REFERENCES

Abera, G., & E.W. Meskel. 2013. Soil Properties, and Soil Organic Carbon Stocks of Tropical Andosol under Different Land Use. Open Journal of Soil Science. 3: 153-162.

An, Z., W.B. Edward, O. David, N.C. Cameron, & X.C. Scott. 2022. Simulated heat wave events increase CO2 and N2O emissions from cropland and forest soils in an incubation experiment. Biology and Fertility of Soils. 58: 789-802.

Arunrat, N., P. Kongsurakan, S. Sereenonchai, & R. Hatano. 2020. Soil Organic Carbon in Sandy Paddy Fields of Northeast Thailand: a Review. Agronomy. 10: 10081061.

Bimantara, P.O., S.M. Kimani, V. Kautsar, H. Egashira, S. Kikuchi, K. Tawaraya, & W. Cheng. 202.) Seasonal changes in soil properties caused by slash and burn agriculture practice in a humid temperate region of northeast Japan. Soil Sci Plant Nutr. 68: 81–87. h

Cheng, W. 2020. Soil carbon and nitrogen dynamics by land use and management changes in East and Southeast Asian countries (soil C and N by LUMC). Soil Sci Plant Nutr. 66: 34–36.

Cheng, W. 2022. Preface to the special section 'Soil C and N response to climate, land-use and management changes (Soil C, N and CLUMC)'. Soil Sci Plant Nutr. 68: 1–4.

Cheng, W., & K. Inubushi. 2019. Global Environmental Problem and Soil Biochemistry, In: Inubushi K (eds) Soil Biochemistry. Asakura Shoten Co., Ltd, Tokyo, Japan, pp 148–150 (in Japanese)

Cheng, W., A.T. Padre, C. Sato, H. Shiono, S. Hattori, A. Kajihara, M. Aoyama, K. Tawaraya, & K. Kumagai. 2016. Change in the soil C and N contents, C decomposition, and N mineralization potentials in a rice paddy after long-term application of inorganic fertilizers and organic matter. 62: 212-219.

Cheng, W., H. Tsuruta, G. Chen, H. Akiyama, & K. Yagi. 2004. N_2O and N_2 production potential in various chinese agricultural soils by denitrification. Soil Sci Plant Nutr. 50: 909–915.

Cheng, W., K. Inubushi, K. Yagi, H. Sakai, & K. Kobayashi. 2001. Effects of elevated carbon dioxide concentration on biological nitrogen fixation, nitrogen mineralization and carbon decomposition in submerged rice soil. Biol Fertil Soils. 34:7–13.

Cheng, W., K. Yagi, H. Akiyama, S. Nishimura, S. Sudo, T. Fumoto, T. Hasegawa, A.E. Hartley, & J.P. Megonigal. 2007. An empirical model of soil chemical properties that regulate methane production in Japanese rice paddy soils. J Envi Qual. 36: 1920–1925.

Cheng, W., S.M. Kimani, T. Kanno, S. Tang, A.Z. Oo, K. Tawaraya, S. Sudo, Y. Sasaki & N Yoshida. 2018. Forage rice varieties Fukuhibiki and Tachisuzuka emit

larger CH4 than edible rice Haenuki. Soil Science and Plant Nutrition. 64 (1): 77 – 83.

Choi, W.J., J.H. Kwak, H.J. Park, H.I. Yang, S.I. Park, Z. Xu, S.M. Lee, S.S. Lim, & S.X. Chang. 2020. Land-use type, and land management and disturbance affect soil $\delta^{15}N$: a review. Journal of Soil and Sediments. 20: 3283 – 3299.

Conrad, R. 1999. Contribution of hydrogen to methane production and control of hydrogen concentrations in methanogenic soils and sediments. FEMS Microbiology Ecology. 28: 193 – 202.

Fan, L., M.A. Dippold, T. Ge, J. Wu, V. Thiel, Y. Kuzyakov, & M. Dorodnikov. 2020. Anaerobic oxidation of methane in paddy soil: Role of electron acceptors and fertilization in mitigating CH4 fluxes. Soil Biology and Biochemistry. 141: 1 – 9.

Fang, Z., H. Yu, C. Li, B. Wang, & J. Huang. 2022. Soil microbia biomass C:N:P stoichiometry is driven more by climate, soil properties and plant traits than by N enrichment in a desert steppe. Catena. 216: 1 – 10.

FAO. 2017. Soil Organic Carbon: the hidden potential. Food and Agriculture Organization of the United Nations. Rome, Italy.

FAO. 2022. FAOSTAT database. http://faostat.fao.org/. access on Nov. 2022.

Fukuda, H, J. Dyck, & J. Stout. 2003. Rice Sector Policies in Japan. Electronic Outlook Report from the Economic Research Service. United States Department of Agriculture.

Funakawa, S., M. Makhrawie, & H. B. Pulunggono. 2009. Soil fertility status under shifting cultivation in East Kalimantan with special reference to mineralization patterns of labile organic matter. Plant Soil. 319: 57-66.

Ghrefat, H.A. 2011. The geology of sand dunes. King Sand University, Saudi Arabia.

Gilman, E.F. & D.G. Watson. 1994. Pinus thunbergiana Japanese Black Pine. Fact Sheet, University of Florida.

Haynes, R.J. 2005. Labile organic matter fractions as central components of the quality of agricultural soil: an overview. Advances in Agronomy. 85: 221 – 268.

Hennings, N., J.N. Becker, T. Guillaume, M. Damris, M.A. Dippold, & Y. Kuzyakov. 2021. Riparian wetland properties counter the effect of land-use change on soil carbon stocks after rainforest conversion to plantations. Catena. 196: 104941.

Huang, W., & S.J. Hall. 2017. Elevated moisture stimulates carbon loss from mineral soil by releasing protected organic matter. Nat Commun. 8: 1-7.

Intergovernmental Panel on Climate Change (IPCC). 2013. Climate change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Stocker, TF, Qin D, Plattner GK, Tignor M, Allen SK, Boschung J, Nauels A, Xia Y, Bex V, Midgley PM (eds.)]. Cambridge: Cambridge University Press.

Intergovernmental Panel on Climate Change (IPCC). 2014. Climate Change 2014: Synthesis Report. IPCC, Geneva, Switzerland. 1 – 151.

Intergovernmental Panel on Climate Change (IPCC). 2018. Good Practice Guidance for Land Use, Land-Use Change, and Forestry. Institute for Global Environmental Strategies, Japan.

Inubushi, K. 2021. Sustainable soil management in East, South and Southeast Asia. Soil Sci Plant Nutr. 67: 1–9.

Jenny, H. 1941. Factors of Soil formation: A System of Quantitative Pedology. Dover Publications, Inc. New York.

Jeong, Y.J., H.J. Park, B.J. Jeon, B.S. Seo, N. Baek, H.I. Yang, J.H. Kwak, S.M. Lee, & W.J. Choi. 2022. Land use types with different fertilization management affected isotope ratios of bulk and water-extractable C and N of soils in an intensive agricultural area. Journal of Soil and Sediments. 22: 249-442.

JSSSPN (Japanese Society of Soil Science and Plant Nutrition). 1986. Soil Normal Analysis Methods. Hakuyusha Press, Tokyo (in Japanese).

Kautsar, V., W. Cheng, K. Tawaraya, S. Hattori, Y. Susumu, K. Kobayashi, & K. Toriyama. 2020. Air-drying and drying-rewetting effects in Japanese Andosols subjected to long-term organic rice farming. Soil Sci Plant Nutr. 66: 714–723.

Khotimah, N. 2006. Kelestarian Gumuk Pasir Pantai Parangtritis Sebagai Penghalang (Barrier) Alami Gelombbang Pasang dan Tsunami. Geomedia. 4: 81 – 92.

Kogel-Knabner, I., W. Amelung, Z. Cao, S. Fiedler, P. Frenzel, R. Jahn, K. Kalbitz, A. Kolbl, & M. Schloter. 2010. Biogeochemistry of paddy soil. Geoderma. 157: 1 – 14.

Kohn, M.J. 2010. Carbon isotope compositions of terrestrial C3 plants as indicators of (paleo)ecology and (paleo)climate. PNAS. 107: 19691 – 19695.

Kunlanit, B., L. Khwanchum, & P. Vityakon. 2020. Land Use Changes Affecting Soil Organic Matter Accumulation in Topsoil and Subsoil in Northeast Thailand. Applied and Environmental Soil Science. 2020: 1 – 20.

Kusumawardani, P.N., P.O. Bimantara, J. Guigue, C. Haga, Y. Sasaki, V. Kautsar, T. Nguyen-Sy, S. Tang, B.H. Purwanto, S.N.H. Utami, K. Tawaraya, K. Sugawara, & W. Cheng. 2022. Carbon and nitrogen dynamics as affected by land-use and management change from original rice paddies to orchard, wetland, parking area and uplands in a mountain village located in the Shonai region, Northeast Japan. Soil Science and Plant Nutrition. 68: 114 – 123.

Kusumawardani, P.N., W. Cheng, B.H. Purwanto, & S.N.H. Utami. 2017. Changes in the soil pH, EC, available-P and inorganic-N after land use change from rice paddy in Northeast Japan. Journal of Wetlands Environmental Management. 5 (2): 53-61.

Kyuma, K. 2004. Paddy Soil Science, Kyoto University Press, Kyoto, Japan

Lambin, E.F., H.J. Geist, & E. Lepers. 2003. Dynamics of land-use and land-cover change in Tropical Regions. Annual Review Environment and Resources. 28: 205-241.

Lauchli, A. & S.R. Grattan. 2012. Soil pH Extremes. Plant Stress Physiology, CAB International.

Liechty, Z., C.S. Medellin, J. Edwards, B. Nguyen, D. Mikhail, S. Eason, G. Phillips, & V. Sundaresan. 2020. Comparative analysis of root microbiomes of rice cultivars with high and low methane emissions reveals differences in abundance of methanogenic archaea and putative upstream fermenters. mSystems. 5 (1): 1 – 19.

Liu, E., C. Yan, X. Mei, W. He, S.H. Bing, L. Ding, Q. Liu, S. Liu, & T. Fan. 2010. Long-term effect of chemical fertilizer, straw, and manure on soil chemical and biological properties in northwest China. Geoderma. 158: 173-180.

Lu, J., S. Feng, S. Wang, B. Zhang, Z. Ning, R. Wang, X. Chen, L. Yu, H. Zhao, D. Lan, & X. Zhao. 2022. Patterns and driving mechanism of soil organic carbon, nitrogen, and phosphorus stoichiometry across northern China's desert-grassland transition zone. Catena. 220: 1 – 11.

Luo, W., F.A. Dijkstra, E. Bai, J. Feng, X.T. Lu, C. Wang, H. Wu, M.H. Li, X. Han, & Y. Jiang. 2016. A threshold reveals decoupled relationship of sulfur with carbon and nitrogen in soil across arid and semi-arid grasslands in northern China. Biogeochemistry. 127: 141 – 153.

Maitima, J., & J.M. Olson. 2001. Guide to Field Methods for Comparative Site Analysis for the Land Use Change, Impacts dan Dynamics Project. Maitima LUCID WP 15. International Livestock Research Institute, Kenya.

McKenzie, R. 2010. Soil carbon sequestration under pasture. (Project MCK 13538). In Australian Soil Management. Orange NSW: Dairy Regions. Dairy Australia.

Miyasaka, K., S. Shiozawa, K. Nishida, & S. Yoshida. 2014. Solute electrical charge effects on molecular diffusion coefficients in unsaturated soils. Soil Sci Soc Am J. 78: 1852–1858.

Molla, E., K. Getnet., & M. Mekonnen. 2022. Land use change and its effect on selected soil properties in the northwest highlands of Ethiopia. Heliyon. 1-7.

Morari, F., E. Lugato, A. Berti & L. Giardini. 2006. Long-term effect of recommended management practices on soil carbon changes and sequestration in north-eastern Italy. Soil Use and Management. 22: 71 - 81.

Msimbira, L.A., & D.L. Smith. 2020. The Roles of Plant Growth Promoting Microbes in Enhancing Plant Tolerance to Acidity and Alkalinity Stresses. Frontiers in Sustainable Food System. 4: 106. doi: 10.3389/fsufs.2020.00106

Murata, K., F. Watermann, O.B.H. Gonroudobou, L.T. Hang, T. Yamanaka, & C.M.L. Lopez. 2022. Effect of black locust trees on the nitrogen dynamics of black pine trees in Shonai coastal forest, Japan. Plant Soil. 474: 513–523.

Naeth, M.A., A.W. Bailey, D.S. Chanasyk, & D.J. Pluth. 1991. Water holding capacity of litter and soil organic matter in mixed prairie and fescue grassland ecosystem of Alberta. Journal of Range Management. 44 (1): 13-17.

Niu, X., C. Liu, X. Jia, & J. Zhu. 2021. Changing soil organic carbon with land use and management practices in a thousand-year cultivation region. Agriculture, Ecosystems, and Environment. 322: 1-10.

O'Donnell, J., J. Barrett, & P. Slovinsky. 2016. Connecticut Beaches and Dunes: A Hazar Guide for Coastal Property Owner. https://beachduneguide.uconn.edu/ access on October 5th, 2022.

Olsson, M.T., M. Erlandsson, L. Lundin, T. Nilsson, A. Nilsson, & J. Stendahl. 2009. Organic carbon stocks in Swedish Podzol soil in relation to soil hydrology and other site characteristics. Silva Fennica. 43(2): 209-222.

Park, H.J., N. Baek, S.S. Lim, Y.J. Jeong, B.S. Seo, J.H. Kwak, S.M. Lee, S.I. Yun, H.Y. Kim, M.A. Arshad, & W.J. Choi .2022. Coupling of $\delta^{13}C$ and $\delta^{15}N$ to understand soil organic matter sources and C and N cycling under different land-uses and management: a review and data analysis. Biol Fertil Soils. https://doi.org/10.1007/s00374-022-01668-3

Ram, B., A. P. Singh, V.K. Singh, M. Shivran, & A. Serawat. 2022. Effect of different Land-uses Systems on Soil pH, Electrical Conductivity and Micronutrients in Mollisols of Uttarakhand. Biological Forum an International Journal. 14 (1): 712-716.

Rhoades, J.D., N.A. Manteghi, P.J. Shouse, W.J. Alves. 1989. Soil Electrical Conductivity and Soil Salinity: New Formulations and Calibrations. Soil Sci. Soc. Am. K. 53: 433 – 439.

Rillig, M.C., B.A.Caldwell, H.A.B. Wosten, & P. Sollins. 2007. Role of proteins in soil carbon and nitrogen storage: controls on persistence. Biogeochemistry. 85: 25 – 44.

Robertson, G.P., & Paul, E.A. 2000. Decomposition and Soil Organic Matter Dynamics. Methods in Ecosystem Science. 104–116.

Smil, V., and K. Kobayashi. 2012. Japan's Dietary Transition and Its Impacts. Cambridge: MIT Press.

Sothe, C., G. Alemuo, A. Joyce, A.K. Werner, A.F. Sarah, & S. James. 2022. Large Soil Carbon Storage in Terrestrial Ecosystem of Canada. Global Biogeochemical Cycles. 36 (2): 1-18.

Takai, Y. 1970. The mechanism of methane fermentation in flooded paddy soil. Soil Sci Plant Nutr. 16: 238–244.

Tang, H., Y. Liu, X. Li, A. Muhammad, & G. Huang. 2019. Carbon sequestration of cropland and paddy soil in China: potential, driving factors, and mechanisms. Greenhouse Gases Science and Technology. 1-14.

Tang, S., W. Cheng, R. Hu, J. Guigue, S.M. Kimani, K. Tawaraya, & X. Xu. 2016. Simulating the effects of soil temperature and moisture in the off-rice

season on rice straw decomposition and subsequent CH_4 production during the growth season in a paddy soil. Biol Fertil Soils. 52: 739–748.

Tao, Y., X.B. Zhou, S.H. Zhang, H.Y. Lu, & H. Shao. 2020. Soil nutrient stoichiometry on linear sand dunes from a temperate desert in Central Asia. Catena. 195: 1 – 13.

Tinker, P.B., & P.B. Barraclough. 1988. Root-Soil Interaction. Environmental Chemistry. Springer, Berlin, Heidelberg.

Wakamatsu, M., & Y. Wakamatsu. 2011. Research of paddy field using polyethylene film on Shonai sand dune area in Yamagata Prefecture. Tohoku Journal of Crop Science. 54: 7-8. (In Japanese)

Wang, Z., D. Gong, & Y. Zhang. 2020. Investigating the Effects of Greenhouse Vegetable Cultivation on Soil Fertility in Lhasa, Tibetan Plateau. Agriculture, Ecosystem & Environment. 30 (3): 456-465.

Wang, B., S. An, C. Liang, Y. Liu, & Y. Kuzyakov. 2021. Microbial necromass as the source of soil organic carbon in global ecosystems. Soil Biology and Biochemistry. 162: 1 – 13.

Wang, S., L. Sun, N. Ling, C. Zhu, F. Chi, W. Li, X. Hao, W. Zhang, J. Bian, L. Chen, & D. Wei. 2020. Exploring Soil Factors Determining Composition and Structure of the Bacterial Communities in Saline-Alkali Soils of Songnen Plain. Frontiers in Microbiology. 10: 1-11.

Watanabe, T., M. Kimura, S. Asakawa. 2009. Distinct members of a stable methanogenic archaeal community transcribe mcrA genes under flooded and drained conditions in Japanese paddy field soil. Soil Biology & Biochemistry. 42: 276 – 285.

Wei, L., T. Ge, Z. Zhu, R. Ye, J. Penuelas, Y. Li, T.M. Lynn, D. L. Jones, J. Wu, & Y. Kuzyakov. 2022. Paddy soil have a much higher microbial biomass content than upland soil: A review of the origin, mechanisms, and drivers. Agriculture, Ecosystems and Environment. 326: 1 – 11.

Wos, B., M Pajak, & M. Pietrzykowski. 2022. Soil Organic Carbon Pools and Associated Soil Chemical Properties under Two Pine Species (Pinus sylvestris L. and Pinus nigra Arn.) Introduced on Reclaimed Sandy Soil. Forests. 13: 1-16. 8.

Wu, X., T.N. Sy, Z. Sun, T. Watanabe, K. Tawaraya, R. Hu, & W. Cheng. 2020. Soil Organic Matter Dynamics as Affected by Land Use Change from Rice Paddy to Wetland. Wetlands. 40: 2199-2207.

Yang, Z., X. Chen, J. Hou, H. Liu, & W. Tan. 2022. Soil texture and pH exhibit important effects on biological nitrogen fixation in paddy soil. Applies Soil Ecology. 178: 1 – 8.

Yoshida, T., & R. Ancajas. 1973. Nitrogen fixing activity in upland and flooded rice fields. Soil Sci Soc Am Proc. 37:42–46

You, M., X.Z. Barker, X.X. Hao, & L.J. Li. 2021. Profile Distribution of Soil Organic Carbon and its Isotopic Value Following Long Term Land-use Changes. Catena. 207: 1 – 8.

Yu, H., T. Zha, X. Zhang, & L. Ma. 2019. Vertical distribution and influencing factors of soil organic carbon in the Loess Plateau, China. Science of the Total Environment. 693: 1-8.

Yuan, C., S. Feng, J. Wang, Z. Huo, & Q. Ji. 2018. Effect of irrigation water salinity on soil salt content distribution, soil physical properties and water use efficiency of maize for seed production in arid Northwest China. International Journal Agriculture & Biological Engineering. 11 (3): 137 – 145.

Zhang, Futao, Xi Chen, Qianqian Wang, Yueling Zhang, Shuihong Yao, & Bin Zhang. 2022. The priming effect dynamics are driven by microbial activation and growth and constrained by the relative availability of input C and soil N. Biology and Fertility of Soil. 58: 745-760.