

DAFTAR PUSTAKA

- Aguaron, E., McPherson, E. G. (2012). Chapter 3: Comparison of Methods for Estimating Carbon Dioxide Storage by Sacramento's Urban Forest. Dalam *Carbon Sequestration in Urban Ecosystems*, pp. 43–71. Springer. <https://doi.org/10.1007/978-94-007-2366-5>.
- Amriyah, Q., Arief, R., Dyatmika, H. S., & Maulana, R. (2019). Analisis Perbandingan Data Level-1 Sentinel 1A/B (Data SLC dan GRD) menggunakan Software SNAP dan GAMMA. *Seminar Nasional Penginderaan Jauh Ke-6 Tahun 2019 Analisis*, pp. 533–543.
- Andersen, H. E. (2019). Sampling Designs for SAR-Assisted Forest Biomass Surveys. Dalam *The SAR Handbook: Comprehensive Methodologies for Forest Monitoring and Biomass Estimation*. SERVIR Global Science Coordination. <https://doi.org/10.1515/9783110289039.734>.
- Anderson, J. R. (1971). Land Use Classification Schemes Used in Selected Recent Geographic Applications of Remote Sensing. *Photogrammetric Engineering*, 37(4), 379 - 387.
- Anderson, J. R., Hardy, E. E., Roach, J. T., & Witmer, R. E. (1976). A Land Use and Land Cover Classification System for Use with Remote Sensor Data. *Geological Survey Professional Paper 964*.
- Asner, G. P., & Mascaro, J. (2014). Mapping Tropical Forest Carbon: Calibrating Plot Estimates to a Simple LiDAR Metric. *Remote Sensing of Environment*, 140, 614–624. <https://doi.org/10.1016/j.rse.2013.09.023>
- Badan Pusat Statistik Kota Samarinda. 2019. Kecamatan Sungai Pinang Dalam Angka Tahun 2019. Samarinda: BPS Kota Samarinda.
- Basuki, T. M., van Laake, P. E., Skidmore, A. K., & Hussin, Y. A. (2009). Allometric Equations for Estimating the Above-Ground Biomass in Tropical Lowland Dipterocarp Forests. *Forest Ecology and Management*, 257, 1684–1694. <https://doi.org/10.1016/j.foreco.2009.01.027>
- Berger, C., Werner, S., Wigley-coetsee, C., Smit, I., & Schmullius, C. (2019). Multi-Temporal Sentinel-1 Data for Wall-To-Wall Herbaceous Biomass Mapping In Kruger National Park , South Africa — First Results. *IEEE Geoscience and Remote Sensing Symposium 2019*, 7358–7360.
- Berninger, A., Lohberger, S., Stängel, M., & Siegert, F. (2018). SAR-Based Estimation of Above-Ground Biomass and Its Changes in Tropical Forests of Kalimantan Using L- and C-Band. *Remote Sensing*, 10(6). <https://doi.org/10.3390/rs10060831>.



- Brown, S. (1997). Estimating Biomass and Biomass Change of Tropical Forests: a Primer. *FAO Forestry Paper*, 134, pp. 13–33.
- Cahyawati, A. (2017). Analisis Citra ALOS PALSAR untuk Estimasi Stok Karbon Di Atas Permukaan pada Tegakan Tiap Ekosistem Hutan Di SPTN I Sukadana Taman Nasional Gunung Palung, Provinsi Kalimantan Barat. Skripsi. Fakultas Geografi, Universitas Gadjah Mada.
- Cenzo, A. Di. (1981). Synthetic Aperture Radar and Digital Processing: An Introduction. National Aeronautics and Space Administration.
- Chan, Y. K., & Koo, V. C. (2008). An Introduction to Synthetic Aperture Radar (SAR). *Progress In Electromagnetics Research B*, 2, 27–60. <https://doi.org/10.2528/pierb07110101>
- Chaturvedi, R. K., Raghubanshi, A. S., & Singh, J. S. (2011). Carbon Density and Accumulation in Woody Species of Tropical Dry Forest in India. *Forest Ecology and Management*, 262, 1576–1588. <https://doi.org/10.1016/j.foreco.2011.07.006>
- Chave, J., Andalo, C., Brown, S., Cairns, M., Chambers, J., Earnus, Q. D., Folster, H., Fromard, F., Higuchi, N., Kira, T., Lescure, J. P., Nelson, B. W., Ogawa, H., Puig, H., Riera, B., Yamakura, T. (2005). Tree Allometry and Improved Estimation of Carbon Stocks and Balance in Tropical Forests. *Oecologia*, 145, 87–99. <https://doi.org/https://doi.org/10.1007/s00442-005-0100-x>
- Chave, J., Réjou-Méchain, M., Búrquez, A., Chidumayo, E., Colgan, M. S., Delitti, W. B. C., Duque, A., Eid, T., Fearnside, P. M., Goodman, R. C., Henry, M., Martínez-Yrizar, A., Mugasha, W. A., Muller-Landau, H. C., Mencuccini, M., Nelson, B. W., Ngomanda, A., Nogueira, E. M., Ortiz-Malavassi, E., ... Vieilledent, G. (2014). Improved Allometric Models to Estimate the Aboveground Biomass of Tropical Trees. *Global Change Biology*, 20(10), 3177–3190. <https://doi.org/10.1111/gcb.12629>.
- Cohen, J. (1960). A Coefficient of Agreement for Nominal Scales. *Educational and Psychological Measurement*, 60, 27 - 46.
- Cohen, L., Manion, L., Morrison, K. (2007). Research Methods in Education. Edisi ke-6. New York: Routledge Falmer.
- Crockett, M. T. (2013). An Introduction to Synthetic Aperture Radar Imaging. *Utah Space Grant Consortium*. <https://doi.org/10.5670/oceanog.2013.28>
- Danoedoro, P. (2012). Pengantar Penginderaan Jauh Digital. Yogyakarta: Penerbit Andi.



- Das, S., & Singh, T. P. (2016). Forest Type, Diversity and Biomass Estimation in Tropical Forests of Western Ghat of Maharashtra Using Geospatial Techniques. *Small-Scale Forestry*, 15(4), 517–532. <https://doi.org/10.1007/s11842-016-9337-y>
- Devagiri, G. M., Money, S., Singh, S., Dadhawal, V. K., Patil, P., Khaple, A., Devakumar, A. S., & Hubballi, S. (2013). Assessment of Above Ground Biomass and Carbon Pool in Different Vegetation Types of South Western Part of Karnataka, India using Spectral Modeling. *Tropical Ecology*, 54(2), 149–165.
- Effendi, J. (2019). Implementasi Peraturan Daerah Nomor 2 Tahun 2014 tentang Rencana Tata Ruang Wilayah Terkait Pelaksanaan Ruang Terbuka Hijau di Kota Samarinda. Tesis. Fakultas Hukum, Universitas Islam Indonesia.
- ESA. (2012). Sentinel-1: ESA's Radar Observatory Mission for GMES Operational Services. The Netherland: European Space Agency.
- ESRI. (2007). ArcGIS 9.2 Desktop Help "Standard Classification Schemes: Standard Deviation". Diakses tanggal 17 Februari 2021. http://webhelp.esri.com/arcgisdesktop/9.2/index.cfm?TopicName=Standard_deviation.
- Fonseca, W., Alice, F. E., & Rey-Benayas, J. M. (2012). Carbon Accumulation in Aboveground and Belowground Biomass and Soil of Different Age Native Forest Plantations In The Humid Tropical Lowlands of Costa Rica. *New Forests*, 43(2), 197–211. <https://doi.org/10.1007/s11056-011-9273-9>.
- Forest Watch Indonesia. (2009). Penghitungan Biomassa & Potensi Karbon, Studi Kasus: Kawasan Kelola SHK Lestari di Tahura Wan Abburrahman dan Kawasan Kelola Masyarakat di Pekandangan, Way Seputih, Provinsi Lampung. Bogor: Forest Watch Indonesia.
- Godwin, C., Chen, G., & Singh, K. K. (2015). The Impact Of Urban Residential Development Patterns On Forest Carbon Density: An Integration of LiDAR, aerial photography and field mensuration. *Landscape and Urban Planning*, 136, 97–109. <https://doi.org/10.1016/j.landurbplan.2014.12.007>
- Hairiyah, K., Ekadinata, A., Sari, R. R., Rahayu, S. (2011). Pengukuran Cadangan Karbon: Dari Tingkat Lahan ke Bentang Lahan. World Agroforestry Centre.
- Hermayani, R. (2018). Analisis Citra Sentinel-1A untuk Estimasi Stok Karbon di Atas Permukaan (*Above Ground Carbon*) Hutan Mangrove Pulau Kemujan, Taman Nasional Karimunjawa. Skripsi. Fakultas Geografi, Universitas Gadjah Mada.



- Hu, Y., & Jia, G. (2010). Influence of Land Use Change On Urban Heat Island Derived from Multi-Sensor Data. *International Journal of Climatology*, 30(9), 1382–1395. <https://doi.org/10.1002/joc.1984>
- IPCC. (2006). IPCC Guidelines for National Greenhouse Gas Inventories. Hayama, Kanagawa: Institute for Global Environmental Strategies (IGES).
- Jensen, J. R. (2014). Remote Sensing of the Environment, An Earth Resource Perspective. Edisi ke-2. New York: Prentice Hall.
- Jin, M., Dickinson, R. E., & Zhang, D. L. (2005). The Footprint Of Urban Areas On Global Climate As Characterized by MODIS. *Journal of Climate*, 18(10), 1551–1565. <https://doi.org/10.1175/JCLI3334.1>
- Jo, H. K. (2002). Impacts of Urban Greenspace On Offsetting Carbon Emissions For Middle Korea. *Journal of Environmental Management*, 64(2), 115–126. <https://doi.org/10.1006/jema.2001.0491>
- Karsenty, A., Blanco, C., & Dufour, T. (2003). Forest and Climate Change: Instruments Related to the United Nations Framework Convention on Climate Change and Their Potential for Sustainable Forest Management in Africa. Roma: *Food and Agriculture Organization of The United Nations (FAO)*.
- Kenzo, T., Furutani, R., dan Hattori, D. (2009). Allometric Equations for Accurate Estimation of Above-Ground Biomass in Logged-Over Tropical Rainforests in Sarawak, Malaysia. *Journal of Forest Research*, 14(6), 365–372. <https://doi.org/10.1007/s10310-009-0149-1>
- Ketterings, Q. M., Coe, R., Van Noordwijk, M., Ambagau, Y., & Palm, C. A. (2001). Reducing Uncertainty in the Use of Allometric Biomass Equations for Predicting Above-Ground Tree Biomass in Mixed Secondary Forest. *Forest Ecology and Management*, 146, 199–209. [https://doi.org/10.1016/S0378-1127\(00\)00460-6](https://doi.org/10.1016/S0378-1127(00)00460-6)
- Khorram, S., Koch, F. H., van der Wiele, C. F., Nelson, S. A. C. (2012). *Remote Sensing* (J. N. Pelton (ed.)). Springer. <https://doi.org/10.2528/PIERC13030401>
- Kristian, G. (2014). Estimasi Stok Karbon Di Atas Permukaan Tanah untuk Vegetasi Tegakan Ruang Terbuka Hijau Sebagian Kota Semarang Melalui Transformasi Indeks Vegetasi Citra ALOS AVNIR-2. Skripsi. Fakultas Geografi, Universitas Gadjah Mada.
- Krooks, A., Kaasalainen, S., Kankare, V., Joensuu, M., Raunonen, P., & Kaasalainen, M. (2014).



Tree Structure Vs. Height From Terrestrial Laser Scanning And Quantitative Structure Models. *Silva Fennica*, 48(2), 1–11. <https://doi.org/10.14214/sf.1125>

- Laurin, G. V., Balling, J., Corona, P., Mattioli, W., Papale, D., Puletti, N., Rizzo, M., Truckenbrodt, J., & Urban, M. (2018). Above-ground Biomass Prediction By Sentinel-1 Multitemporal Data In Central Italy With Integration Of ALOS-2 And Sentinel-2 Data. *Journal of Applied Remote Sensing*, 12(01), 1. <https://doi.org/10.1117/1.jrs.12.016008>
- Lillesand, T. M., Kiefer, R. W., Chipman, J. W. (2007). Remote Sensing and Image Interpretation. Edisi ke-6. New Jersey: John Wiley & Sons, Inc.
- Lillesand, T. M., Kiefer, R. W., Chipman, J. W. (2015). Remote Sensing and Image Interpretation. Edisi ke-7. New York: John Wiley & Sons, Inc. <https://doi.org/10.14358/pers.81.8.615>.
- Lu, D. (2006). The Potential And Challenge Of Remote Sensing-Based Biomass Estimation. *International Journal of Remote Sensing*, 27(7), 1297–1328. <https://doi.org/10.1080/01431160500486732>.
- Manuri, S., Brack, C., Noor'an, F., Rusolono, T., Anggraini, S. M., Dotzauer, H., & Kumara, I. (2016). Improved Allometric Equations For Tree Aboveground Biomass Estimation In Tropical Dipterocarp Forests of Kalimantan, Indonesia. *Forest Ecosystems*, 3(28). <https://doi.org/10.1186/s40663-016-0087-2>.
- Margaretha, E. W. (2013). Estimasi Cadangan Karbon Vegetasi Tegakan di Kota Yogyakarta dan Sekitarnya Berbasis ALOS AVNIR-2. Skripsi. Fakultas Geografi, Universitas Gadjah Mada.
- McCoy, R. M. (2005). Field Methods in Remote Sensing. New York: The Guilford Press. http://doi.wiley.com/10.1111/j.1541-0064.2006.00161_2.x.
- Meyer, F. (2019). Spaceborne Synthetic Aperture Radar: Principles, Data Access, and Basic Processing Techniques. Dalam *The Synthetic Aperture Radar (SAR) Handbook: Comprehensive Methodologies for Forest Monitoring and Biomass Estimation*. Huntsville: SERVIR Global Science Coordination. <https://gis1.servirglobal.net/TrainingMaterials/SAR/Chp2Content.pdf>
- Munir, M. (2017). Sekuestrasi Karbon Dari Berbagai Tipe Habitat Terrestrial Di Gresik , Jawa Timur Secara Non-Destructive. Skripsi. Fakultas Matematika dan Ilmu Pengetahuan Alam, Institut Teknologi Sepuluh Nopember. <http://repository.its.ac.id/47266/>.
- Murdiyarsa, D., Rosalina, U., Hairiah, K., Muslihat, L., Suryadiputra, I. N. N., & Jaya, A. (2004). Petunjuk Lapangan: Pendugaan Cadangan Karbon pada Lahan Gambut. Bogor: Wetlands



- Ostadhashemi, R., Shahraji, T. R., Roehle, H., & Limaie, S. M. (2014). Estimation of Biomass And Carbon Storage Of Tree Plantations In Northern Iran. *Journal of Forest Science*, 60(9), 363–371. <https://doi.org/10.17221/55/2014-jfs>.
- Peraturan Menteri Pekerjaan Umum Nomor 5 Tahun 2008. Pedoman Penyediaan dan Pemanfaatan Ruang Terbuka Hijau di Kawasan Perkotaan. 26 Mei 2008. Kementerian Pekerjaan Umum dan Penataan Ruang. Jakarta.
- Picard, N., Andre-Saint, L., Henry, M. (2012). Manual for Building Tree Volume and Biomass Allometric Equations from Field Measurement to Prediction. Food and Agricultural Organization of the United Nations, Rome, and Centre de Cooperation Internationale en Recherche Agronomique pour le Developpement, Montpellier.
- Poudyal, N. C., Siry, J., & Bowker, J. M. (2011). Urban Forests And Carbon Markets: Buyers' Perspectives. *Journal of Forestry*, 109(7), 378–385. <https://doi.org/10.1093/jof/109.7.378>
- Pratama, L. D. Y. (2019). Model Estimasi Stok Karbon Atas Permukaan Tegakan Karet (*Hevea brasiliensis*) menggunakan Citra Sentinel 2A Kasus di Perkebunan Karet PTPN IX Kebun Ngobo dan Kebun Getas, Kabupaten Semarang. Skripsi. Fakultas Geografi, Universitas Gadjah Mada.
- Ravindranath, N. H., Chaturvedi, R. K., & Murthy, I. K. (2008). Forest Conservation, Afforestation and Reforestation in India: Implications for Forest Carbon Stocks. *Current Science*, 95(2), 216–222.
- Richards, J. A. (2009). Remote Sensing With Imaging Radar: A Review. New York: Springer. [https://doi.org/10.1016/0016-7185\(70\)90029-1](https://doi.org/10.1016/0016-7185(70)90029-1)
- Saatchi, S. (2019). SAR Methods for Mapping and Monitoring Forest Biomass. Dalam *The SAR Handbook: Comprehensive Methodologies for Forest Monitoring and Biomass Estimation*. Huntsville: SERVIR Global Science Coordination. <https://doi.org/10.1515/9783110289039.176>
- Santi, E., Paloscia, S., Pettinato, S., Fontanelli, G., Mura, M., Zolli, C., Maselli, F., Chiesi, M., Bottai, L., & Chirici, G. (2017). The Potential Of Multifrequency SAR Images For Estimating Forest Biomass In Mediterranean Areas. *Remote Sensing of Environment*, 200(February), 63–73. <https://doi.org/10.1016/j.rse.2017.07.038>
- Santoso, S. (2010). Statistik Parametrik: Konsep dan Aplikasi dengan SPSS. Jakarta: Penerbit PT.



- Sarwono, J. (2006). *Metode Penelitian Kuantitatif dan Kualitatif*. Yogyakarta: Graha Ilmu.
- Sidiq, W. (2013). *Pemanfaatan Penginderaan Jauh dan Sistem Informasi Geografis untuk Evaluasi dan Arahan Pengembangan Ruang Terbuka Hijau di Kota Semarang*. Skripsi. Fakultas Geografi, Universitas Gadjah Mada.
- Small, D. (2011). Flattening Gamma: Radiometric Terrain Correction for SAR Imagery. *IEEE Transactions on Geoscience and Remote Sensing*, 49 (8), 1 – 13.
- Stickler, C. M., Nepstad, D. C., Coe, M. T., McGrath, D. G., Rodrigues, H. O., Walker, W. S., Soares-Filho, B. S., & Davidson, E. A. (2009). The Potential Ecological Costs And Cobenefits Of REDD: A Critical Review And Case Study From The Amazon Region. *Global Change Biology*, 15(12), 2803–2824. <https://doi.org/10.1111/j.1365-2486.2009.02109.x>
- Strohbach, M. W., & Haase, D. (2012). Above-ground Carbon Storage By Urban Trees In Leipzig, Germany: Analysis Of Patterns In A European City. *Landscape and Urban Planning*, 104(1), 95–104. <https://doi.org/10.1016/j.landurbplan.2011.10.001>
- Sugiyono. (2008). *Statistika untuk Penelitian*. Bandung: Alfabeta.
- Sugiyono. (2016). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Bandung: Alfabeta.
- Sutanto. (1986). *Penginderaan Jauh Jilid 1*. Yogyakarta: Gadjah Mada University Press.
- Sutanto. (2016). *Metode Penelitian Penginderaan Jauh*. Edisi Revisi. Yogyakarta: Penerbit Ombak.
- Sutaryo, D. (2009). *Penghitungan Biomassa: Sebuah Pengantar untuk Studi Karbon dengan Perdagangan Karbon*. Bogor: Wetlands International Indonesia Programme.
- Tavasoli, N., Arefi, H., Samiei-Esfahany, S., & Ronoud, Q. (2019). Modelling the Amount Of Carbon Stock Using Remote Sensing In Urban Forest And Its Relationship With Land Use Change. *International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences - ISPRS Archives*, 42(4/W18), 1051–1058. <https://doi.org/10.5194/isprs-archives-XLII-4-W18-1051-2019>
- Tobler, W. (1987). Measuring Spatial Resolution. Beijing: *Land Resources Information Systems Conference*.
- Torres, R., Snoeij, P., Geudtner, D., Bibby, D., Davidson, M., Attema, E., Potin, P., Rommen, B. Ö., Floury, N., Brown, M., Traver, I. N., Deghaye, P., Duesmann, B., Rosich, B., Miranda, N., Bruno, C., L'Abbate, M., Croci, R., Pietropaolo, A., ... Rostan, F. (2012). GMES



Sentinel-1 mission. *Remote Sensing of Environment*, 120, 9–24.
<https://doi.org/10.1016/j.rse.2011.05.028>

- Tran, H., Uchihama, D., Ochi, S., & Yasuoka, Y. (2006). Assessment with Satellite Data Of The Urban Heat Island Effects In Asian Mega Cities. *International Journal of Applied Earth Observation and Geoinformation*, 8(1), 34–48. <https://doi.org/10.1016/j.jag.2005.05.003>.
- Ukrainski, P. (2016). Supervised Classification Help: ROI Separability. Diakses tanggal 15 Februari 2021. <http://www.50northspatial.org/supervised-classification-help-roi-separability/>.
- Undang-Undang Republik Indonesia Nomor 26 Tahun 2007. Penataan Ruang. 26 April 2007. Lembaran Negara Republik Indonesia Nomor 68 Tahun 2007. Jakarta.
- Van Pham, M., Pham, T. M., Viet Du, Q. V., Bui, Q. T., Van Tran, A., Pham, H. M., & Nguyen, T. N. (2019). Integrating Sentinel-1A SAR Data And GIS To Estimate Aboveground Biomass And Carbon Accumulation For Tropical Forest Types In Thuan Chau District, Vietnam. *Remote Sensing Applications: Society and Environment*, 14(September 2017), 148–157. <https://doi.org/10.1016/j.rsase.2019.03.003>
- Vargas-Larreta, B., López-Sánchez, C. A., Corral-Rivas, J. J., López-Martínez, J. O., Aguirre-Calderón, C. G., & Álvarez-González, J. G. (2017). Allometric Equations For Estimating Biomass And Carbon Stocks In The Temperate Forests Of North- Western Mexico. *Forests*, 8(8), 1–20. <https://doi.org/10.3390/f8080269>
- Walpole, R. E. (1995). Pengantar Statistika. Edisi ke-3. Jakarta: Penerbit Gramedia.
- Wang, V., & Gao, J. (2020). Estimation of Carbon Stock In Urban Parks: Biophysical Parameters, Thresholds, Reliability, And Sampling Load By Plant Type. *Urban Forestry and Urban Greening*, 55, 126852. <https://doi.org/10.1016/j.ufug.2020.126852>
- Wibowo, A., Ginoga, K., Nurfatriani, F., Dwiprabowo, H., Ekawati, S., Krisnawati, H., & Siregar, C. A. (2010). REDD+ & Forest Governance. In *REDD+ & Forest Governance*. Pusat Penelitian Sosial Ekonomi dan Kebijakan Kehutanan, Balitbang Kehutanan. http://www.forda-mof.org/files/REDD_Forest_Governance.pdf
- Zaki, N. A. M., Latif, Z. A., Zainal., M. Z. (2016). Aboveground Biomass and Carbon Stock Estimation using Double Sampling Approach and Remotely-Sensed Data. *Jurnal Teknologi (Sciences & Engineering) Universiti Teknologi Malaysia*, 78(5–4), 57–62.