DAFTAR PUSTAKA

Abdallah, A., Al-MISTAREHI, B., & SHTAYAT, A. (2024). Evaluation of the Applications of using Global free Digital Elevation Models and GNSS-RTK data for Agricultural purposes in Egypt using Machine Learning. *JES. Journal of Engineering Sciences*, *0*(0), 0–0. https://doi.org/10.21608/jesaun.2024.326709.1374

Afif, M. (2016). *NON-DESTRUCTIVE INDIVIDUAL TREE ABOVEGROUND BIOMASS ESTIMATION IN TROPICAL RAINFOREST USING TERRESTRIAL LASER SCANNER MD AFIF BIN ABU BAKAR UNIVERSITI TEKNOLOGI MALAYSIA*.

Ahmad, A., Gilani, H., & Ahmad, S. R. (2021). Forest aboveground biomass estimation and mapping through high-resolution optical satellite imagery—a literature review. Dalam *Forests* (Vol. 12, Nomor 7). MDPI AG. https://doi.org/10.3390/f12070914

Analuddin, K., Kadidae, L. O., Yasir Haya, L. O. M., Septiana, A., Sahidin, I., Syahrir, L., Rahim, S., Fajar, L. O. A., & Nadaoka, K. (2020). Aboveground biomass, productivity and carbon sequestration in rhizophora stylosa mangrove forest of southeast sulawesi, indonesia. *Biodiversitas*, *21*(4), 1316–1325. https://doi.org/10.13057/biodiv/d210407

Chen, T., & Guestrin, C. (2016). XGBoost: A scalable tree boosting system. *Proceedings of the ACM SIGKDD International Conference on Knowledge Discovery and Data Mining*, *13-17-August-2016*, 785–794. https://doi.org/10.1145/2939672.2939785

Copernicus. (2010). *Copernicus DEM GLO-30: Global 30m Digital Elevation Model*.

Copernicus. (2014, Oktober 3). *Sentinel-1 SAR GRD: C-band Synthetic Aperture Radar Ground Range Detected, log scaling*.

Copernicus. (2017, Maret 28). *Harmonized Sentinel-2 MSI: MultiSpectral Instrument, Level-2A*.

Cutler, A., Cutler, D. R., & Stevens, J. R. (2012). Random Forests. Dalam *Ensemble Machine Learning* (hlm. 157–175). Springer New York. https://doi.org/10.1007/978-1-4419-9326-7_5

Dong, W., Mitchard, E. T. A., Yu, H., Hancock, S., & Ryan, C. M. (2023). *Forest aboveground biomass estimation using GEDI and earth observation data through attention-based deep learning*. http://arxiv.org/abs/2311.03067

Dwi Julianto, F., Pratiwi, D., Putri, D., & Safi'i, H. (2020). *Analisis Perubahan Vegetasi dengan Data Sentinel-2 menggunakan Google Earth Engine (Studi Kasus Provinsi Daerah Istimewa Yogyakarta)*. http://jurnal.mapin.or.id/index.php/jpji/issue/archive

ESA. (2024). *SAR (ERS)*.

GEDI. (2024). *Mission Page GEDI LIDAR*.

GeeksforGeeks. (2024, Desember 11). *Random Forest Algorithm in Machine Learning*.

GeeksforGeeks. (2025, Januari 16). *Linear Regression in Machine Learning*. GeeksforGeeks.

Global Forest Watch. (2024). *Indonesia Primary Forest Loss, 2002 - 2023*.

Guth, P. L., Van Niekerk, A., Grohmann, C. H., Muller, J. P., Hawker, L., Florinsky, I. V., Gesch, D., Reuter, H. I., Herrera-Cruz, V., Riazanoff, S., López-Vázquez, C., Carabajal, C. C., Albinet, C., & Strobl, P. (2021). Digital elevation models: Terminology and definitions. *Remote Sensing*, *13*(18). https://doi.org/10.3390/rs13183581

Hadistian, Setiawan, C., & Munandar, A. (2021). *Analisis Faktor-Faktor Konversi Lahan Pertanian di Kabupaten Tangerang dengan Menggunakan Geographically Weighted Regression*.

Hastoro, D. A., & Yudinugroho, M. (2023). Analisis Klasifikasi Tutupan Lahan dengan Citra Sentinel 1A Menggunakan Metode Dekomposisi Polarimetrik di Provinsi Daerah Istimewa Yogyakarta. *Jurnal Ilmiah Geomatika*, *3*(2), 58. https://doi.org/10.31315/imagi.v3i2.10778

Ince, E. S., Abrykosov, O., & Förste, C. (2024). GDEMM2024: Global Digital Elevation Merged Model 2024 for surface, bedrock, ice thickness, and land-type masks. *Scientific data*, *11*(1), 1087. https://doi.org/10.1038/s41597-024-03920-x

Indriyani, S., Sari, S. P., Negari, S. I. T., Prambudi, S. A., Nur, A. A. I., Kusumaningrum, L., Indrawan, M., Sunarto, Sugiyarto, Budiharta, S., & Setyawan, A. D. (2024). Short Communication: Estimation of aboveground biomass and carbon sequestration in KGPAA Mangkunagoro I Grand Forest Park, Central Java, Indonesia. *Biodiversitas*, *25*(5), 2257–2263. https://doi.org/10.13057/biodiv/d250544

Japan Aerospace Exploration Agency. (2024). *ALOS-2 Project / PALSAR-2*.

JAXA. (2014, Agustus 4). *PALSAR-2 ScanSAR Level 2.2* .

Jia, Z., Zhang, Z., Cheng, Y., Buhebaoyin, Borjigin, S., & Quan, Z. (2024). Grassland biomass spatiotemporal patterns and response to climate change in eastern Inner Mongolia based on XGBoost model estimates. *Ecological Indicators*, *158*. https://doi.org/10.1016/j.ecolind.2024.111554

Kurnia, D., & Yulianandha, A. (2020). *Penggunaan Metode NDVI (Normalized Difference Vegetation Index) dan SAVI (Soil Adjusted Vegetation Index) untuk Mengetahui Ketersediaan Ruang Terbuka Hijau terhadap Pemenuhan Kebutuhan Oksigen (Studi Kasus : Kota Yogyakarta)*.

Li, H., Kato, T., Hayashi, M., & Wu, L. (2022). Estimation of Forest Aboveground Biomass of Two Major Conifers in Ibaraki Prefecture, Japan, from PALSAR-2 and Sentinel-2 Data. *Remote Sensing*, *14*(3), 468. https://doi.org/10.3390/rs14030468

Lyashenko, V. (t.t.). *How to use random forest for regression: notebook, examples and documentation*.

Madundo, S. D., Mauya, E. W., & Kilawe, C. J. (2023). Comparison of multi-source remote sensing data for estimating and mapping above-ground biomass in the West Usambara tropical montane forests. *Scientific African*, *21*. https://doi.org/10.1016/j.sciaf.2023.e01763

Matiza, C., Mutanga, O., Peerbhay, K., Odindi, J., & Lottering, R. (2024).

Assessing above-ground biomass in reforested urban landscapes using machine learning and remotely sensed data. *Journal of Spatial Science*. https://doi.org/10.1080/14498596.2024.2343764

Mukhlisin, A., & Soemarno, S. (2020). Estimasi Kandungan Klorofil Tanaman Kopi Robusta (Coffea canephora var. Robusta) menggunakan Normalized Difference Vegetation Index (NDVI) du Bangelan, Wonosari, Malang. *Jurnal Tanah dan Sumberdaya Lahan*, *7*(2), 329–339. https://doi.org/10.21776/ub.jtsl.2020.007.2.18

Mulyani, A., Mulyanto, B., Barus, B., Retno Panuju, D., Husnain, dan, & Besar Litbang Sumberdaya Lahan Pertanian, B. (2022). Analisis Kapasitas Produksi Lahan Sawah untuk Ketahanan Pangan Nasional Menjelang Tahun 2045 Analysis of Rice Field Production Capacity for National Food Security By 2045. *Jurnal Sumberdaya Lahan*, *16*(1), 33–50. https://doi.org/10.21082/jsdl.v16n1.2022.33-50

Narin, O. G., Abdikan, S., Gullu, M., Lindenbergh, R., Balik Sanli, F., & Yilmaz, I. (2024). Improving global digital elevation models using space-borne GEDI and ICESat-2 LiDAR altimetry data. *International Journal of Digital Earth*, *17*(1). https://doi.org/10.1080/17538947.2024.2316113

NASA. (2024). *GEDI Lidar*.

NASA GEDI. (2019, Maret 25). *GEDI L4A Raster Aboveground Biomass Density, Version 2.1*.

Navar, J. (2010). *2 Measurement and Assessment Methods of Forest Aboveground Biomass: A Literature Review and the Challenges Ahead*. 202.

Nesha, M. K., Hussin, Y. A., van Leeuwen, L. M., & Sulistioadi, Y. B. (2020). Modeling and mapping aboveground biomass of the restored mangroves using ALOS-2 PALSAR-2 in East Kalimantan, Indonesia. *International Journal of Applied Earth Observation and Geoinformation*, *91*. https://doi.org/10.1016/j.jag.2020.102158

Pham, L. T. H., & Brabyn, L. (2017). Monitoring mangrove biomass change in Vietnam using SPOT images and an object-based approach combined with machine learning algorithms. *ISPRS Journal of Photogrammetry and Remote Sensing*, *128*, 86–97. https://doi.org/10.1016/j.isprsjprs.2017.03.013

Pham, T. D., Le, N. N., Ha, N. T., Nguyen, L. V., Xia, J., Yokoya, N., To, T. T., Trinh, H. X., Kieu, L. Q., & Takeuchi, W. (2020). Estimating mangrove above-ground biomass using extreme gradient boosting decision trees algorithm with fused sentinel-2 and ALOS-2 PALSAR-2 data in can Gio biosphere reserve, Vietnam. *Remote Sensing*, *12*(5). https://doi.org/10.3390/rs12050777

Pham, T. D., Yokoya, N., Xia, J., Ha, N. T., Le, N. N., Nguyen, T. T. T., Dao, T. H., Vu, T. T. P., Pham, T. D., & Takeuchi, W. (2020). Comparison of machine learning methods for estimating mangrove above-ground biomass using multiple source remote sensing data in the red river delta biosphere reserve, Vietnam. *Remote Sensing*, *12*(8). https://doi.org/10.3390/RS12081334

Poley, L. G., & McDermid, G. J. (2020). A systematic review of the factors influencing the estimation of vegetation aboveground biomass using unmanned aerial systems. Dalam *Remote Sensing* (Vol. 12, Nomor 7). MDPI AG. https://doi.org/10.3390/rs12071052

Pronk, M., Hooijer, A., Eilander, D., Haag, A., de Jong, T., Vousdoukas, M., Vernimmen, R., Ledoux, H., & Eleveld, M. (2024). DeltaDTM: A global coastal digital terrain model. *Scientific Data*, *11*(1). https://doi.org/10.1038/s41597-024-03091-9

Purnamasari, E., Kamal, M., Wicaksono, P., Faqih Hidayatullah, M., & Susetyo, B. B. (2024). *Multi-spatial Resolution Imagery to Estimate Above-Ground Carbon Stocks in Mangrove Forests*. www.joiv.org/index.php/joiv

Rijal, S. S., Pham, T. D., Noer'Aulia, S., Putera, M. I., & Saintilan, N. (2023). Mapping Mangrove Above-Ground Carbon Using Multi-Source Remote Sensing Data and Machine Learning Approach in Loh Buaya, Komodo National Park, Indonesia. *Forests, 14*(1). https://doi.org/10.3390/f14010094

Selvaraj, J. J., & Gallego Pérez, B. E. (2023). Estimating mangrove aboveground biomass in the Colombian Pacific coast: A multisensor and machine learning approach. *Heliyon*, *9*(11). https://doi.org/10.1016/j.heliyon.2023.e20745

Shendryk, Y. (2022). Fusing GEDI with earth observation data for large area aboveground biomass mapping. Dalam *International Journal of Applied Earth Observation and Geoinformation* (Vol. 115). Elsevier B.V. https://doi.org/10.1016/j.jag.2022.103108

Song, J., Duan, X., Wu, J., Ma, B., & Liu, X. (2023). *Comparative analysis of machine learning algorithms and scales for estimating boreal forest above ground biomass in the Qilian Mountains, China*. https://doi.org/10.21203/rs.3.rs-3448183/v1

Su, H., Shen, W., Wang, J., Ali, A., & Li, M. (2020). Machine learning and geostatistical approaches for estimating aboveground biomass in Chinese subtropical forests. *Forest Ecosystems*, *7*(1). https://doi.org/10.1186/s40663-020-00276-7

The Nature Conservancy. (2024). *Optical and Radar Remote Sensing*.

Tian, Y., Huang, H., Zhou, G., Zhang, Q., Tao, J., Zhang, Y., & Lin, J. (2021). Aboveground mangrove biomass estimation in Beibu Gulf using machine learning and UAV remote sensing. *Science of the Total Environment*, *781*. https://doi.org/10.1016/j.scitotenv.2021.146816

Tudip. (2024). *What Is Remote Sensing and Its Applications?*

Uddin, I., Awan, H. H., Khalid, M., Khan, S., Akbar, S., Sarker, M. R., Abdolrasol, M. G. M., & Alghamdi, T. A. H. (2024). A hybrid residue based sequential encoding mechanism with XGBoost improved ensemble model for identifying 5-hydroxymethylcytosine modifications. *Scientific Reports*, *14*(1). https://doi.org/10.1038/s41598-024-71568-z

Wirasatriya, A., Pribadi, R., Iryanthony, S. B., Maslukah, L., Sugianto, D. N., Helmi, M., Ananta, R. R., Adi, N. S., Kepel, T. L., Ati, R. N. A., Kusumaningtyas, M. A., Suwa, R., Ray, R., Nakamura, T., & Nadaoka, K. (2022). Mangrove Above-Ground Biomass and Carbon Stock in the

Karimunjawa-Kemujan Islands Estimated from Unmanned Aerial Vehicle-Imagery. *Sustainability (Switzerland)*, *14*(2). https://doi.org/10.3390/su14020706

Zadbagher, E., Marangoz, A. M., & Becek, K. (2024). Estimation of above-ground biomass using machine learning approaches with InSAR and LiDAR data in tropical peat swamp forest of Brunei Darussalam. *IForest* , *17*(3), 172–179. https://doi.org/10.3832/ifor4434-017