DAFTAR PUSTAKA

Agustan, R. 2020. *Pemetaan Sebaran Mangrove Menggunakan Unmanned Aerial Vehicle (UAV) di Pulau Payung, Kecamatan Banyuasin II, Kabupaten Banyuasin, Sumatera Selatan.* Skripsi Sarjana Ilmu Kelautan FMIPA Universitas Sriwijaya. Inderalaya.

Akbar, N., Marus, I., Haji, I., Abdullah, S., Umalekhoa, S., Ibrahim, F.S., Ahmad, M., Ibrahim, A., Kahar, A. & Tahir, I., 2017. Struktur Komunitas Hutan Mangrove di Teluk Dodinga, Kabupaten Halmahera Barat Provinsi Maluku Utara. *Jurnal Enggao,* 2(1):78-89.

Anthoni, A., Schaduw, J. & Sondak, C., 2017. Persentase tutupan dan struktur komunitas mangrove di sepanjang pesisir Taman Nasional Bunaken bagian utara. *Jurnal Pesisir dan Laut Tropis*, 5(3):13-21.

Arisandi, P. 2002. *Mangrove hilang, pencemaran pantai pun datang.* www.ekoton.or.id, diakses tanggal 7 April 2010.

Arlt, G. 2008. Urban Green Volume – a Quality Indicator, ConAccount Urban Metabolism: Measuring the Ecological City. Leibniz Institut.

ASPRS, 2007, Digital Elevation Model Technologies and Applications: The DEM Users Manual, 2nd Edition, edited by David F. Maune, Bethesdha, Maryland.

Auliya, H., Asyari, M., and Jauhari, A. 2020. Korelasi diameter tajuk aerial dan diameter batang setinggi dada (130 cm) berbasis citra drone di Kawasan Hutan Dengan Tujuan Khusus (KHDTK) Mandiangin Kalimantan Selatan. Jurnal Sylva Scienteae, 03(3), 516 – 522.

Banu, T.P., Gheorghe Florian Borlea, & Constantin Banu. 2016. The use of drones in Forestry. *Journal of Environmental Science and Engineering*, 5(11), 557–562.

Bengen, D., 2002. Ekosistem dan Sumberdaya Alam Pesisir dan Laut serta Prinsip Pengelolaanya. Pusat Kajian Sumberdaya Pesisir dan Lautan, IPB, Bogor.

Darmadi, M.W. Lewaru, dan A.M.A. Khan 2012. Struktur Komunitas Vegetasi Mangrove Berdasarkan Karakteristik Substrat di Muara Harmin Desa Cangkring Kecamatan Cantigi Kabupaten Indramayu. 3 (2) :347 – 358

Dinas Kelautan dan Perikanan Pesisir Selatan. 2011. Data KP3K. Sumatera Barat. Painan.

Duarte, C.M., O.G. Hansen, and Udomluck, T. 1998. Relationship between sediment conditions and Mangrove *Rhizophora apiculata* Seedling growth and Nutrient stastus. Mar Ecol Prog Ser., 175 : 277 – 283.

Mukhtar, E. Raynaldo, A. Novarino, W. 2021. Carbon stock mapping using indexmangrove discrimination in Mandeh Bay, West Sumatra. AACL Bioflux 14(1):430-440.

Getzin, S.; Wiegand, K.; Schumacher, J.; Gougeon, F.A. Scale-dependent competition at the stand level assessed from crown areas. For. Ecol. Manag. 2008, 255, 2478–2485.

Gülci, S. (2019). The determination of some stand parameters using SfM-based spatial 3D point cloud in forestry studies: an analysis of data production in pure coniferous young forest stands. *Environmental Monitoring and Assessment*, 191(8).

Haala, N. and Cavegn, S. 2016. High Density Aerial Image Matching: State-of-The - Art and Future Prospect. ISPRS - International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, XLI-B4, 625–630.

Harahap SABN, Mahmudi M. 2014. Pemetaan sebaran hutan mangrove dan analisis pasial kesesuaian lahan budidaya tambak di pesisir kecamatan Gending kabupaten Probolinggo. *Journal of Environmental Engineering and Sustainable Technology* Vol. 1(2):75-78.

Harapan, T. S., Husna, A., Febriamansyah, T. A., Mutashim, M., Saputra, A., Taufiq, A., and Mukhtar, E. 2021. Above Ground Biomass Estimation of *Syzygium aromaticum* using structure from motion (SfM) derived from *Unmanned Aerial Vehicle* in Paninggahan Agroforest Area, West Sumatra. *Jurnal Biologi UNAND*, 9(1), 39-46.

Howes, J., D. Bakewell, and Y.R. Noor. 2003. Panduan Studi Burung Pantai, Bogor: Wetlands International-Indonesia Programme.

Hua, C., Qi, J., Shang, H., Hu, W., & Han, J. 2016. Detection of collapsed buildings with the aerial images captured from UAV. *Science China Information Sciences*, 59(3), 32102.

Iswanto, I. 2014. *"Konversi Data DSM Hasil Pengolahan Citra Foto UAV Menjadi Data DTM Menggunakan Software SAGA GIS"*. Institut Teknologi Nasional Malang.

Kamalia. 2012. Struktur Komunitas Hutan Mangrove di Perairan Pesisir Kelurahan Sawang Kecamatan Kundur Barat Kabupaten Karimun. Progam Studi Manajemen Sumberdaya Perairan. FIKP. Universitas Maritim Raja Ali Haji. Jurnal Kelautan dan Perikanan. 3(1): (1-8).

Keputusan Menteri Negara Lingkungan Hidup Nomor : 201. 2004. Kriteria Baku dan Pedoman Penentuan Kerusakan Mangrove. Deputi MENLH Bidang Kebijakan dan Kelembagaan Lingkungan Hidup : Jakarta.

Korhonen, L., Korhonen, K.T., Rautiainen, M. dan Stenberg, P. 2006. Estimation of forest canopy cover:a comparison of field measurement techniques. *Silva Fennica* 40(4), 577–588.

Kusmana, C., S. Wilarso, I. Hilwan, P. Pamoengkas, C. Wibowo, T Tiryana, A.Triswanto, Yunasfi, and Hamzah. 2003. *Teknik Rehabilitasi Mangrove*. Bogor: Fakultas Kehutanan IPB.

Laar A van and A. Akça. 2007. Forest Mensuration. Springer.

Lakitan, B. (2008). Dasar-dasar fisiologi tumbuhan. Raja Grafindo Persada. Jakarta.

Iizuka K, Itoh M, Shiodera S, Matsubara T, Dohar M, Watanabe K. Advantages of *Unmanned Aerial Vehicle* (UAV) photogrammetry for landscape analysis compared with satellite data: A case study of postmining sites in Indonesia. Cogent Geoscience. 2018;4(1):1498180.

Ma Q, Su Y, Guo Q. 2017. Comparison of Canopy Cover Estimation from Airborne LiDAR, Aerial Imagery, and Satellite Imagery. *IEEE J Sel Top Appl Earth Obs Remote Sens*; 10(9):4225–4236. doi:10.1109/JSTARS.2017.2711482.

Mnih, V., dan Hinton, G. E. 2010. Learning to detect roads in high-resolution aerial images. Paper presented at the European Conference on Computer Vision.

Mukhtar, E., F. Y. Rahmi., I. Okdianto., W. Novarino., Syamsuardi and Chairul. 2017. Ecological Study of Mangrove Forest in Mandeh Bay, West Sumatra, Indonesia: I. Structure and Composition of True Mangrove. *RJPBCS*. 8(2) : 107-111.

Mukhtar, E; A. Raynaldo, W. Novarino. 2021. Carbon stock mapping using the mangrove discrimination indices in Mandeh Bay, West Sumatra. *AACL Bioflux* 14(1); 430-440.

Mutia. 2021. Studi ekologi Sonneratia alba di kawasan hutan mangrove Mandeh. Skripsi Sarjana Biologi. Universitas Andalas

National Researcher Council. 2014. A Report on Existing and Possible Tree Canopy in the City of Charlotte and Mecklenburg County, NC. Washington, DC: The National Academies Press.

Novrinza, R. 2021. *Studi Ekologi Rhizophora Apiculata Di Kawasan Mangrove Mandeh*. Skripsi Sarjana Biologi FMIPA Universitas Andalas. Padang.

Pohan, M.S; E. Muktar and W. Novarino. 2021. angrove Zoning Study Using *Unmanned Aerial Vehicle* in Mangrove Forest of Nagari Mandeh, West Sumatra. *International Journal of Progressive Sciences and Technologies* (IJPSAT) Vol. 28(2); 466-470.

Purnama, M; R. Pribadi dan N. Soenardjo. 2020. Analisa Tutupan Kanopi Mangrove Dengan Metode Hemispherical Photography di Desa Betahwalang, Kabupaten Demak. *Journal of Marine Research* Vol 9, No.3 Agustus 2020, pp. 317-325

Peraturan Menteri Kehutanan. 2004. *Pembuatan Tanaman Rehabilitasi Hutan Mangrove Gerakan Rehabilitasi Hutan dan Lahan*. P. 03/MENHUTV/2004. Bagian keempat.

Philiani I, Saputra L, Harvianto L, Muzaki AA. 2016. Pemetaan vegetasi hutan mangrove menggunakan metode Normalized Difference Vegetation Index (NDVI) di desa Arakan, Minahasa Selatan, Sulawesi Utara. *Journal of Science and Technology* Vol.1(2):210-213.

Pratikto, W. 2002. *Perencanaan perlindungan pantai alami untuk mengurangi resiko terhadap bahaya tsunami*. Makalah disampaikan dalam lokakarya nasional Pengelolaan Ekosistem Mangrove di Jakarta, 6-7 Agustus 2002. Kementerian Perikanan Republik Indonesia.

Pretzsch, H., Biber, P., UHL, E., Dahlhausen, J., Rötzer, T., Caldentey, J., Koike, T., Van Con, T., Chavanne, A., Seifert, T. & Du Toit, B., 2015. Crown size and growing space requirement of common tree species in urban centres, parks, and forests. *Urban forestry & urban greening*, 14(3):466-479. DOI: 10.1016/j.ufug.2015.04.006.

Rafiq M., Chairul and Erizal Mukhtar. 2020. The Vegetation of Mangrove Forest in

Mandeh Bay, West Sumatera- Indonesia. *The International Journal of Social Sciences World.* 95-102.

Roland, Hannes, Janik, Karlheinz and Mathias. Forest Assessment Using High Resolution SAR Data in X-Band. Remote Sens. 2011, 3, 792-815; doi:10.3390/rs3040792.

Sofian, A., Kusmana,C., Fauzi, A., dan Rusdiana, O., 2019, Evaluasi Kondisi Ekosistem Mangrove Angke Kapuk Teluk Jakarta dan Konsekuensinya Terhadap Jasa Ekosistem. Jurnal Badan Penelitian dan Pengembangan Kelautan dan Perikanan. Sekol. Pascasarj. Inst. Pertan. Bogor.
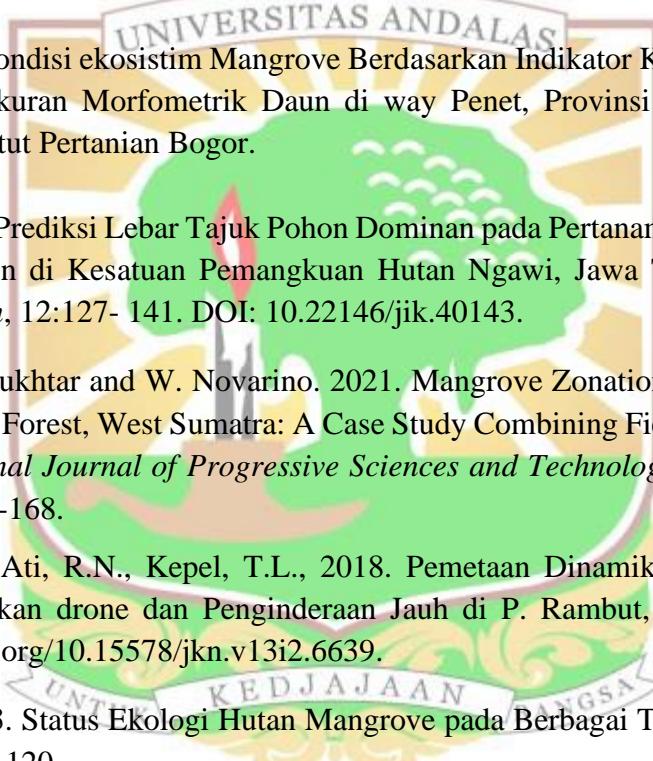
Sadat, A. 2004. Kondisi ekosistim Mangrove Berdasarkan Indikator Kualitas Lingkungan dan Pengukuran Morfometrik Daun di way Penet, Provinsi Lampung. Skripsi, FPIK, Institut Pertanian Bogor.

Sadono, R. 2018. Prediksi Lebar Tajuk Pohon Dominan pada Pertanaman Jati Asal Kebun Benih Klon di Kesatuan Pemangkuan Hutan Ngawi, Jawa Timur. *Jurnal Ilmu Kehutanan*, 12:127- 141. DOI: 10.22146/jik.40143.

Sayuti, S.D; E. Mukhtar and W. Novarino. 2021. Mangrove Zonation Study In Carocok Mangrove Forest, West Sumatra: A Case Study Combining Field Data And UAV. *International Journal of Progressive Sciences and Technologies* (IJPSAT). Vol. 28(2); 162-168.

Salim, H.L., Afi Ati, R.N., Kepel, T.L., 2018. Pemetaan Dinamika Hutan Mangrove menggunakan drone dan Penginderaan Jauh di P. Rambut, Kepulauan Seribu. https://doi.org/10.15578/jkn.v13i2.6639.

Setiawan, H. 2013. Status Ekologi Hutan Mangrove pada Berbagai Tingkat Ketebalan. 2 (2) : 104 – 120.

Schadow, J.N.W. 2020. Percentage of mangrove canopy coverage and community structure in Batanta Island and Salawati Island, Raja Ampat District, West Papua Province. *Aquatic Science & Management*, Vol. 8, No. 1, 28-34

Shobirin A, Aditya BA, Ritonga IR. 2016. Pemetaan sebaran mangrove menggunakan citra Landsat 8/ETM+ di teluk Pangempang kecamatan Muara Bdak provinsi Kalimantan Timur. *Jurnal Ilmu Perikanan Tropis* Vol.22(1):1-7.

Shofiyanti R. 2011. Teknologi pesawat tanpa awak untuk pemetaan dan pemantauan tanaman dan lahan pertanian. *Jurnal Informatika Pertanian* Vol.20(2):58-61.

Silalahi, R.P., 2018. Penggunaan Citra Pesawat Tak Berawak Dalam Inventarisasi Dimensi Vegetasi Nipah. Sekol. Pascasarj. Inst. Pertan. Bogor 45.

Suardi. 2006. Hutan Mangrove di Sumbar Sudah Mulai Rusak. Sumbar.antaranews.com (http://www.antaranews.com).

Subaryono, Harintaka, dan Kurniawan, E., 2008, Evaluasi Pembuatan Mosaik Foto Udara Format Kecil Tidak Terkontrol menggunakan Perangkat Lunak Desain Grafis Komersial, Media Teknik No.3 Tahun XXX Edisi Agustus 2008 ISSN 0216-3012, Universitas Gadjah Mada, Yogyakarta.

Tahir, I., Paembonan, R.E., Harahap, Z.A., Akbar, N., Wibowo, E.S., 2017a. Sebaran Kondisi Ekosistem Hutan Mangrove Di Kawasan Teluk Jailolo, Kabupaten Halmahera Barat. Provinsi Maluku Utara. J. Enggano 2, 143–155.

Tamminga, A., Hugenholtz, C., Eaton, B., and Lapointe, M. 2015. Hyperspatial Remote Sensing of Channel Reach Morphology and Hydraulic Fish Habitat Using an *Unmanned Aerial Vehicle* (UAV): A First Assessment in the Context of River Research and Management. River Research and Applications, 31(3), 379–391.

Tjitrosoedirdjo SS. 2005. Inventory of the invasif alient plant species in Indonesia. *Biotropia*. 25: 60-73.

Tulungen, J.J., Kasmidi, M., Rotinsulu, C., Dimpudus, M., Tangkilisan, N., 2003. Panduan Pengelolaan Sumberdaya Wilayah Pesisir Berbasis Masyarakat: Seri PSWPBM, Dalam Koleksi Dokumen Proyek Pesisir 1997-2003.

Yuliani, S., Herminasari, N.S., 2017. Partisipasi Masyarakat Dalam Pengelolaan Hutan Mangrove Di Desa Segarajaya, Kecamatan Tarumajaya Kabupaten Bekasi. J. Green Growth Dan Manaj. *Lingkung*. 6, 42–53.

Zahra, N. T., Setiawan, Y., Prasetyo, L. B. 2021. Estimation of Mangrove Canopy Cover Using *Unmanned Aerial Vehicle* (UAV) in Indramayu Regency, West Java. *IOP Conf. Series : Earth and Environmental Science*. DOI : 10.1088/1755-1315/950/1/012032.

Zhang, Y., Wu, H., and Yang, W. 2019. Forests growth monitoring based on tree canopy 3D reconstruction using UAV aerial photogrammetry. *Forests*, 10(12), 1–16.