis, T., Maulidiyah, M., Aladin, A., Hafid, N., Salim, L., & Wibowo, D. (2018). Photocurrent responses of metanil yellow and remazol red b organic dyes by using tio2/ti electrode. Paper presented at the IOP Conference Series: Materials Science and Engineering.
- Nurdin, M., Wibowo, D., Natsir, M., Ritonga, H., & Watoni, A. (2015). Probe design of chemical oxygen demand (cod) based on photoelectrocatalytic and study of photocurrent formation at sno-f/tio2 thin layer by using amperometry method. *International Journal of ChemTech Research*, 8(1), 416-423.

- Oe S, Miyagawa K, Honma Y, Harada M. Copper induces hepatocyte injury due to the endoplasmic reticulum stress in cultured cells and patients with Wilson disease. *Exp Cell Res.* 2016 Sep 10;347(1):192-200
- Okereafor, U., Makhatha, M. E., Mekuto, L., & Mavumengwana, V. (2020). Gold mine tailings: a potential source of silica sand for glass making. *Minerals*, 10(5), 448. <https://doi.org/10.3390/min10050448>
- Osenyeng, O., Ishiyama, D., Djordjievski, S., Adamovic, D., & Ogawa, Y. (2023). Environmental risk assessment of the contamination of river water and sediments from the bor mining area, east serbia—secondary cu enrichment at the reservoir site. *Resource Geology*, 73(1). <https://doi.org/10.1111/rge.12314>
- Palar, H. (2012) Pencemaran dan Toksikologi Logam Berat. ke lima. Jakarta: PT. Rineka Cipta.
- Permenlh RI, (2014). Peraturan Menteri Negara Lingkungan Hidup RI No. 5 Tahun 2014 tentang Baku Mutu Air sumur
- Pusat Kajian Akuntabilitas Keuangan Negara Sekertariat Jendral dan Badan Keahlian DPR RI. (2020). Analisis Akuntabilitas Tata Kelola Minerba: Studi Kasus LHP Atas Kontrak Karya Dan Pengenaan Tarif Bea Keluar Pada PT Freeport Indonesia.
- Rahman, A. (2007). Public Health Assessment: Model Kajian Prediktif Dampak Lingkungan dan Aplikasinya untuk Managemen Risiko Kesehatan. Edited by P. K. K. L. dan I. UI. Jakarta
- Ramos, D., Mar, D., Ishida, M., Vargas, R., Gaite, M., Montgomery, A., ... & Linder, M. C. (2016). Mechanism of copper uptake from blood plasma ceruloplasmin by mammalian cells. *Plos One*, 11(3), e0149516. <https://doi.org/10.1371/journal.pone.0149516>
- Regia, R.A., Bachtiar, V.S. and Solihin, R. (2021) ‘Analisis Risiko Kesehatan Akibat Paparan Particulate Matter 2,5 (PM2,5) Dalam Rumah Tinggal di Perumahan X Kawasan Industri Semen’, *Jurnal Ilmu Lingkungan*, 19(3), pp. 531–540. Available at: <https://doi.org/10.14710/jil.19.3.531-540>
- Royer A, Sharman T. Copper Toxicity. [Updated 2023 Mar 27]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2024 Jan. Available from: [https://www.ncbi.nlm.nih.gov.translate.google/books/NBK557456/?\\_x\\_tr\\_sl=en&\\_x\\_tr\\_tl=id&\\_x\\_tr\\_hl=id&\\_x\\_tr\\_pto=tc](https://www.ncbi.nlm.nih.gov.translate.google/books/NBK557456/?_x_tr_sl=en&_x_tr_tl=id&_x_tr_hl=id&_x_tr_pto=tc)
- Sabiha, M. S. (2023). Analisis Risiko Logam Berat Cr dan Cu Pada DAS Cilamaya. *Jurnal Kesehatan Lingkungan Mandiri*, Volume 2, No.1. DOI: <https://doi.org/10.33761/jklm.v2i1.901>

- Sari, M., Fatma, F., Purba, T., Bachtiar, E., NNPS, R. I. N., Simarmata, M. M., Kharisma, D. (2021). Pengetahuan lingkungan: Yayasan Kita Menulis.
- Sausan, D. U. (2020). Analisis Risiko Kesehatan Lingkungan Pajanan Nitrit (No2), Dan Tembaga (Cu) Pada Masyarakat Di Kelurahan Ciketing Udik, Bekasi Tahun 2020. *Skripsi*. UIN Syarif Hidayatullah Jakarta.
- Sekarwati, B. Murachman and Sunarto. (2015). Dampak Logam Berat Cu (Tembaga) dan Ag (Perak) pada Limbah Cair Industri Perak terhadap Kualitas Air Sumur dan Kesehatan Masyarakat Serta Upaya Pengendaliannya di Kota Gede Yogyakarta, *Jurnal EKOSAINS*. VII (1). pp.64-76
- Sekarwati, N., Murachman, B. and Sunarto (2015) 'Dampak logam berat Cu (tembaga) dan Ag (perak) pada limbah cair industri perak terhadap kualitas air sumur dan kesehatan masyarakat serta upaya pengendaliannya di Kota Gede Yogyakarta', *Jurnal Ekosains*, VII(1), p. 13.
- Seleman, M., Sime, T., Ayele, A., Sergawie, A., Nkambule, T., & Fito, J. (2023). Isotherms and kinetic studies of copper removal from textile wastewater and aqueous solution using powdered banana peel waste as an adsorbent in batch adsorption systems. *International Journal of Biomaterials*, 2023, 1-10. <https://doi.org/10.1155/2023/2012069>
- Sembel, D. T. (2015) Toksikologi Lingkungan. Edited by A. Pramesta. Yogyakarta: Andi.
- Senarathne, E., Edirisinghe, E., Kim, T., & Yoo, J. (2023). Quantification of element levels and arsenic species in commonly available rice in sri lanka and assessment of adverse health effects. *International Journal of Food Science & Technology*, 58(8), 4235-4245. <https://doi.org/10.1111/ijfs.16517>
- Siefring, M. L., Lu, D., States, J. C., & Hoang, M. V. (2018). Rapid onset of multiple concurrent squamous cell carcinomas associated with the use of an arsenic-containing traditional medicine for chronic plaque psoriasis. *BMJ Case Reports*, bcr-2017-222645. <https://doi.org/10.1136/bcr-2017-222645>
- Sikandar, M., Mohsin, A., & Malik, A. (2023). Ecological risk assessment of inorganic arsenic and mercuric fungicides through biological tools. *Indonesian Journal of Innovation and Applied Sciences (IJIAS)*, 3(2), 133-145. <https://doi.org/10.47540/ijias.v3i2.742>
- Silva, C. A. d., Santos, S. R., Garcia, C. A. B., Pontes, G. C. d., & Wasserman, J. C. (2019). Metals and arsenic in marine fish commercialized in the ne brazil: risk to human health. *Human and Ecological Risk Assessment: An International Journal*, 26(3), 695-712. <https://doi.org/10.1080/10807039.2018.1529552>

- Siregar, E. S. Adawiyah, R.and Nia. P. (2021). Dampak aktivitas pertambangan emas terhadap kondisi ekonomi dan lingkungan masyarakat muara soma kecamatan batang natal. *J. Educ. Dev.*, vol. 9, no. 2, pp. 556–561.
- Soedarto (2013) Lingkungan dan Kesehatan (Environment And Health). Pertama. Jakarta: Penerbit Sagung Seto.
- Soemirat, J. (2013) Analisis Risiko Kesehatan Lingkungan. Pertama. Yogyakarta: *Gadjah Mada University Press*. Available at: <http://www.gmup.ugm.ac.id>.
- Solomon, F. (2009). Impacts of copper on aquatic ecosystems and human health. *Environment & communities*, 25-28.
- Subagiya, B., & Supraha, W. J. T. J. P. I. (2020). Pengembangan materi ajar kimia berbasis nilai keimanan. 13(2), 124- 141.
- Sudir, S., Tumaruk, Y., Taebi, B., & Naid, T. (2017). Analisis Kandungan Logam Berat As, Cd Dan Pb Pada Eucheuma Cottonii Dari Perairan Takalar Serta Analisis Maximum Tolerable Intake Pada Manusia. *Majalah Farmasi Dan Farmakologi*, 21(3), 63–66. <https://doi.org/10.20956/mff.v21i3.6856>
- Sukandarrumidi. (2018). Geologi mineral logam untuk explorer muda. Yogyakarta: Gadjah Mada University Press.
- Sultana, N. 2017. Studies on Arsenic and Lead Contamination in Crops and Vegetables of Harischandrapur Village of Jessore District in Bangladesh. Khulna University of Engineering & Technology (KUET), Khulna, Bangladesh.
- Suyasa, W. B. 2015. Pencemaran Air dan Pencemaran Air sumur. Udayana University Press: Denpasar
- Suyitno, S. (2021). Implementasi manajemen resiko dalam peningkatan efektivitas pembelajaran di sekolah menengah kejuruan. *Edukatif : Jurnal Ilmu Pendidikan*, 4(1), 141-153. <https://doi.org/10.31004/edukatif.v4i1.1768>
- Taib, Z. J. A. (2020). Dampak ekplotasi tambang emas pt nusa halmahera minerals terhadap sosial ekonomi masyarakat. *Agroprimatech*, 4(1), 1-9. Wibowo, D., Basri, B., Adami, A., Sumarlin, S., Rosdiana, R., Ndibale, W., & Ilham, I. J. I. J. o. C. R. (2020). Analisis logam nikel (ni) dalam air laut dan persebarannya di perairan teluk kendari, sulawesi tenggara. 8(2), 144-150
- Taylor AA, Tsuji JS, Garry MR, McArdle ME, Goodfellow WL Jr, Adams WJ, Menzie CA. Critical Review of Exposure and Effects: Implications for Setting Regulatory Health Criteria for Ingested Copper. *Environ Manage*. 2020 Jan;65(1):131-159. doi: 10.1007/s00267-019-01234-y

Tchounwou PB, Yedjou CG, Patlolla AK, Sutton DJ. (2014). Heavy metal toxicity and the environment. *Exp Suppl.* 2012;101:133-64. doi: 10.1007/978-3-7643-8340-4\_6. PMID: 22945569; PMCID: PMC414427

Tkachenko, H., Kurhaluk, N., Kasiyan, O., & Kamiński, P. (2021). Dietary nutrients and health risks from exposure to some heavy metals through the consumption of the farmed common carp (*Cyprinus carpio*). *Journal of Environmental Health Science and Engineering*, 19(1), 793-804. <https://doi.org/10.1007/s40201-021-00647-4>

U.S. Environmental Protection Agency (EPA). (2022). Water quality criteria for copper. <https://www.epa.gov/wqc/copper>

US EPA (2007) Framework for metals risk assessment. EPA 120/R07/001. Office of the Science Advisor, US EPA. Washington, DC

Velarde, L., Nabavi, M. S., Escalera, E., Antti, M., & Akhtar, F. (2023). Adsorption of heavy metals on natural zeolites: a review. *Chemosphere*, 328, 138508. <https://doi.org/10.1016/j.chemosphere.2023.138508>

Vesković, J. and Onjia, A. (2024). Environmental implications of the soil-to-groundwater migration of heavy metals in mining area hotspots. *Metals*, 14(6), 719. <https://doi.org/10.3390/met14060719>

Viona, V. L., Woodford, B. S. J., Sri, S. M. (2022). Analisis Risiko Kesehatan Lingkungan Paparan Logam Berat Arsen (As) pada Masyarakat Sekitar Sungai yang Mengonsumsi Ikan Nilem (*Ostoechillus Vittatus*) dari Sungai Desa Bakan Kecamatan Lolayan Kabupaten Bolaang Mongondow. *Jurnal KESMAS*, Vol. 11, No. 2

Wahyuni, Tri Endang. (2019). Lebo Taliwang Penyangga Kehidupan yang Perlu Pemulihian. *Warta Konservasi Lahan Basah*, 27(2): 1-24

Wang, C., Sun, M., Zhao, Y., Huo, M., Wang, X., & Elimelech, M. (2020). Photo-electrochemical osmotic system enables simultaneous metal recovery and electricity generation from wastewater. *Environmental Science & Technology*, 55(1), 604-613. <https://doi.org/10.1021/acs.est.0c04375>

Wang, W., Xie, Z., Lin, Y., & Zhang, D. (2013). Association of inorganic arsenic exposure with type 2 diabetes mellitus: a meta-analysis. *Journal of Epidemiology and Community Health*, 68(2), 176-184. <https://doi.org/10.1136/jech-2013-203114>

WHO (2000) Bahaya Bahan Kimia Pada Kesehatan Manusia dan Lingkungan. Jakarta: Buku Kedokteran EGC

Wolfand, J. M., Sytsma, A., Hennon, V., Stein, E. D., & Hogue, T. S. (2022). Dilution and pollution: assessing the impacts of water reuse and flow reduction on water quality in the Los Angeles river basin. *ACS ES&T Water*, 2(8), 1309-1319. <https://doi.org/10.1021/acsestwater.2c00005>

- Wróbel, M., Śliwakowski, W., Kowalczyk, P., Kramkowski, K., & Dobrzyński, J. (2023). Bioremediation of heavy metals by the genus bacillus. *International Journal of Environmental Research and Public Health*, 20(6), 4964. <https://doi.org/10.3390/ijerph20064964>
- Xie, S., Lan, T., Xing, A., Chen, C., Meng, C., Wang, S., ... & Hong, M. (2023). Spatial distribution and ecological risk of heavy metals and their source apportionment in soils from a typical mining area, inner mongolia, china. *Journal of Arid Land*, 15(10), 1196-1215. <https://doi.org/10.1007/s40333-023-0109-1>
- Xie, X., Zhou, S., & Li, C. (2023). Advanced technologies for the treatment of copper-contaminated wastewater. *Journal of Hazardous Materials*, 423, 127174. <https://doi.org/10.1016/j.jhazmat.2022.127174>
- Xue, J., Zartarian, V., Wang, S. W., Liu, S. V., & Georgopoulos, P. G. (2010). Probabilistic modeling of dietary arsenic exposure and dose and evaluation with 2003–2004 nhanes data. *Environmental Health Perspectives*, 118(3), 345-350. <https://doi.org/10.1289/ehp.0901205>
- Yabanlı, M., Tay, S., & Giannetto, D. (2016). Human health risk assessment from arsenic exposure after sea bream (*sparus aurata*) consumption in aegean region. *Bulgarian Journal of Veterinary Medicine*, 19(2), 127-136. <https://doi.org/10.15547/bjvm.905>
- Yunanada, M. Y. and Kurniawati, D. (2023). Effect of adsorbent dosage on copper ion adsorption using activated carbon of langsat shell (*lansium domesticum corr*) with column method. *Indonesian Journal of Chemical Science and Technology (IJCST)*, 6(1), 1. <https://doi.org/10.24114/ijcst.v6i1.43173>
- Zhang, L., Wang, Y., & Sun, S. (2022). Copper contamination in aquatic environments: Sources, effects, and management strategies. *Environmental Science and Pollution Research*, 29(34), 51461-51475. <https://doi.org/10.1007/s11356-022-19499-9>
- Zhou, C., Han, C., Min, X., & Yang, T. (2021). Enhancing arsenic removal from acidic wastewater using zeolite-supported sulfide nanoscale zero-valent iron: the role of sulfur and copper. *Journal of Chemical Technology & Biotechnology*, 96(7), 2042-2052. <https://doi.org/10.1002/jctb.6734>
- Zhou, T. et al. (2016) 'Human and Ecological Risk Assessment: An International Copper and zinc concentrations in human hair and popular foodstuffs in China', *Human and Ecological Risk Assessment*.
- Ziegelhöfer, A. and Kujala, K. (2021). Assessing the diversity and metabolic potential of psychrotolerant arsenic-metabolizing microorganisms from a subarctic peatland used for treatment of mining-affected waters by culture-dependent and -independent techniques. *Frontiers in Microbiology*, 12. <https://doi.org/10.3389/fmicb.2021.648412>
- Zimnicka, A. M., Ivy, K., & Kaplan, J. H. (2011). Acquisition of dietary copper: a role for anion transporters in intestinal apical copper uptake. *American Journal of*