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Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

DAFTAR PUSTAKA

Abebe, G., Getachew, D., Ewunetu, A., 2022, "Analysing Land Use/ Land Cover Changes and Its Dynamics using Remote Sensing and GIS in Gubalafito District, Northeastern Ethiopia", *SN Applied Sciences*, (2022) 4:30.

Adrian, Nugratama, S., 2020, "Estimasi Besaran Emisi Karbon di Kabupaten Banyumas (Studi Kasus Tahun 2005 – 2016)", *Jurnal Ilmiah Pendidikan Geografi*, Vol. I, No. 1, 2020.

Aghaloo, K., Sharifi, A., 2025, "Integrated Spatial Prioritization Of Urban Nature-based Solutions For Climate Adaptation, Mitigation, And Justice", International Journal of Sustainable Development & World Ecology, 32:2, 224-241, DOI:10.1080/13504509.2024.2424988.

Agumanis, V., Tasirin, J.S. ,Nurmawan, W., 2022, "Pemetaan Simpanan Karbon Tanaman Peneduh Jalan Wolter Monginsidi Kota Manado", *In COCOS* (Vol. 14, No. 2).

Akter, R., Hasan, M.K., Roshni, N.A., Hemel, S.A.K., Islam, M.T., 2025, "Biomass Accumulation and Carbon Stocks of Soil and Tree Components of Different Agroforestry Systems In Tropical Moist Regions of Bangladesh", *Trees, Forests and People*, Volume 19, March 2025, 100793.

Alexander, L., Manson, S., Jain, V., Setiawan, I.M., Sadnyana, M.D., Syirazi, M., Wibowo, Z.A., Sukmadewi, D.K.T., Campera, M., 2025, "The Interplay Between Carbon Storage, Productivity, and Native Tree Density of Agroforestry Systems", *Land*, 2025, 14, 344, https://doi.org/10.3390/land14020344.

Aryandi, A., Zuharnen, Z, 2015, "Estimasi Stok Karbon Menggunakan Citra Alos Avnir-2 di Hutan Wanagama Kabupaten Gunungkidul", *Jurnal Bumi Indonesia*, Vol. 4, no. 3, 2015.

Askar, Nuthammachot, N., Phairuang, W., Wicaksono, P., Sayektiningsih, T., 2018, "Estimating Aboveground Biomass on Private Forest using Sentinel-2 Imagery", *Journal of Sensors*, Volume 2018, Article ID 674529, 11 pages.

Badan Pusat Statistik (BPS) Kabupaten Gunungkidul, 2025, "Kabupaten Gunungkidul dalam Angka 2025", Yogyakarta : BPS Kabupaten Gunungkidul.

Badan Standarisasi Nasional (BSN), 2019, *Standar Nasional Indonesia (SNI) 77241:2019 Pengukuran dan Penghitungan Cadangan Karbon – Pengukuran Lapangan untuk Penaksiran Cadangan Karbon berbasis Lahan*. Jakarta : Badan Standarisasi Nasional.

Badan Standarisasi Nasional (BSN), 2014, *Standar Nasional Indonesia (SNI) 7645-1:2014 Klasifikasi Penutup Lahan – Bagian 1 : Skala Kecil dan Menengah*. Jakarta : Badan Standarisasi Nasional.

Balasubramanian, A., Hari-Prasath, C.N., Radhakrishnan, S., Manimaran, V., Swathiga G., 2022, "Carbon Estimation and Carbon Yield Table for Teak (*Tectona grandis*) at Cauvery Delta Zone of Tamil Nadu", *Journal of Tropical Forest Science*, 34(3): 296–304 (2022).

Bappenas, 2022, Prediksi Kerugian Akibat Perubahan Iklim Rp 544 T, Begini Rinciannya, <https://lcdi-indonesia.id/2022/01/11/bappenas-prediksi-

UNIVERSITAS
GADJAH MADA
Optimalisasi Stok Karbon dalam Lanskap Kabupaten Gunungkidul untuk Mitigasi Perubahan Iklim : Pendekatan Nature-based Solution Restorasi Ekosistem dan Analisis Nilai Ekonomi Karbon
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Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

kerugian-akibat-perubahan-iklim-rp-544-t-begini-rinciannya/>, (diakses 15 Januari 2025).

Bhattacharya, A., Saikia, K., Takhelmayum, M., Sarkar, P. "Carbon Sequestration in the Bio-edaphic Ecosystem of National Highway-27 in Guwahati, Assam, India", *Heliyon*, 2020 Sep 19;6(9):e04969. doi: 10.1016/j.heliyon.2020.e04969. PMID: 32995637; PMCID: PMC7505764.

Brown, S, 1997, "Estimating Biomass and Biomass Change of Tropical Forests: a Primer", *FAO Forestry Paper* : 134.

Cao, J., Wu, X., Huang, F., Hu, B., Groves, C., Yang, H., Zhang, C. ,2018, "Global Significance Of The Carbon Cycle In The Karst Dynamic System: Evidence From Geological And Ecological Processes", *China Geology I*, 17–27.

Campbell, J.B, 1996, *Introduction to Remote Sensing. 2nd Edition*, New York : The Guilford Press.

Carbon Credits, 2025, Live Carbon Prices Today, <https://carboncredits.com/carbon-prices-today/>, (diakses 7 Mei 2025).

Chandrashekar, J. S., Mahalakshmi, M., 2023, "Carbon Sequestration of Tree Plantation in CASFOS Campus, Coimbatore, India", *Journal of Mines, Metals and Fuels*, 71(12C), 421–425.

Chavan, B., Rasal, G., 2012, "Total Sequestered Carbon Stock of Mangifera indica", *Journal of Environment and Earth Science*, Vol 2 No 1 (2012).

Choksi,P., Agrawal, A., Bialy, I., Chaturvedi, R., Davis, K. F., Dhyani, S., Fleischman, F., Lechner, J., Nagendra, H., Srininvasan, V., DeFries, R., 2023, "Combining Socioeconomic and Biophysical Data to Identify People-Centric Restoration Opportunities", *npj Biodiversity* (2023) 2:7

Cohen-Shacham, E., Walters, G., Janzen, C., Maginnis, S., 2016, "Nature-Based Solutions To Address Global Societal Challenges", Gland, Switzerland: *IUCN*, xiii + 97pp.

Cadizza, R., Rizanizarli, M., 2024, "Pengaturan Perdagangan Karbon dan Manfaat bagi Indonesia", *UNMUHA Law Journal*, Vol 1, No.1 Tahun 2024.

Damanik, M., Amru, K., Anjani, R., najib, N. N., Ura, R., Herningtyas, W., 2025, *IOP Conf. Ser.: Earth Environmental Science*, 1462 012003.

Danoedoro, P., 2012, *Pengantar Penginderaan Jauh Digital*, Yogyakarta : Penerbit Andi.

Donatien, L.M.B., Clobite B.B., Midel, M.L.M., 2024, "Comparing Sentinel-2 and Landsat 9 for Land Use and Land Cover Mapping Assesment in the North of Congo Republic : a Case Study in Sangha Region", *International Journal of Remote Sensing*, Vol. 45, NO. 22.

Eneji, I. S., Obinna, O., Azua, E.T., 2014. "Sequestration and Carbon Storage Potential of Tropical Forest Reserve and Tree Species Located Within Benue State of Nigeria", *Journal of Geoscience and Environment Protection*, 2, 157-166, http://dx.doi.org/10.4236/gep.2014.22022.

Energy Education, 2025, Carbon Pool , <https:// energyeducation.ca/encyclopedia/ Carbon_pool#cite_note-fao-1>, diakses 6 Juni 2025).

Fakultas Kehutanan Universitas Gadjah Mada, Dinas Lingkungan Hidup Kabupaten Gunungkidul, 2023, Laporan Akhir Kajian Karakteristik Monyet Ekor Panjang di Kawasan Karst Gunungsewu, Yogyakarta : Dinas Lingkungan

UNIVERSITAS
GADJAH MADA
Optimalisasi Stok Karbon dalam Lanskap Kabupaten Gunungkidul untuk Mitigasi Perubahan Iklim : Pendekatan Nature-based Solution Restorasi Ekosistem dan Analisis Nilai Ekonomi Karbon
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Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

Hidup Kabupaten Gunungkidul.

Faradika, M., Oktoyoki, H., Paulina, M., 2024, "Estimasi Cadangan Karbon di Beberapa Jenis Penggunaan Lahan di Indonesia", *Journal of Global Forest and Environmental Science*, Vol. 4, No. 2, December 2024.

Food and Agriculture Organization (FAO), 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 : Forest Products Division, FAO.

Food and Agriculture Organization (FAO), 1976, "A Framework for Land Evaluation", Roma : FAO Soils Bulletin, No. 32.

Gubernur Daerah Istimewa Yogyakarta, 2013, *Peraturan Gubernur Daerah Istimewa Yogyakarta Nomor 65 Tahun 2013*, Yogyakarta : Gubernur Daerah Istimewa Yogyakarta.

Hardjowigeno, S., Widiatmaka, 2018, *Evaluasi Kesesuaian Lahan dan Perencanaan Tata Guna Lahan Cetakan Kelima*, Yogyakarta : Gadjah Mada University Press.

Hisanah, N.N., Subiyanto, S., Nugraha, A. L., 2015, "Kajian Teknis Penerapan Generalisasi Peta Rupa Bumi Indonesia (RBI) dari Skala 1 : 50.000 menjadi skala 1 : 250.000", *Jurnal Geodesi Undip*, Volume 4, Nomor 4, Oktober 2015.

Indonesia, 2021, *Peraturan Presiden Republik Indonesia No. 98 Tahun 2021 tentang Penyelenggaraan Nilai Ekonomi Karbon Untuk Pencapaian Target Kontribusi Yang Ditetapkan Secara Nasional Dan Pengendalian Emisi Gas Rumah Kaca Dalam Pembangunan Nasional*, Jakarta : Presiden Republik Indonesia.

IPCC, 2023, *Climate Change 2023: Synthesis Report*, Switzerland : IPCC.

IPCC, 2019, *Refinement to the 2006 IPCC Guidelines for National Greenhouse Gas Inventories*, Switzerland : IPCC Published.

IPCC, 2018, *Annex I: Glossary.* In : *Global Warming of 1.5°C*. United Kingdom and New York : Cambridge University Press.

Irama, A.B., 2020, "Perdagangan Karbon di Indonesia : Kajian Kelembagaan dan Keuangan Negara", *Info Artha*, Volume 4 No. 01 (2020), 83 – 102.

Isah, M., Usman, A., Sotannde, O.A., 2025, "Carbon Sequestration Potentials of Selected Tree Species in Kanawa Forest Reserve, Gombe State, Nigeria", *Journal Of Arid Agriculture*, Vol. 26(1):48-60.

IUCN, 2020, *Guidance for using the IUCN Global Standard for Nature-based Solutions : A User-Friendly Framework for the Verifcation, Design and Scaling up of Nature-Based Solutions First Edition*, Switzerland : IUCN.

IUCN, 2016, WCC 2016 Resolution 069 : Defining Nature-based Solutions, <https://portals.iucn.org/library/node/46486>, (diakses 16 Januari 2025).

Joshi, R.K., Garkoti, S.C., 2025, "Ecosystem Carbon Storage, Allocation and Carbon Credit Values of Major Forest Types in The Central Himalaya", *Carbon Research*, (2025) 4:7.

Kabupaten Gunungkidul, 2025, *Kajian Indeks Kualitas Lahan Kabupaten Gunungkidul 2025*, Wonosari : Dinas Lingkungan Hidup Kabupaten Gunungkidul.

UNIVERSITAS
GADJAH MADA
Optimalisasi Stok Karbon dalam Lanskap Kabupaten Gunungkidul untuk Mitigasi Perubahan Iklim : Pendekatan Nature-based Solution Restorasi Ekosistem dan Analisis Nilai Ekonomi Karbon
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Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

Kabupaten Gunungkidul, 2011, *Peraturan Daerah Kabupaten Gunungkidul Nomor 6 Tahun 2011 tentang Rencana Tata Ruang Wilayah Kabupaten Gunungkidul Tahun 2010 – 2030*, Wonosari : Pemerintah Kabupaten Gunungkidul.

Kementerian Energi dan Sumber Daya Mineral (ESDM), 2012, *Penetapan Kawasan Bentang Alam Karst*, Jakarta : Kementerian Energi dan Sumber Daya Mineral.

Kementerian Lingkungan Hidup dan Kehutanan (KLHK), 2022, *Peraturan Menteri Lingkungan Hidup dan Kehutanan Nomor 21 tahun 2022 tentang Tata Laksana Penerapan Nilai Ekonomi Karbon*, Jakarta : Direktorat Jenderal Pengendalian Perubahan Iklim, Kementerian Lingkungan Hidup dan Kehutanan.

Kementerian Lingkungan Hidup dan Kehutanan (KLHK), 2022, *Rencana Operasional Indonesia's FOLU Net Sink 2030*, Jakarta : Direktorat Jenderal Pengendalian Perubahan Iklim, Kementerian Lingkungan Hidup dan Kehutanan.

Kementerian Lingkungan Hidup dan Kehutanan (KLHK), 2018, *Peraturan Menteri Lingkungan Hidup dan Kehutanan Nomor P.7/MENLHK/SETJEN/KUM.1/2/2018 tentang Pedoman Kajian kerentanan, Risiko, dan Dampak perubahan iklim*, Jakarta : Direktorat Jenderal Pengendalian Perubahan Iklim, Kementerian Lingkungan Hidup dan Kehutanan.

Kanniah, K.D., Abdullah, R., Siong, H.C., 2022, "Potential Carbon Storage and Sequestration by Urban Trees in Malaysia", In: Maruthaveeran, S., Chen, W.Y., Morgenroth, J. (eds) Urban Forestry and Arboriculture in Malaysia. Springer, Singapore. https://doi.org/10.1007/978-981-19-5418-4_6.

Keesstra, S., Nunes, J., Novara, A., Finger, D., Avelar, D., Kalantari, Z., Cerda, A., 2018, "The Superior Effect Of Nature-based Solutions In Land Management for Enhancing Ecosystem Services", *Science of the Total Environment* 610-611 (2018) 997 – 1009.

Kenzo, T., Himmapan, W., Yoneda, R., Tedsorn, N., Vacharangkura, T., Hitsuma, G., Noda, I.,2020, "General Estimation Models for Above-and Below-Ground Biomass of Teak (Tectona grandis) Plantations in Thailand", *Forest Ecology and Management* 457 (2020) 117701.

Kuyah, S., Muthuri, C., Wakaba, D., Cyamweshi, A.R., Kiprotich, P., Mukuralinda, A., 2024, "Allometric Equations and Carbon Sequestration Potential of Mango (*Mangifera indica*) and avocado (*Persea americana*) in Kenya", *Trees, Forests dan People*, 15 (2024) 100467.

Lestari, A.S.R.D., Bowo, H., Prijono, A., 2024, "Pendugaan Potensi Karbon Tersimpan pada Vegetasi Semua Tingkat Pohon di Taman Keanekaragaman Hayati di PT. Tirta Investama Plant Wonosobo", *Agroforetech*, Volume 2, Nomor 2, Juni 2024.

Lillesand, T.M., Kiefer, R.W., 2000, *Remote Sensing and Image Interpretation*, New York : John Wiley & Sons.

Livingston, C., Lincoln, N.K., 2023, "Determining Allometry and Carbon Sequestration Potential of Breadfruit (Artocarpus altilis) as a Climate-Smart Staple in Hawai'i", *Sustainibility*, 15, 15682.

UNIVERSITAS
GADJAH MADA
Optimalisasi Stok Karbon dalam Lanskap Kabupaten Gunungkidul untuk Mitigasi Perubahan Iklim : Pendekatan Nature-based Solution Restorasi Ekosistem dan Analisis Nilai Ekonomi Karbon
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Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

Malik, A.D., Nasrudin, A., Parikesit., Withaningsih, S, 2023, "Vegetation Stands Biomass and Carbon Stock Estimation using NDVI - Landsat 8 Imagery in Mixed Garden of Rancakalong, Sumedang, Indonesia", *IOP Conf. Ser.: Earth Environ*, Sci. 1211 012015.

Malunguja, G.K., Aligonza, S., Chowdhury, R., Kilonzo, M.B., Thakur, B., Devi, A., 2025, "Carbon Stocks and Sequestration Potential in Urban Reserve Forests : Insights For Climate Change Mitigation", *Next Sustainibility*, Volume 6, 2025, 100161.

Marhaento, H., Booij, M.J., Ahmed, N., 2021, "Quantifying Relative Contribution Of Land Use Change And Climate Change To Streamflow Alteration In The Bengawan Solo River, Indonesia", *Hydrological Science Journal*, Vol. 66, NO. 6, 1059–1068 https://doi.org/10.1080/02626667.2021.1921182.

Martin, J.G.C., Scolobig, A., Linnerooth-Bayer, J., Irshaid, J., Rodriguez, J.J.A., Fresolone-Caparros, A., Oen, A., 2025, "The Nature-based Solution Implementation Gap : A Review Of Nature-based Solution Governance Barriers and Enablers", *Journal of Environmental Management* 388 (2025) 126007.

de Mendonca, G.C., Abdo, M.T.V.N., da Costa, L.M., Costa, R. C. A., Pachecho, F. A. L., Ribeiro, M. C., Zakia, M. J. B., Borma, L. D. S., Pissarra, T. C. T., 2025, "Watershed's Spatial Targeting : Enhancing Payments for Ecosystem Services", *Ecosystem Services* 71 (2025) 101679.

to scale up agroecosystem restoration through nature-based solutions

Moreno, R., Nery, A., Zamora, R., Lora, A., Galan, C., 2024, "Contribution of Urban Trees to Carbon Sequestration and Reduction of Air Pollutants in Lima, Peru", *Ecosystem Services*, 67 (2024) 101618.

Morris, A., 2015, *A Practical Introduction to In-Depth Interviewing*, 10.4135/9781473921344.

Muhammad, A. K., 2004, *Hukum dan Penelitian Hukum*, halaman 134, Bandung : Citra Aditya.

Naik, S.K., Sarkar, P.K., Dash, B., Singh, A.K., Bahtt, B.P., 2021, "Biomass Production and Carbon Stock In Psidium Guajava Orchards Under Hot and Sub-Humid Climate", *Current Science*, 120. 1627-1635. 10.18520/cs/v120/i10/1627-1635.

NOAA, 2024, What Is The Difference Between Land Cover And Land Use, <https://oceanservice.noaa.gov/facts/lclu.html>, (diakses 11 Maret 2025).

Nurfafitriani, F., Darusman, D., Nurrochmat, D.R., Yustika, A.E., Muttaqin, M. Z., 2015, "Redesigning Indonesian Forest Fiscal Policy to Support Forest Conservation", Forest Policy and Economics, Vol 61 December 2015 Pages 39 – 50.

Nunery, J.S., Keeton, W.S., 2010, "Forest Carbon Storage In The Northeastern United States : Net Effects Of Harvesting Frequency, Post-Harvest Retention, And Wood Products", *Forest Ecology and Management*, Volume 259, Issue 8.

Otoritas Jasa Keuangan (OJK), 2023, *Peraturan Otoritas Jasa Keuangan Republik Indonesia Nomor 14 Tahun 2023 tentang Perdagangan Karbon melalui Bursa Karbon*, Jakarta : Otoritas Jasa Keuangan Republik Indonesia.

UNIVERSITAS
GADJAH MADA
Optimalisasi Stok Karbon dalam Lanskap Kabupaten Gunungkidul untuk Mitigasi Perubahan Iklim : Pendekatan Nature-based Solution Restorasi Ekosistem dan Analisis Nilai Ekonomi Karbon
Bambang Septian, Prof. Dr. Eko Haryono, M.Si.; Dr. Ir. Hero Marhaento, S.Hut., M.Si., IPM
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

Oxford Dictionary, 2019, Word of The Year 2019, <https://languages.oup.com/word-of-the-year/2019/#:~:text=Climate%20emergency%20is%20defined%20as,environmental%20damage%20resulting%20from%20it>, (diakses 10 Maret 2025).

Pascual, A., Godinho, S., Guerra-Hernandez, J., 2023, "Integrated LiDAR-supported Valuation Of Biomass And Litter In Forest Ecosystems. A Showcase In Spain", *Science of The Total Environment*, 897 (2023) 165364.

Patil, S. D., Kauthale, V. K., Nimbalkar, S. D., 2025, "Quantitative Estimation of Carbon Stock and Sequestration in Cashew Nut (*Anacardium Occidentale*) and Mango (*Mangifera Indica*) Orchards in Gujarat's Valsad District", *International Journal of Environmental Sciences*, Vol. 11 No. 24s, 2025.

Pitoyo, A. J., Irbah, A., Bestari, A.H., Nugrohi, S.F., 2024, "Pemetaan Lokasi Penerapan Nature-Based Solution melalui Pendekatan Berbasis Masyarakat sebagai Mitigasi Bencanan Tanah Longsor di Kecamatan Ngebel", *Jurnal Pengabdian, Riset, Kreativitas, Inovasi, dan Teknologi Tepat Guna*, Vol. 2, No. 1, Mei 2024, Hal. 212-219.

Proceeding of International Seminar on Achieving Resilient-Agriculture to Climate Change Through the Development of Climate-Based Risk Management Scheme, Bogor, 2009, *Atmospheric Carbon Dioxide Sequestration Trough Karst Denudation Process Preliminary Estimation from Gunung Sewu Karst*, Haryono, E., Adji, T.N., Widyastuti, M., Trijuni, S., Bogor : PERHIMPI.

Purnama, S.M., Hartono, H., 2014, "Aplikasi Citra Alos Avnir-2 untuk Estimasi Stok Karbon dan Serapan CO_2 dengan Menggunakan Indeks Vegetasi pada Hutan Tropis Kabupaten Gunungkidul", *Jurnal Bumi Indonesia*, Vol. 3, no. 2, 2014.

Ramos-Quispe, Y., Alarcon-Aguirre, G., Garate-Quispe, J., 2025, "Estimation of Anthropogenic Carbon Dioxide Emissions and Aboveground Carbon Stocks In Agroforestry Cacao Production Systems In The Southeastern Peruvian Amazon", *Journal of Ecological Engineering*, 2025, 26(8), 408–421.

Rathore, A.C., Kumar, A., Tomar, J.M.S., 2018, "Predictive models for biomass and carbon stock estimation in Psidium guajava on bouldery riverbed lands in North-Western Himalayas, India", *Agroforest Syst*, 92, 171–182 (2018). https://doi.org/10.1007/s10457-016-0023-z.

Reinhart, H., Putra, R.D., Majiid, M.A., Rafida, M.R., Maulita, N.S., 2022, "Karst of Gunung Sewu Land Use and Land Covers Dynamics: Spatio-Temporal Analysis", *Forum Geografi*. Vol. 36, No. 2.

Ritung, S., Wahyunto, A. F., Hidayat, H., 2007, Panduan Evaluasi Kesesuaian Lahan dengan Contoh Peta Arahan Penggunaan Lahan Kabupaten Aceh Barat. Bogor : Balai Penelitian Tanah dan World Agroforestry Centre (ICRAF).

Rohmah, T.L.S, Rachmadiarti, F., 2025, "Carbon Stock Analysis of Family Fabaceae in the Forest Area of Surabaya State University as An Effort to Conserve the Environment", *Jurnal Riset Biologi dan Aplikasinya*, 7 (2): 128-141.
DOI: DOI:10.26740/jrba.v7n2.p.128-141.

Rosianty, Y., Waluyo, E. A., Himawan, M. S. G., 2021, "Potensi Simpanan Karbon Pada Tanaman Angsana (*Pterocarpus Indicus Willd*) di Kecamatan Ilir Barat

UNIVERSITAS
GADJAH MADA
Optimalisasi Stok Karbon dalam Lanskap Kabupaten Gunungkidul untuk Mitigasi Perubahan Iklim : Pendekatan Nature-based Solution Restorasi Ekosistem dan Analisis Nilai Ekonomi Karbon
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Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

I Kota Palembang", *SYLVA: Jurnal Penelitian Ilmu-ilmu Kehutanan*, https://doi.org/10.32502/sylva.v10i1.3605.

Samasta, N.A., 2023, "Pengaruh Perdagangan Karbon terhadap Kondisi Ekologi di Indonesia", *Jurnal Pendidikan Biologi*. Vol : 1, No. 1, 2023, Page 1 – 8.

Santoso, N., Sutopo, Pambudi, G.P., Danarta, V.F., Wibisono, R.A., Astuti, T.P., Wicaksono, D.A., 2021, "Pendugaan Biomassa Dan Serapan Karbon Di Beberapa Areal Taman Hutan Kota Jakarta, Bekasi dan Bogor", *Jurnal Penelitian Hutan Tanaman*, Vol 18 No. 1, Juni 2021, 35-49.

Sari, S.R.K., Setiahadi, R., Wardhani, R.M., Sanyoto, R., Anom, P., 2021, "Strategy Mitigation Action Of Climate Change Of Land-Based In Geopark Karst Area Of Gunungsewu, Yogyakarta", Indonesia IOP Conf. Ser.: Earth Environ. Sci. 824 012071.

Setiani, P., 2020, *Sains Perubahan Iklim*, Jakarta : PT Bumi Aksara.

Shiferaw, H., Kassawmar, T., Zeleke, G., 2022, "Above and Belowground Woody-Biomass and Carbon Stock Estimations at Kunzila Watershed, Northwest Ethiopia", *Trees, Forests and People*, 7 (2022) 100204.

Slaymaker, O., 2009, "The Future of Geomorphology", *Geography Compass*, 3: 329-349.

Slaymaker, O., Spencer, T., Embleton-Hamann, C, 2021, "Recasting Geomorphology as a Landscape Science", *Geomorphology*. 384 (2021) 107723.

Sowinska-Swierkosz,B., Garcia, J., Wendling, L., 2024, "Linkages Between The Concept of Nature-based Solutions and The Notion Of Landscape", Ambio 2024, 53:227–241.

Sudirman, Kondolayuk, M.L., Sriwahyuningrum, A., Cahaya, I.M.E., Astuti, N.L.S., Setiawan, J., Tandirerung, W.Y., Rahmi, S., Nusantari, D.O., Indrawati, F., Fittriya, N.L., Aziza, N., Kurniawati, N., Wardhana, A., Hasanah, T., 2023, *Metodologi Penelitian I*, Bandung : Media Sains Indonesia.

Sutaryo, Dandun, 2009, *Penghitungan Biomassa : Sebuah Pengantar untuk Studi Karbon dan Perdagangan Karbon*, Bogor : Wetlands International Programme.

Tantuoyie, S.M., Muluneh, A., Danbara, T.T., 2025, "Land Suitability Evaluation Using GIS And Multicriteria Decision Analysis For Cashew Cultivation In The Abaya-Chamo Watershed, Ethiopia", *Smart Agricultural Technology*, Smart Agricultural Technology 10 (2025) 100744.

Tesalonika, R., Wala, G.N., 2025, "Analisis Yuridis dan Akuntansi dalam Implementasi Kebijakan Pajak Karbon Tahun 2025 menuju Kepatuhan dan Pelaporan Keuangan Pasca Penerapan", *Dinasti Accounting Review*, Vol 2 No. 3 Januari – March 2025.

Tol, R. S. J., 2025, "Meta-emulation: An Application to The Social Cost of Carbon", *Energy Economics*, 152 (2025) 109026.

United Nations Environment Programme (UNEP) dan International Union for Conservation of Nature (IUCN), 2021, *Nature-Based Solutions For Climate Change Mitigation*, Nairobi and Gland.

Vandariya, H., Ulva, J., Odedra, K. N., Bamaniya, J., Jadeja, B. A. Dr., 2025, "Carbon Sequestration Potential of Urban Tree Species: A Case Study from Porbandar, India", *Cities and the Environment (CATE)*, Vol. 18: Iss. 2,

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Wunder, S., 2006, "Are Direct Payments for Environmental Services Spelling Doom for Sustainable Forest Management in the Tropics?", *Ecology and Society*, 11. 10.5751/ES-01831-110223.

Xu, K., Chen, J., Feng, Y., Wang, J., Bai, Z., 2021, "How are Nature-Based Solutions Contributing to The Improvement of Ecosystem Quality in China : A Systematic Review", *Ecological Indicators* 155 (2023) 110985.

Widayani, P., 2024, Materi Kuliah : Penginderaan Jauh untuk Studi Lingkungan, Yogyakarta : Program Magister Ilmu Lingkungan Sekolah Pascasarjana, Universitas Gadjah Mada.

World Meteorological Organization (WMO), 2023, Greenhouse Gasses. <https://wmo.int/topics/greenhouse-gases>, (diakses 13 Maret 2025).

Yoga WN, Elric., Purwanto, R. H., 2008. Penaksiran Kandungan Karbon Hutan Rakyat Jenis Jati (*Tectona grandis*) di Desa Selopuro Kabupaten Wonogiri, <https://etd.repository.ugm.ac.id/penelitian/detail/167388>, diakses (10 Juni 2025). Skripsi : Universitas Gadjah Mada.

Zulqisthi, G., 2017, Potensi Penyerapan Karbon oleh Ekosistem Bentanglahan Karst Pesisir Biduk-Biduk, Kabupaten Berau, Provinsi Kalimantan Timur, Disertasi : Universitas Gadjah Mada.