Table S1. List of all publications used in the meta-analysis.

Adame MF, Santini NS, Toville C, Vazquez-Lule A, Castro L, Guvara M. 2015. Carbon stocks and soil sequestration rates of tropical riverine wetlands. Biogeosciences 12: 3805-3818.

Adame et al. 2018. Loss and recovery of carbon and nitrogen after mangrove clearing. Ocean Coast Manage 161: 117-126. doi.org/10.1016/j.oce.

Adame et al. 2021. Mangrove sinkholes (cenotes) of the Yucatan Peninsula, a global hotspot of carbon sequestration. Biol Lett 17: 20210037.

Afefe et al. 2020. Tree biomass and soil carbon stocks of a mangrove ecosystem on the Egyptian- African Red Sea coast. Fundam Appl Limnol 193: 239-251. doi.org/10.1127/fal/2020/1240.

Agarwal et al. 2017. Role of mangroves in carbon sequestration: A case study from Prentice island of Indian Sundarbans Internat J Basic Appl Res 7: 35-42.

Agarwal et al. 2017. Carbon sequestration by mangrove vegetations: a case study from Mahanadi mangrove wetland. J Environ Sci Comput Sci Eng Technol 7: 16-29.

Ahmed et al. 2022. Stand structure and carbon storage of a young mangrove plantation forest in coastal area of Bangladesh: the promise of a natural solution. Nature-Based Solutions 2: 100025. doi.org/10.1016/j.nbsj.2022.100025

Aksornkoe 1975. Structure, regeneration, and productivity of mangroves in Thailand. PhD dissertation, Michigan State University, East Lansing, MI, 109 pp

Almahasheer et al. 2017. Low carbon sink capacity of Red Sea mangroves. Sci Rept 7:9700. doi.org/10.1038/s41598-017-10424-9.

Alongi et al. 1999. Mineralization of organic matter in intertidal sediments of a tropical semi-enclosed delta. Estuar Coast Shelf Sci 48: 451-467. doi.org/10.1006/ecss.1998.0465.

Alongi et al. 2000. Benthic decomposition rates and pathways in plantations of the mangrove *Rhizophora apiculata* in the Mekong delta, Vietnam. Mar Ecol Prog Ser 194: 87-101.

Alongi et al. 2001. Organic carbon accumulation and metabolic pathways in sediments of mangrove forests in southern Thailand. Mar Geol 179: 85-103.

Alongi et al. 2004. Sediment accumulation and organic material flux in a managed mangrove ecosystem: estimates of land-ocean-atmosphere exchange in peninsular Malaysia. Mar Geol 208: 383-402. doi.org/10.1016/j.margeo.2004.04.016.

Alongi 2011. Carbon payments for mangrove conservation: ecosystem constraints and uncertainties of sequestration potential. Environ Sci Policy 14: 462-470. doi.org/10.1016/j.envsci.2011.02.004.

Alongi 2012. Carbon sequestration in mangrove forests. Carbon Manage 3: 313-322.

Alongi et al. 2016. Indonesia's blue carbon: a globally significant and vulnerable sink for seagrass and mangrove carbon. Wetlands Ecol Manage 24: 3-13.

Analuddin et al. 2020. Aboveground biomass, productivity, and carbon sequestration in *Rhizophora stylosa* mangrove forest of Southeast Sulawesi, Indonesia. Biodiversitas 21: 1316-1325.

Andreetta et al. 2016. Land use changes affecting soil organic carbon storage along a mangrove swamp rice chronosequence in the Cacheu and Oio regions (northern Guinea-Bissau). Agric Ecosyst Environ 216: 314-321. doi.org/10.1016/j.agee.2015.10.017.

Andreetta et al. 2021 Mangrove carbon sink. Do burrowing crabs contribute to sediment carbon storage? Evidence from a Kenyan mangrove system. J Sea Res 85: 524-533.

Arias-Ortiz et al. 2021. Losses of soil organic carbon with deforestation in mangroves of Madagascar. Ecosystems 24: 1-19. doi.org./10.1007/s10021-020-00500-2.

Arshad et al. 2018. Evaluation of carbon sequestration in the sediment of polluted and non-polluted locations of mangroves. Fundamental Appl Limnol 192: 53-64.

Asadi et al. 2017. Mangrove ecosystem C-stocks of Lamongan, Indonesia and its correlation with forest age. Research J Chem Environ. 21: 1-9.

Asadi et al. 2018. Comparing carbon in sediment of primary and artificially generated mangrove forests. Disaster Advances 11: 18-26.

Aye et al. 2023. Assessing the carbon storage potential of a young mangrove plantation in Myanmar. Forests 14: 824. doi.org/10.3390/f14040824.

Azman et al. 2023. Total ecosystem blue carbon stocks and sequestration potential along a naturally regenerated mangrove forest chronosequence. For Ecol Manage 527: 120611. doi.org/10.1016/j.foreco.2022.120611.

Baowen et al. 1993. Biomass and leaf area index of secondary schrub in mangroves in Hainan Island, China. For Res 6: 680-685.

Bautista-Olivas et al. 2018. Above-ground biomass and carbon sequestration in mangroves in the arid area of the northwest of Mexico: Bahía del Tóbari and Estero El Sargento, Sonora. Revista Chapingo serie ciencias forestales y del ambiente 24: 387-403.

Beloto et al. 2023. Blue carbon heterogeneity in Brazilian mangrove forests: a systematic review. Mar Pollut Bull 197: 115694. doi.org/101.1016/j.marpolbul.2023.115694.

Bernadino et al. 2020. Land use impacts on benthic bioturbation potential and carbon burial in Brazilian mangrove ecosystems. Limnol Oceanogr 65: 2366-2376. doi.org/10.1002/lno.11458.

Bhomia et al. 2016. Impacts of land use on Indian mangrove forest carbon stocks: implications for conservation and management. Ecol Appl 26: 1396-1408. doi.org/10.1890/15-2143.

Bianchi et al. 2013. Historical reconstruction of mangrove expansion in the Gulf of Mexico: l inking climate change with carbon sequestration in coastal wetlands. Estuar Coastal Shelf Sci. 119: 7-16. doi.org/10.1016/j.ecss.2012.12.007.

Breithaupt et al. 2012. Organic carbon burial rates in mangrove sediments: strengthening the global budget .Global Biogeochem Cycles 26: GB3011.

Breithaupt et al. 2019. Spatial variability of organic carbon, $CaCO_3$ and nutrient burial rates spanning a mangrove productivity gradient in the coastal Everglades. Ecosystems 22: 844-858. doi.org/10.1007/s10021-018-0306-5.

Breithaupt et al. 2020. Increasing rates of carbon burial in southwest Florida coastal wetlands. J Geophys Res 125: e2019JG005349. doi.org/10.1029JG005349.

Brunskill et al. 2002. Carbon burial rates in sediment and a carbon mass balance for the Herbert River Region of the Great Barrier Reef continental shelf, North Queensland, Australia. Estuar. Coast Shelf Sci 54: 677-700. doi.org/10.1006/ecss.2001.0852.

Brunskill et al. 2004. Sediment and trace element depositional history from the Ajkwa River estuarine mangroves of Irian Jaya (West Papua), Indonesia. Contin Shelf Res 24: 2535-2551. doi.org/10.1016/j.csr.2004.07.024.

Cahoon and Lynch. 1997. Vertical accretion and shallow subsidence in a mangrove forest of southwestern Florida, USA. Mang Salt Marsh 1: 173-186. doi.org/10.1023/A:1009904816246.

Callaway et al. 1997. Sediment accretion rates from four coastal wetlands along the Gulf of Mexico. J Coast Res 13: 184-191. http://www.jstor.org/stable14298603.

Camacho et al. 2011. Tree biomass and carbon stock of a community-managed mangrove forest in Bohol, Philippines. For Sci Technol. 7: 161-167. doi.org/10.1080.21580103.2011.621377.

Cameron et al. 2019. Community structure dynamics and carbon stock change of rehabilitated mangrove forests in Sulawesi, Indonesia. Ecol Appl 29: e01810. doi.org/10.1002/eap.1810.

Cameron et al. 2021. Impact of extreme monsoon on CO2 and CH4 fluxes from mangrove soils of the Ayeyarwady delta, Myanmar. Sci Tot Environ 760: 143422. doi.org/10.1016/j.scitotenv.2020.143422.

Carnell et al. 2022. Blue carbon drawdown by restored mangrove forests improves with age. J Environ

Manage 306: 114301. doi.org/10.1016/j.envman.2021.114301.

Carnero-Bravo et al. 2018. Sea level rise sedimentary record and organic carbon fluxes in a low-lying tropical coastal ecosystem. Catena 162: 421-430. doi.org/10.1016/j.catena.2017.09.016.

Castillo et al. 2022. Monitoring the sediment surface elevation change across a chronosequence of restored stands of tropical mangroves and their contemporary carbon sequestration in soil pool. Forests 13: 241. doi.org/10.3390/f13020241.

Castillo and Breva 2012. Carbon stock Assessment of four mangrove reforestation/plantation stands in the Philippines. 1st ASEAN Congr Mangrove Res Develop, Manila, The Philippines.

Cerón-Bretón et al. 2011. Determination of carbon sequestration rate in soil of a mangrove forest in Campeche, Mexico. WSEAS Trans Environ Develop 7: 55-64.

Chandra et al. 2011. Aboveground biomass production of *Rhizophora apiculata* Blume in Sarawak mangrove forest. American J Agricultural Biol Sci 6: 469-474.

Chatting et al. 2020 Mangrove carbon stocks and biomass partitioning in an extreme environment. Estuar Coast Shelf Sci 244: 106940.

Chen et al. 2012. Comparing carbon sequestration and stand structure of monoculture and mixed mangrove plantations of *Sonneratia caseolaris* and *S. apetala* in Southern China. For Ecol Manage 284: 222-229. doi.org/10.1016/j.foreco.2012.06.058.

Chen et al. 2018. Top-meter soil organic carbon stocks and sources in restored mangrove forests of different ages. For Ecol Manage 422: 87-94. doi.org/10.1016/j.foreco.2018.03.044.

Chen et al. 2020. Effects of simulated sea level rise on stocks and sources of soil organic carbon in *Kandelia obovata* mangrove forests. For Ecol Manage 460: 117898. doi.org/10.1016/j.foreco.2020.117898.

Chen et al. 2021. Forest thinning in the seaward fringe speeds up surface elevation increment and carbon accumulation in managed mangrove forests. J Appl Ecol 58: 1899-1909. doi.org/10/1111/1365-2664.13939.

Chen et al. 2021. Higher soil organic carbon sequestration potential at a rehabilitated mangrove comprised of *Aegiceras corniculatum* compared to *Kandelia obovata*. Sci Tot Environ 742: 142279. doi.org/10.1016/j.scititenv.2020.142279.

Chen et al. 2023. Differences in ecosystem organic carbon stocks due to species selection and site elevation of restored mangrove forests. Catena 226: 107089. doi.org/10.1016/j.catena.2023.107089.

Chomin-Virden, D. 2021. Carbon storage of restored mangrove forests in Biscayne Bay, Florida. Florida International University. MS Thesis, 98 pp.

Chowdhury et al. 2018. Cost–benefit analysis of Blue Carbon sequestration by plantation of few key mangrove species at Sundarban Biosphere Reserve, India. Carbon Manage 9: 575-586.

Chowdhury et al. 2020. Plantation methods and restoration techniques for enhanced blue carbon sequestration by mangroves. In: Sustainable Agriculture Reviews 37: Carbon Sequestration Vol. 1 Introduction and Biochemical Methods. Springer: 127-144.

Chowdhury et al. 2023. Variations in soil blue carbon sequestration between natural mangrove metapopulations and a mixed mangrove plantation: a case study from the world's largest contiguous mangrove forest. Life 13: 271.

Christensen 1978. Biomass and primary production of *Rhizophora apiculata* Bl. in a mangrove in southern Thailand. Aquat Bot 4: 43-52.

Cuc et al. 2009. Belowground carbon accumulation in young *Kandelia candel* (L.) Blanco plantations in Thai Binh River mouth, Northern Vietnam. Intern J Ecol Develop 12: 107-117.

Cuc and Hien. 2021. Stand structure and above ground biomass of *Kandelia obovata* Sheue, H.Y. Liu & J. Yong mangrove plantations in Northern Vietnam. For Ecol Manage 483: 118. doi.org/10.1016/j.foreco.2020.118720.

Cuellar-Martinez et al. 2020. Temporal records of organic carbon stocks and burial rates in Mexican blue carbon coastal ecosystems throughout the Anthropocene. Global Planet Change 192: 103215.

doi.org/10.1016/j.gloplacha.2020.103215.

Cuellar-Martnez et al. 2021. Data taken from Briethaupt and Steinmuller (2022).

Cusack et al., 2018. Organic carbon sequestration and storage in vegetated coastal habitats along the western coast of the Arabian Gulf. Environ Res Lett 13: 074007. doi.org/10.108811748-9326/aac899.

DelVecchia et al. 2014. Organic carbon inventories in natural and restored Ecuadorian mangrove forests. PeerJ 2: e388, doi.org/10.7717/peerj.388.

Donato et al. 2011 Mangroves among the most carbon-rich forests in the tropics. *Nat Geosci* 4: 293-297.

Dontis et al. 2020. Carbon storage increases with site age as created salt marshes transition to mangrove forests in Tampa Bay, Florida (USA). Estuaries Coast doi.org/10/1007/s12237-020-00733-0.

Duncan et al. 2016. Rehabilitating mangrove ecosystem services: a case study on the relative benefits of abandoned pond reversion from Panay Island, Philippines. Mar Pollut Bull 109: 772-782. doi.org/10.1016/j.marpolbul.2016.05.049.

Dung et al. 2016. Carbon storage in a restored mangrove forest in Can Gio Mangrove Forest Park, Mekong delta, Vietnam. For Ecol Manage 380: 31-40. doi.org/10.1016/j.foreco.2016.08.032.

Eid and Shaltout. 2016. Distribution of soil organic carbon in the mangrove *Avicennia marina* (Forssk) Vierh. along the Egyptian Red Sea coast. Reg Stud Mar Sci 3: 76-82. doi.org/10.1016/j.rsma.2015.05.006.

Eid et al. 2020. Evaluation of carbon stocks in the sediments of two mangrove species, *Avicennia marina* and *Rhizophora mucronata,* growing in the Farasan Islands, Saudi Arabia. Oceanol 62: 200-213. doi.org/10.1016/j.oceano.2019.12.001.

Elwin et al. 2019. Preservation and recovery of mangrove ecosystem carbon stocks in abandoned shrimp ponds. Sci Rept 9: 18275. doi.org/10.1038/s41598-019-54893-6.

Estrada and Soares. 2017. Global patterns of aboveground carbon stock and sequestration in mangroves. Anais Acad Brasileira Ciências 89: 973-989.

Ezcurra et al. 2016. Coastal landforms and accumulation of mangrove peat increase carbon sequestration and storage. Proc Natl Acad Sci 113: 4404-4409.

Feng et al. 2017. Effects of short-term invasion of *Spartina alterniflora* and the subsequent restoration of native mangroves on the soil organic carbon, nitrogen and phosphorus stock. Chemosphere 184: 774-783. doi.org/10.1016/j.chemosphere.2017.06.060.

Feng et al. 2019. Effects of exotic and native mangrove forests plantation on soil organic carbon, nitrogen, and phosphorus contents and pools in Leizhou, China. Catena 180: 1-7. doi. org/10.1016/j.catena.2019.04.018.

Ferreira et al. 2019. Aboveground carbon stock in a restored neotropical mangrove: influence of management and brachyuran crab assemblage. Wetlands Ecol Manage 27: 223-242. doi.org/10.1007/s11273-019-09654-7.

Fujimoto et al. 1999. Belowground carbon storage of Micronesian mangrove forests. Ecol Res 14: 409423. doi.org/10.1046/j.1440-1703.1999.00313.x.

Fujimoto 2004. Below-ground carbon sequestration of mangrove forests in the Asia-Pacific region. In: Mangrove management and conservation workshop, Okinawa, Japan, 2000.. UN University Press.

Fujimoto et al. 2023. Findings from long-term monitoring studies of Micronesian mangrove forests with special reference to carbon sequestration and sea-level rise. Ecol Res 38: 494-507.

Gao et al. 2017. Carbon storage and influence factors of major mangrove communities in Fuching, Leizhou Peninsula, Guangdong Province. Ecol Environ Sci 26: 985-990.

Gevana et al. 2016. How planting distance influences the survival and blue carbon production of monoculture mangrove plantations in Banacon Island, Philippines? Proc Intern Conf Sustain For Develop Clim Change , Putrajaya, Malaysia, pp 140-144.

Gevana et al. 2017. Stand density management and blue carbon stock of monospecific mangrove plantation in Bohol, Philippines. Forestry Stud. 66: 75-83

Goessens et al. 2014. Is Matang mangrove forest in Malaysia sustainably rejuvenating after more than a

century of conservation and harvesting management? PLoS ONE 9: e10.

Gu and Wu. 2023. Blue carbon effects of mangrove restoration in subtropics where *Spartina alteriflora* invaded. Ecol Eng 186: 106822. doi.org/10.1016/j.ecoeng.2022.106822.

Ha et al. 2018. Belowground carbon sequestration in a mature planted mangrove (Northern Viet Nam). For Ecol Manage 407: 191-199. doi.org/10.1016/j.foreco.2017.06.057.

Han et al. 2001. Study of *Sonneratia apetala* productivity in restored forests in Leizhou Peninsula, China. J For Res 12: 229-234.

Hassan et al. 2018. Management practices and aboveground biomass production patterns of *Rhizophora apiculata* plantation: study from a mangrove area in Samut Songkram Province, Thailand. BioResources 13: 7826-7850.

He et al. 2018. Appearance can be deceptive: scrubby native mangrove species contribute more to soil carbon sequestration than fast-growing exotic species. Plant Soil 432: 425-436. doi.org/10.1007/s11104-018-3821-4.

He et al. 2020. Colonization by native species enhances the carbon storage capacity of exotic mangrove monocultures. Carbon Balance Manage 15: 28. doi.org/10.1186/s13021-020-00165-0.

He et al. 2021. Monoculture or mixed culture? Relevance of fine root dynamics to carbon sequestration oriented mangrove afforestation and restoration. Front Mar Sci 8: 763922. doi.org/10.3389/fmars.2021.763922.

Hien et al. 2018. Seasonal variability of CO2 emissions from sediments in planted mangroves (Northern Viet Nam). Estuar Coast Shelf Sci. 213: 28-39. doi.org/10.1016/j.ecss.2018.08.006.

Hieu et al. 2017. Will restored mangrove forests enhance sediment organic carbon and ecosystem carbon storage? Reg Stud Mar Sci 14: 43-52. doi.org/10.1016/j.rsma.2017.05.003.

Hilmi et al. 2019. Carbon sequestration of mangrove ecosystem in Segara Anakan Lagoon, Indonesia. Biotropia 26: 181-190.

Howe et al. 2009. Surface evolution and carbon sequestration in disturbed and undisturbed wetland soils of the Hunter estuary, southeast Australia. Estuar Coast Shelf Sci 84: 75-83.

Hu, Q. 2009. Comparisons on growth, physiology, and generation of *Avicennia marina* and *Kandelia candel* mangrove restored at different tidal elevations (in Chinese). MS thesis, Xiamen University, Xiamen, China.

Hu, Y., Zhu, N., Liao, B, You, Y., Tang, H. 2019. Carbon density and carbon fixation rates of mangroves of different restoration types in Qi'ao Island. Journal of Central South University of Forestry and Technology 39: 101-107. (in Chinese).

Hu et al. 2022. Assessing the effect of age and geomorphic setting on organic carbon accumulation in high-latitude human- planted mangroves. Forests 13: 105. doi.org/10.

Huang et al. 2019. Temporal variations of greenhouse gas emissions and carbon sequestration and stock from a tidal constructed mangrove wetland. Mar Pollut Bull 149: 110568.

Huang et al. 2023. Carbon sequestration potential of transplanted mangroves and exotic saltmarsh plants in the sediments of subtropical wetlands. Sci Tot Environ 904: 166185.

Inoue 2019. Carbon sequestration in mangroves. In: Blue Carbon in Shallow Coastal Ecosystems: Carbon Dynamics, Policy, and Implementation: 73-99.

Jennerjahn 2021. Relevance and magnitude of blue carbon storage in mangrove sediments: carbon accumulation rates vs stocks, sources vs sinks. Estuar Coast Shelf Sci 248: 107156.

Jimenez et al. 2021. Soil organic matter responses to mangrove restoration: a replanting experience in Northeast Brazil. Int. J. Environ. Res. Public Health 18: 8981. doi.org/10.3390/ijerph18178981.

Jin et al. 2012. An assessment method of *Kandelia obovata* population biomass. Acta Ecol Sinica 32: 3414-3422.

Jones et al. 2014. Ecological variability and carbon stock estimates of mangrove ecosystems in northwestern Madagascar. Forests 5: 177-205.

Kairo et al. 2008. Structural development and productivity of replanted mangrove plantations in Kenya. For Ecol Manage 255: 2670-2677. doi.org/10.1016/j.foreco.2008.01.031.

Kandasamy et al. 2021. Carbon sequestration and storage in planted mangrove stands of *Avicennia marina*. Reg Stud Mar Sci 43:101701.

Kathiresan et al. 2013. Carbon sequestration potential of *Rhizophora mucronata* and *Avicennia marina* as influenced by age, season, growth and sediment characteristics in southeast coast of India. J Coast Conserv doi.org.10.1007/s11852-013-0236-5.

Kathiresan et al. 2021. Carbon sequestration and storage in planted mangrove stands of *Avicennia marina.* Regional Stud Mar Sci 43: 101701. doi.or g/10.1016/j.rsma.2021.101701.

Kauffman et al. 2011. Ecosystem carbon stocks of Micronesian mangrove forests. Wetlands 31: 343-352.

Kelleway et al. 2016. Seventy years of continuous encroachment substantially increases 'blue carbon' capacity as mangroves replace intertidal salt marshes. Glob Change Biol. 22: 1097-1109. doi.org/10.1111/gcb.13158.

Kridiborworn et al. 2012. Carbon sequestration by mangrove forest planted specifically. for charcoal production in Yeesarn, Samut Songkram. J Sustain Energy Environ 3: 87-02.

Kusumaningtyas et al. 2019. Variability in the organic carbon stocks, sources, and accumulation rates of Indonesian mangrove ecosystems. Estuar Coast Shelf Sci 218: 310-323. doi.org/10.1016/j.ecss. 2018.12.007.

Kusumaningtyas et al. 2022. Carbon sequestration potential in the rehabilitated mangroves in Indonesia. Ecol Res 37: 80-91. doi.org/10.1111/1440-1703.12279.

Lamont et al. 2020. Thirty-year repeat measures of mangrove above- and below-ground biomass reveals unexpectedly high carbon sequestration. Ecosystems 23: 370–382. https://doi.org/10.1007/s10021-019-00408-3.

Lang'at et al. 2013. Species mixing boosts root yield in mangrove trees. Oecologia 172: 271-278.doi.org/10.1007/s00442-012-2490-X.

Leite et al. 2021. The colonization of a coastal lagoon by a mangrove ecosystem: benefit or threat to the lagoon? Aquat Bot 171: 103362. doi.org/10.1016/j.aquabot.2021.103362.

Li et al. 2018. Factors regulating carbon sinks in mangrove ecosystems. Global Change Biol 24: 4195-4210. doi.org/10.1111.gcb.14322.

Lin et al. 2005. Studies on biomass of *Kandelia candel* in Pingtan coast of Fujian Province. Protection For Sci Tech 3: 6-8. (in Chinese)

Lin et al. 2023. Mangrove carbon budgets suggest the estimation of net production and carbon burial by quantifying litterfall. Catena 232: 107421. doi.org/10.1016/j.catena.2023.107421.

Liu et al. 2014.Carbon stocks and potential carbon storage in the mangrove forests of China. *J Environ Manage* 133: 86-93.

Liu et al. 2020. Increase in organic carbon burial response to mangrove expansion in the Nanliu River estuary, South China Sea. Prog Earth Planet Sci 7: 71. doi.org/10.1186/s40645-020-00387-3.

Lovelock et al. 2014. Contemporary rates of carbon sequestration through vertical accretion of sediments in mangrove forests and saltmarshes of South East Queensland, Australia. Estuar Coast 37: 763-771.

Lu et al. 2014. Changes in carbon pool and stand structure of a native subtropical mangrove forests after inter-planting with exotic species *Sonneratia apetala.* PLoS ONE 9: e91238. doi.org:10.1371/journal.pone.0091238

Lunstrum and Chen. 2014. Soil carbon stocks and accumulation in young mangrove forests. Soil Biol Biochem 75: 223-232. doi.org/10.1016/j.soilbio.2014.04.008.

Luo et al. 2010. A comparison of species composition and stand structure between planted and natural mangrove forests in Shenzhen Bay, South China. J Plant Ecol 3: 165-174. doi.org/10.1093/jpe/rtq004.

Lynch et al. 1989. Recent accretion in mangrove ecosystems based on ^{137}Cs and ^{210}Pb. Estuaries 12: 284-299. doi.org/10.2307/1351907.

MacIntosh and Ashton. 2023. Growth and carbon stocks in four mangrove species planted on a former

charcoal concession site in Ranong, Thailand. Carbon Footprints 2: 14. doi:10.20517/cf.2023.26.

MacKenzie et al. 2016. Sedimentation and belowground carbon accumulation rates in mangrove forests that differ in diversity and land use: a tale of two mangroves. Wetlands Ecol Manage 24: 245-261. doi.org/10.1007/s11273-016-9481-3.

Malik et al. 2022. The potential soil organic carbon stocks in mangrove areas of Sinjai District, South Sulawesi, Indonesia. J Environ Eng Landscape Manage 30: 450-456. doi.org/10.3846/jeelm.2022.17638.

Manna et al. 2014. Estimating aboveground biomass in *Avicennia marina* plantation in Indian Sundarbans using high-resolution satellite data. J Appl Remote Sensing 8: 083638. doi.org/10.1117/1.JRS.8.083638.

Marchand, C.2017. Soil carbon stocks and burial rates along a mangrove forest chronosequence. For Ecol. Manage 384: 92-99. doi.org/10.1016/j.forecol.2016.10.030.

Marchio et al. 2016. Carbon sequestration and sedimentation in mangrove swamps influenced by hydrogeomorphic conditions and urbanization in southwest Florida. Forests 7: 116. doi.org/10.3390/f7060116.

Mariano et al. 2022. Abandoned fishpond reversal to mangrove forest: will the carbon storage potential match the natural stand 30 years after reforestation? Forests 13: 847. doi.org/10.3390/f13060847.

Mao et al. 2012. Preliminary study of mangrove ecosystem carbon cycle of *Kandelia obovata* in Futian Natural Reserve, Shenzhen, China. Ecol Environ Sci 7: 1189-1199. (in Chinese)

Matos et al. 2020. Carbon and nutrient accumulation in tropical mangrove creeks, Amazon region. Mar Geol 429: 106317. doi.org/10.1016/j.margeo.2020.106317.

Matsui et al. 2012. Ten year evaluation of carbon stock in mangrove plantation reforested from an abandoned pond. Forests 3: 431-444. doi.org/10.3390/f3020431.

Miah and Hossain 2020. Carbon concentration in the coastal afforestation sites of Cox's Bazar, Bangladesh. Forestist 22. doi.org/10.5152/forestist.2020.20012.

Miao et al. 1998. Biomasses and distributive patterns of mangrove populations in Zhanjiang Nature Reseerve, Guangdong, China. Guangxi Zhiwu 18: 19-23.(in Chinese)

Mitra et al. 2012. Spatial and temporal trends in biomass and carbon sequestration potential of *Sonneratia apetala* Buch.-Ham in Indian Sundarbans. Proc Natl Acad Sci India, Sect B Biol Sci 82: 317-323. doi.org/10.1007/s40011-012-0021-5.

Mitra and Zaman. 2014. Carbon sequestration by coastal floral community. Energy and Resources Institute.

Murdiyarso et al. 2018. Sedimentation and sol carbon accumulation in degraded mangrove forests of North Sumatra, Indonesia. bioRxiv doi.org/10.1101.325191.

Murdiyarso et al. 2021. Mangrove selective logging sustains biomass carbon recovery, soil carbon, and sediment. Sci Rept 11: 12325. doi.org/10.1038/s41598-021-91502-x.

Monteiro et al. 2012. Sedimentary geochemical record of historical anthropogenic activities affecting Guanabara Bay (Brazil) environmental quality. Environ Earth Sci 65: 1661-1669. doi.org/10.1007/s12665-011-1143-4.

Nam et al. 2016. Carbon stocks in artifically and naturally regenerated mangrove ecosystems in the Mekong Delta. Wetlands Ecol Manage. doi.org/10.1007/s11273-015-9479-2.

Nguyen et al. 2004. The effects of stand-age and inundation on carbon accumulation in mangrove plantation soil in Namdinh, Northern Vietnam. Tropics 14: 21-27.

Okimoto et al. 2013. A case study for an estimation of carbon fixation capacity in the mangrove plantation of *Rhizophora apiculata* trees in Trat, Thailand. For Ecol Manage 31: 1016-1026. doi.org/10.1016/j.foreco.2013.08.051.

Ong et al. 1995. Structure and productivity of a 20-year-old stand of *Rhizophora apiculata* Bl. mangrove forest. J Biogeogr 22: 417-424.

Osland et al. 2012. Ecosystem development after mangrove wetland creation: plant-soil change across a 20-

year chronosequence. Ecosystems 15: 848-866. doi.org/10.1007/s10021-012-9551-1.

Pandey and Pandey. 2013. Carbon sequestration in mangroves of Gujarat, India. Int J Bot Res 3: : 57-70.

Patil et al. 2012. Carbon sequestration in mangrove ecosystems. *J Environ Res Develop* 7:: 576-583.

Peng et al. 1985. Studies on mangrove ecosystem of Jiulongjiang River estuary in China: the biomass and productivity of *Kandelia candel* community. J Xiamen University 24: 508-514 (in Chinese)

Peng et al. 1998. A study on the biomass and energy of mangrove communities in Shenzhen Bay. Scientia Silvae Sinicae 34: 18-24. (in Chinese).

Peng et al. 2005. Net primary productivity of several mangrove species under controlled habitats. J Appl Ecol 16: 1383-1388. (in Chinese)

Peng et al. 2016. Vegetation carbon stocks and net primary productivity of the mangrove forests in Shenzhen, China. J Appl 27: 2059-2065. doi.org/10.13287/ j.1001-9332.201607.029 (in Chinese)

Perdomo-Trujillo et al. 2021. Effect of restoration actions on organic carbon pools in the lagoon-delta Cienaga Grande de Santa Marta, Colombian Caribbean. Water 13: 1297. doi.org/10.3390/w13091297.

Perera and Amarasinghe. 2019. Carbon sequestration capacity of mangrove soils in micro tidal estuaries and lagoons: a case study from Sri Lanka. Geoderma 347: 80-89.

Perez et al. 2017. Changes in organic carbon accumulation driven by mangrove expansion and deforestation in a New Zealand estuary. Estuar Coast Shelf Sci 192: 1080116. doi.org/10.1016/j.ecss.2017.05.009.

Perez et al. 2018. Factors influencing organic carbon accumulation in mangrove ecosystems. Biol Lett 14: 20180237. doi.org/10.1098/rsbl.2018.0237.

Perez et al. 2020. Shrimp farming influence on carbon and nutrient accumulation within Peruvian mangrove sediments. Estuar Coast Shelf Sci 243: 106879. doi.org/j.ecss.2020.106879.

Phan et al. 2019. Modelling above ground biomass accumulation of mangrove plantations in Vietnam. For Ecol Manage 432: 376-386. doi.org/10.1016/j.foreco.2018.09.028.

Phillips et al. 2017. Impacts of mangrove density on surface sediment accretion, belowground biomass and biogeochemistry in Puttalam Lagoon, Sri Lanka. Wetlands 37: 471-483. doi.org/10.1007/s13157-017-0883-7.

Putz and Chan. 1986. Tree growth, dynamics and productivity in a mature mangrove forest in Malaysia. For Ecol Manage 17: 211-230.

Quintana-Alcantara. 2014. Carbon Sequestration in Tidal Salt Marshes and Mangrove Ecosystems. Master's Projects and Capstones. 19. The University of San Francisco, CA.

Radabaugh et al. 2018. Coastal blue carbon assessment of mangroves, salt marshes and salt barrens in Tampa Bay, Florida USA. Estuaries Coast 41: 1496-1510. doi.org/10.1007/s12237-017-03632-7.

Raga-as et al. 2022. Aboveground blue carbon stock assessment of Bakhawan Eco-Park Mangrove plantation in New Buswang, Kalibo, Aklan, the Philippines. Open J Ecol. 12: 773-787. doi.org/10.4236/oje.2022.121045.

Ramdhun and Appadoo. 2020. A contribution to understanding blue carbon sequestration and forest structure in mangroves of different ages in a small island (Mauritius). Ocean Life 4: 74-81. doi.org/10.13057/oceanlife/o040203.

Rani et al. 2021. Carbon source characterisation and historical carbon burial in three mangrove ecosystems on the southwest coast of India. Catena 197: 104980. doi.org/10.1016/j.catena.2020.104980.

Rani et al. 2023. Carbon stocks and sequestration rate in mangroves and its major influencing factors from highly urbanised port city, southern India. J Environ Manage 335: 117542. doi.org/10.1016/j.jenvman.2023.117542.

Ranjan et al. 2011. Elemental and stable isotope records of organic matter input and its fate in the Pichavaram mangrove-estuarine sediments (Tamil Nadu, India). Mar Chem 126: 163-172. doi.org/10.1016/j.marchem.2011.05.005.

Ratul et al. 2022. Blue carbon sequestration following mangrove restoration: evidence from a carbon neutral

case in China. Ecosys Health Sustain 8: 2101547. doi.org/10.10180/20964129.2022.2101547.

Raw et al. 2019. A comparison of soil carbon pools across a mangrove-salt marsh ecotone at the southern African warm-temperate range limit. S African J Bot 127: 301-307. doi.org/10.1016/j.sajb.2019.11.005.

Ray et al. 2011.Carbon sequestration and annual increase of carbon stock in a mangrove forest. Atmos Environ 45: 5016-5024.

Ray et al. 2023. Sedimentary blue carbon dynamics based on chronosequential observations in a tropical restored mangrove forest. Biogeosciences 20: 911-928. doi.org/10.5194/bg-20-911-2023.

Ren et al. 2010. Biomass accumulation and carbon storage of four different aged *Sonneratia apetala* plantations in Southern China. Plant Soil 327: 279-291. doi.org/10.1007/s11104-009-0053-7.

Rovai et al. 2011. Ecosystem-level carbon stocks and sequestration rates in mangroves in the Caneneia-Igapa lagoon estuarine system, southeastern Brazil. For Ecol Manage 479: 118533. doi.org/10.1006/j.foreco.2020.118553.

Rovai et al. 2018. Global controls on carbon storage in mangrove soils.Nat Clim Change 8: 534-538.

Sahu et al. 2016. Carbon stocks in natural and planted mangrove forests of Mahanadi mangrove wetland, east coast of India. Curr Sci 110: 2253-2260.

Sahu & Kathiresan. 2019. The age and species composition of mangrove forest directly influence the net primary productivity and carbon sequestration potential. Biocatalysis Agric Biotechnol 20: 101235. doi.org/10.1016/j.jbcab.2019.101235

Sakai et al. 2023. Recovery of mangrove ecosystem carbon stocks through reforestation at abandoned shrimp pond in southeast Thailand. Ecosys Health Sustain 9: 0018. doi.org/10.34133/ehs.0018

Salmo et al. 2013. Vegetation and soil characteristics as indicators of restoration trajectories in restored mangroves. Hydrobiol 720: 1-18. doi.org/10.1007/s10750-013-1617-3.

Salmo and Duke. 2010. Establishing mollusk colonization and assemblage patterns in planted Mangrove stands of different ages in Lingayen Gulf, Philippines. Wetlands Ecol Manage 18: 745-754. doi.org/10.1007/s11273-010-9189-8.

Salmo and Gianan. 2019. Post-disturbance carbon stocks and rates of sequestration: implications on 'blue carbon' estimates in Philippines mangroves. Philippine Sci Lett 12: 122-132.

Salmo et al. 2019. Establishing rates of carbon sequestration in mangroves from an earthquake uplift event. Biol Lett 15: 20180799. doi.org/10.1098/rsbl.2018.0799.

Sanders et al. 2008. Recent sediment accumulation in a mangrove forest and its relevance to local sea level rise (Ilha-Grande, Brazil). J Coast Res 24: 533-536. doi.org/10.221/07-0872.1.

Sanders et al. 2010. Mangrove forest sedimentation and its relevance to sea level rise, Cananeia, Brazil. Environ Earth Sci 60: 1291-1301. doi.org/10.1007/S12665-009-0269-0.

Sanders et al. 2010.Organic carbon burial in a mangrove forest, margin, and intertidal mud flat. Estuar Coast Shelf Sci 90: 168-172. doi.org/10.1016/j.ecss.2010.08.013.

Sanders et al. 2010. Organic carbon accumulation in Brazilian mangal sediments. J S Am Earth Sci 30: 189-192. doi.org/10.1016/j/sames.2010.10.001.

Sanders et al. 2016. Examining $^{239+240}$Pu, ^{210}Pb and historical events to determine carbon, nitrogen and phosphorus burial in mangrove sediments of Moreton Bay, Australia. J. Environ Radioactiv 151: 623-629. Doi.org/10.1016/j.jenvrod.2015.04.018.

Santos et al. 2019. Carbon outwelling and outgassing versus burial in an estuarine tidal creek surrounded by mangrove and salt marsh wetlands. Limnol Oceangr 64: 996-1013. doi.org/10.1002/lno.11090.

Sasmito, 2019. Mangrove blue carbon dynamics in Papua, Indonesia: effects of hydro-geomorphic setting and land-use change. PhD Thesis, Charles Darwin University, Darwin, Australia

Sasmito et al. 2020. Organic carbon burial and sources in soils of coastal mudflat and mangrove ecosystems. Catena 187: 104414, doi.org/10.1016/j.catena.2019.104414.

Schile et al. 2017. Limits on carbon sequestration in arid blue carbon ecosystems. Ecol Appl 27: 859-874. doi.org/10.1002/eap.1489.

Sharma et al. 2020. The impacts of degradation, deforestation, and restoration on mangrove ecosystem carbon stocks across Cambodia. Sci Tot Environ 706: 135416. doi.org/10.1016/j.scitotenv.2019.135416.

Sidik et al. 2019. Carbon sequestration and fluxes of restored mangroves in abandoned aquaculture ponds. J Indian Ocean Region doi.org/10.1080/19480881.2019.1605659.

Sitoe et al. 2014. Biomass and carbon stocks of Sofala Bay mangrove forests. *Forests* 5: 1967-1981.

Shaltout et al. 2020. Evaluation of the carbon sequestration capacity of arid mangrove along nutrient availability and salinity gradients along the Red Sea coastline of Saudi Arabia. Oceanol 62: 56-69. doi.org/10.1016/j.oceano.2019.08.002.

Sharma et al. 2017. Growth performance and structure of a mangrove afforestation project on a former seagrass bed, Mindanao Island, Philippines. Hydrobiol 803: 359-371. doi.org/10.1007/s10750-017-3252-x.

Sheue et al. 2021. Mangrove plantations in Northern Viet Nam. Forest Ecol Manage 483: 118720. doi.org/10.1016/j.foreco.2020.118720.

Smoak et al. 2012. Organc carbon burial rates in mangrove sediments: strengthening the global budget. Global Biogeochem Cycles 26: GB3011. doi.org:10.1029/2012GB004375.

Smoak et al. 2013. Sediment accretion and organic carbon burial relative to sea-level rise and storm events in two mangrove forests in Everglades National Park. Catena 104:58-66. doi.org:10.1016/j.catena.2012.10.009.

Soper et al. 2019. Non- native mangroves support carbon storage, sediment carbon burial, and accretion of coastal ecosystems. Glob Change Biol 25: 4315-4326. doi.org/10.1111/gcb.14813.

Sukardjo and Yamada. 1992. Biomass and productivity of a *Rhizophora mucronata* Lamarck plantation in Trith, Central Java, Indonesia. For Ecol Manage 49: 195-209.

Sun, Y. 2017. Restoration-driven distribution of wetland soil carbon and environmental implications at Jingjiang estuary, Futian estuary, China (in Chinese). MS thesis, Huaqiao University, Xiamen, China.

Suprayogi et al. 2022. Ecosystem carbon stocks of restored mangroves and its sequestration in Northern Sumatra coast, Indonesia. Universal J Agricult Res 10: 1-19. doi.org/10.13189/ujar.2022.100101.

Suratman 2008. Carbon sequestration potential of mangroves in Southeast Asia. In: Managing forest ecosystems: The challenge of climate change. Springer: 297-315.

Tamooh et al. 2008. Below-ground root yield and distribution in natural and replanted Mangrove forests at Gazi Bay, Kenya. For Ecol Manage 256: 1290-1297. doi.org/10.1016/j.foreco/2008.06.026.

Tateda et al. 2005. Preliminary evaluation of organic carbon sedimentation rates in Asian mangrove coastal ecosystems estimated by ^{210}Pb chronology. Radioprotection 40: 5527-5532. doi.org/10.1051/radiopro:2005s1-077.

Thant et al. 2012. Carbon sequestration by mangrove plantations and a natural regeneration stand in the Ayeyarwady Delta, Myanmar. Tropics 21: 1-10.

Thura et al. 2023. Mangrove restoration built soil organic carbon stocks over six decades: a chronosequence study. J Soil Sed 23: 1193-1203. doi.org/10.1007/s11368-022-03418-2.

Tinh et al. 2020. A comparison of soil carbon stocks of intact and restored mangrove forests in Northern Vietnam. Forests 11: 660. doi.org/10.3390/f11060660.

Trettin et al. 2021. Mangrove carbon stocks in Pongara National Park, Gabon. Estuar Coast Shelf Sci 259: 107432.

Trujillo et al. 2021. Massive loss of aboveground biomass and its effect on sediment organic carbon concentration: less mangrove, more carbon? Estuar Coast Shelf Sci. 248: 106888. doi.org/10.1016.j.ecss.2020.106888.

Uddin et al. 2023. Importance of mangrove plantations for climate change mitigation in Bangladesh. Global Change Biol. doi.org/10.1111/gcb.16674.

Van Vinh et al. 2022. Soil and aboveground carbon stocks in a planted tropical mangrove forest (Can Gio, Vietnam). In: Wetland Carbon and Environmental Management, Eds. K.W. Krauss, Z. Zhu, C.L. Stragg, Wiley, pp. 229-245

Vaughn et al. 2020. Increased organic carbon burial in Northern Florida mangrove- salt marsh transition zones. Global Biogeochem Cycles 34: e2019GB006334. doi.org/10.1029/2019GB00633.

Vinh et al. 2019. Allometric models to estimate above-ground biomass and carbon stocks in *Rhizophora apiculata* tropical mangrove forests (Southern Viet Nam). For Ecol Manage 434: 131-141. doi.org/10.1016/j.foreco.2018.12.017.

Walcker et al. 2018. Control of 'blue carbon' storage by mangrove aging: evidence from a 66-year chronosequence in French Guiana. Global Change Biol. 24: 2325-2338. doi.org/10.1111/gcb.14100.

Wang et al. 2010. Comparative study on biomass of the natural *Kandelia candel* forest and its plantation in the coastal area of east Fujian Province. J Southwest Forestry University 30: 16-20. (in Chinese).

Wang et al. 2018. Spatial distribution of glomalin-related soil protein and its relationship with sediment carbon sequestration across a mangrove forest. Sci Tot Environ 613: 548-556.

Wang et al. 2021. Community structure and ecosystem carbon stock dynamics along a chronosequence of mangrove plantations in China. Plant Soil 464: 605-620. doi.org/10.1007/s11104-021-04973-2.

Wang et al. 2021. The potential of mature *Sonneratia apetala* plantations to enhance carbon stocks in the Zhanjiang Mangrove National Nature Reserve. Ecol. Indicators 133: 108415. doi.org/10.1016/j.ecolind.2021.108415.

Wang et al. 2023. Soil organic carbon storages and bacterial communities along a restored mangrove soil chronosequence in the Jiulong River Estuary: from tidal flats to mangrove afforestation. Fund Res doi.org/10.1016/j.fmre.2022.08.019.

Wigand et al. 2021. Recent carbon storage and burial exceed historic rates in the San Juan Bay estuary peri-urban mangrove forests (Puerto Rico, USA). Front For Glob Change 4: 676691. doi.org/10.3389/ffgc.2021.676691.

Wu et al. 2020. Species choice in mangrove reforestation may influence the quantity and quality of long-term carbon sequestration and storage. Sci Tot Environ 714: 136742.

Yan et al. 2013. Comparative studies on the carbon storage between *Kandelia candel* natural forests and plantations in north mangrove forests of China. Chinese J Trop Crops 34: 1395-1401 (in Chinese).

Yang et al. 2014. Sediment deposits and organic carbon sequestration along mangrove coasts of the Leizhou Peninsula, southern China. Estuar Coast Shelf Sci 136: 3-10. doi.org/10.1016/j.ecss.2013.11.020.

Yu et al. 2020. *Sonneratia apetala* introduction alters methane cycling microbial communities. and increases methane emissions in mangrove ecosystems. Soil Biol Biochem 144: 107775. doi.org/10.1016/j.soilbio.2020.107775.

Yu et al. 2020. Changes in ecosystem carbon stock following the plantation of exotic mangrove *Sonneratia apetala* in Qi'ao Island, China. Sci Tot Environ 717: 137142. doi.org/10.1016/j.scitotenv.2020.137142.

Yu et al. 2021. Development of ecosystem carbon stock with the progression of a natural mangrove forest in Yingluo Bay, China. Plant Soil 460: 391-401. doi.org/10.1007/s11104-020-04819-3.

Zan et al. 2001. Biomass and net primary productivity of *Sonneratis apetala, S. caseolaris* mangrove man-made forest. Wuhan Botanical Res19: 391-396 (in Chinese).

Zarate-Barrera and Maldonado. 2015. Valuing blue carbon: carbon sequestration benefits provided by the marine protected areas in Colombia. *PloS one* 10: e0126627. Z

Zhang et al. 2021. Comparison of fine root biomasss and soil organic carbon stock between exotic and native mangrove. Catena 204: 105423. doi.org/10.1016/j.catena.2021.105423.

Zhang et al. 2021. Spatiotemporal variations in the organic carbon accumulation rate in mangrove sediments from the Yingluo Bay, China, since 1900. Acta Oceanol Sinica 40: 65-77. doi.org/10.1007/s13131-021-1864-5.

Zhang et al. 2022. Carbon sequestration in soil and biomass under native and non-native mangrove ecosystems. J Soil Sediment 479: 61-76. doi.org/10.1007/s11104-022-05352-1.

Zheng et al. 1995. The law for vertical structure and succession dynamics of mangrove in Qinglan Harbor, Hainan Island. For Res 8: 152-158.

Zhu et al. 2011. Studies on the biomass of mangrove plantations of *Sonneratia apetala* and *Bruguiera gymnorrhiza* in the wetland of Nansha in Guangzhou City. For Res 24: 531-536.

Zhu et al. 2021. Allometric growth and carbon storage in the mangrove *Sonneratia apetala.* Wetland. Ecol Manage 29: 129-141. doi.org/10.1007/s11273-020-09772-7.