List of Publications

The following articles arranged in each research field were published by our faculty members during April 2021 to March 2022. Our department and/or research groups also published the following publications.

1) Annals of Human and Regional Geography, 44 (2022)

The exchanges of the publications will be gratefully acknowledged.

[Symbols]

 \boldsymbol{J} in Japanese

JE in Japanese with English abstract

- The first author
- * Researchers belonging to the University of Tsukuba, not to Geoenvironmental Science Field
- ** Researchers not belonging to the University of Tsukuba
- *** Undergraduate students, graduate students and auditors belonging to University of Tsukuba

[a] Human Geography

- Kubo, T. (2021): Overview of housing market and residential environmental issues in the Tokyo metropolitan area: urban geographical perspectives. *Urban Housing Sciences*, **113**, 4-9. (*J*)
 - (2021): Local Response to the "Sponge-fication" of Urban Space: Case of a Middle-sized City in Japan. *Annals of the Japan Association of Economic Geographers*, **67**, 118-124. (*J*)
 - (2022): Does the introduction of bus rapid transit affect car use? Travel mode choice among high-income households in Bogotá, Colombia. *Tsukuba Geoenvironmental Sciences*, **17**, 1-18. (with Masaki, A.****)
 - (2022): Changes in the Commuting, Shopping, and Leisure Behavior: Focusing on the Differences among Residential Districts and between Generations. *Annals of Human and Regional Geography*, **44**, 1-18. (*J*, with Iwai, Y.***, Tongu, Y.***, Onuma, Y.***, Okada, K.***, Shimizu, Y.***, Nakamura, M.***, Hu, S.***, Tian, H. *** and Chen, S.***)
 - (2022): Formation process of Social Relations in Matsuba and Nagayama, Ryugasaki City, Ibaraki Prefecture. *Annals of Human and Regional Geography*, **44**, 19-44. (*J*, with Usui, H. ****, Ishii, K. ****, Uno, H. ****, Wang, Y. ****, Hong, J. ****, Matsui,

- A.***, Sasaki, Y.*** and Mao, Y.***)
- (2022): Seeing through Ryugasaki Croquette: The Approach to Town Revitalization Based on Development-type B-class Gourmet. *Annals of Human and Regional Geography*, **44**, 73-94. (*J*, with Huang, T.****, Nakayama, A.***, Tomita, Y.*** and Xiao, J.****)
- _____ (2022): Freezing Chicago: beyond divided Chicago. *Urban Geography*, **17**, 115-117. (*J*)
- Matsui, K. (2021): Overview of the Special Issue "Local Records of Natural Disaster Events: A Wealth of Spatiotemporal Information for Future Use". *Journal of Geography*, **130**, 143-146. (with Iwafune, M.***, Tamura, T.** and Todokoro, T.**)
- "Local Records of Natural Disaster Events: A Wealth of Spatiotemporal Information for Future Use". *Journal of Geography*, **130**, 147-151. (*J*, with Iwafune, M. ***, Tamura, T. ** and Todokoro, T. ***)
- Urban Festival Management in the Central City of Ryugasaki, Ibaraki, Prefecture. *Annals of Human and Regional Geography*, **44**, 45-72. (*J*, with Kawazoe, W.***, Fu, K.***, Zhang, Q.***, Lu, Z.***, Kakinuma, Y.***, Kumagai, M.*** and Wu, S.***)
- (2022): Transformation of Multiple Livelihoods and Dynamics of Utility System of Environment in Ushikunuma Lakeside Village: Case Study of Shinchi district, Ushiku City, Ibaraki Prefecture. *Annals of Human and Regional Geography*, **44**, 95-122. (*J*, with Suzuki, S.****, Qu, F.****, Yamashita, S.****, Wei, G.****, Maeno, Y.****, Yoshino, H.**** and Yu, W.****)
- (2022): The Appearance and Value of Ushikunuma from the Point of View of Leisure Users. *Annals of Human and Regional Geography*, 44, 123-143. (*J*, with Sato, D. ****, Wakaume, S. ****, Matsubara, S. ****, Wang, H. ****, Kawahara, K. **** and Ohata, T. ****)
- Awareness in the Kashima Central Commercial Area. *E-journal GEO*, **17**, 68-81. (*J*, with Iwai, Y.***)

[b] Regional Geography

Kureha, M. (2021): The recent characteristics of ski

- tourism in France: A comparative study for the sustainable development of Japanese ski tourism. *Geographical Space*, **14**, 109-126. (*JE*, with Yoshizawa, N. ****)
- (2021): Global warming and ski areas in the European Alps. *In* Urushibara, K., *et al.* eds., *100 Regional Problems in the World.* Nakanishiya Shuppan, 94-95. (*J*)
- Tsutsumi, J. (2022): Human-induced Marine Degradation in Anoxic Coastal Sediments of Beppu Bay, Japan, as an Anthropocene Marker in East Asia. *Anthropocene*, 37, https://doi.org/10.1016/j.ancene.2021.100318 (with Kuwae, M. ***, Tsugeki, N. K. ***, Amano, A. ***, Agusa, T. ***, Suzuki, Y. ***, Leavitt, P. R. *** and Hirose, H. ***)
- (2022): Oakleigh as a Greek Centre: The Role of the Greek Community. *Journal of Australian Studies*, **35**, 1-17. (*JE*, with O'Connor, K.**)
- (2022): Changing Melbourne Metropolitan
 Area through the Spatial Analysis with Census
 Costomised Data. *Geographical Space*, **14**, 161170. (*JE*)
- _____(2022): Study on Hotel Location in Australian Metropolitan Areas Focusing on the Web Data Availability on Hotel Booking Sites. *Geographical Space*, **14**, 171-180. (*JE*, with Uno, H. ****)
- Yamashita, A. (2021): Sustainability of irrigation fruit farming in terms of water supply-demand situation: case study of the middle basin of San Francisco River, northeast Brazil. *Geographical Review of Japan Series B*, **94**, 1-17. (with Hata, T.**)

[c] Spatial Information Science

- Kusaka, H. (2021): Japan's south foehn on the Toyama Plain: Dynamical or thermodynamical mechanisms? *International Journal of Climatology*, **41**, 1-18. (with Nishi, A.**, Kakinuma, A.***, Doan, Q. V.*, Onodera, T.*** and Endo, S.***)
 - (2021): How urban growth changes the heat island effect and human thermal sensations over the last 100 years and towards the future in a European city? *Meteorological Applications*, **28**, e2019. (with Vitanova, L. L. ***, Doan, Q. V. * and Subasinghe, S. **)
 - (2021): Statistical intercomparison of similarity metrics in sea level pressure classification.

 Journal of the Meteorological Society of Japan,
 99, 993-1001. (with Sato, T.****)
- ing the number of patients with heatstroke on the next day considering heat acclimatization. *Journal*

- of the Meteorological Society of Japan, **99**, 1395-1412. (with Ikeda, T.***)
- (2021): Numerical simulation study of the effects of foehn winds on white head incidences in Yamagata Prefecture, Japan. *Meteorological Applications*, **28**, e2042. (with Asano, Y.***)
- (2022): High resolution of city-level climate simulation by GPU with multi-physical phenomena. *Lecture Notes in Computer Science*, 13152. (with Watanabe, K.****, Kikuchi, K.****, Boku, T.** and Sato, T.***)
- (2022): Wisteria trellises and tents as tools for improved thermal comfort and heat stress mitigation: Meteorological, physiological, and psychological analyses considering the relaxation effect of greenery. *Meteorological Applications*, **29**, e2046. (with Asano, Y.*** and Kimura, R.***)
- (2022): Development of statistical and machine learning models to predict the occurrence of radiation fog in Japan. *Meteorological Applications*, **29**, e2048. (with Negishi, M.****)
- Matsushita, B. (2022): Simultaneous retrieval of selected optical water quality indicators from Landsat-8, Sentinel-2, and Sentinel-3. *Remote Sensing of Environment*, **270**, 112860; 1-22. (with Pahlevan, N. ***, Smith, B. **, Alikas, K. **, Anstee, J. **, Barbosa, C. ***, Binding, C. ***, Bresciani, M. ***, Cremella, B. **, Giardino, C. ***, Gurlin, D. ***, Fernandez, V. ***, Jamet, C. ***, Kangro, K. ***, Lehmann, M. K. ***, Loisel, H. ***, Ha, N. ***, Olmanson, L. ***, Potvin, G. ***, Simis, S. G. H. ***, VanderWoude, A. ***, Vantrepotte, V. *** and Ruiz-Verdù, A. ***)
 - (2022): A Semianalytical Algorithm for Estimating Water Transparency in Different Optical Water Types from MERIS Data. *Remote Sensing*, **14**, 868; https://doi.org/10.3390/rs14040. (with Msusa, A. D.**** and Jiang, D.***)
 - extreme rainfall events: implications for water quality affected by stormy runoff. *SN Applied Sciences*, **3:841**, https://doi.org/10.1007/s42452-021-04823-x. (with Fukushima, T.*** and Kitamura, T.***)
 - (2021): Ecosystem Services Monitoring in the Muthurajawela Marsh and Negombo Lagoon, Sri Lanka, for Sustainable Landscape Planning. *Sustainability*, **13**, 11463; https://doi.org/10.3390/su132011463. (with Athukorala, D. ****, Estoque, R. C. *** and Murayama, Y. *)
 - _____ (2021): A practical approach to reconstruct high-quality Landsat NDVI time-series data by

gap filling and the Savitzky–Golay filter. *ISPRS Journal of Photogrammetry and Remote Sensing*, **180**, 174-190. (with Chen, Y. ***, Cao, R. ***, Chen, J. *** and Liu, L. ***)

(2021): Limiting nutrient and its use efficiency of phytoplankton in a shallow eutrophic lake, Lake Kasumigaura. *Hydrobiologia*, **848**, 3469-3487. (with Fukushima, T.***)

(2021): Remotely estimating total suspended solids concentration in clear to extremely turbid waters using a novel semi-analytical method. *Remote Sensing of Environment*, **258**, 112386, 1-18. (with Jiang, D. ****, Pahlevan, N. ***, Gurlin, D. ***, Lehmann, M. K. ***, Fichot, C. G. ***, Schalles, J. ***, Loisel, H. ***, Binding, C. ***, Zhang, Y. ***, Alikas, K. ***, Kangro, K. ***, Uus *oue, M. ***, Ondrusek, M. ***, Greb, S. ***, Moses, W. J. ***, Lohrenz, S. *** and O'Donnell, D. ***)

Morimoto, T. (2021): Participatory GIS-Based Approach for the Demarcation of Village Boundaries and Their Utility: A Case Study of the Eastern Boundary of Wilpattu National Park, Sri Lanka. *ISPRS International Journal of Geo-Information*, 11(1), 17. DOI: 10.3390/ijgi11010017 (with Hettiarachchi, C. J. Priyankara, P. and Murayama, Y.)

(2021): A GIS-Based Bivariate Logistic Regression Model for the Site-Suitability Analysis of Parcel-Pickup Lockers: A Case Study of Guangzhou, China. *ISPRS International Journal of Geo-Information*, **10**(10), 648. DOI: 10.3390/ijgi10100648 (with Zheng, Z.**** and Murayama, Y.*)

urban development using remote sensing and GIS: review. *Remote Sensing Applications: Society and Environment*, **22**, 100474. DOI: 10.1016/j.rsase.2021.100474 (with Wang, R.*** and Murayama, Y.*)

(2021): Spatial Analysis of Urbanization Patterns in Four Rapidly Growing South Asian Cities Using Sentinel-2 Data. *Remote Sensing*, **13**(8), 1531. DOI: 10.3390/rs13081531 (with Ranagalage, M.***, Simwanda, M.*** and Murayama, Y.*)

(2021): Spatial distribution of agro ecological diversity in Pathadumbara DS division, Kandy, Sri Lanka. *Proceedings of the General Meeting of the Association of Japanese Geographers*, 2021a, 57-57. DOI: 10.14866/ajg.2021a.0_57 (with Hettiarachchi, C. J. ****)

[d] Hydrologic Sciences

Asanuma, J. (2021): Validation of Soil Moisture Data Products from the NASA SMAP Mission, IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 15, 364-392. (with Colliander, A.**, Rolf, R.**, Crow, W.**, Cosh, M.**, Chen, F.**, Chan, S.**, Das, N. N.**, Bindlish, R.**, Chaubell, J.**, Kim, S.**, Liu, Q.**, O'Neill, P.**, Dunbar, S.**, Dang, L.**, Kimball, J. S.**, Jackson, T.**, Al-Jassar, Hala.**, Asanuma, J.**, Bhattacharya, B.**, Berg, A.**, Bosch, D.**, Bourgeau-Chavez, L.**, Caldwell, T**, Calvet, J. C.**, Collins, C.**, Jensen, K.**, Livingston, S.**, Lopez-Baeza, E.**, Martinez-Fernandez, J.**, McNairn, H.**, Moghaddam, M.**, Montzka, C.**, Notarnicola, C.**, Pellarin, T.**, Greimeister-Pfeil, I.**, Pulliainen, J.**, Ramos, J.**, Hernandez Judith Gpe, R.**, Seyfried, M.**, Starks, P. **, Su, B. **, van der Velde**, Zeng, R.. **, Thibeault, M. Y.**, Vreugdenhil, M.**, Walker, J.**, Zribi, M.**, Entekhabi, D.** and Yueh, S.**)

(2021): Regularized Dual-Channel Algorithm for the Retrieval of Soil Moisture and Vegetation Optical Depth from SMAP Measurements, *Journal of Selected Topics in Applied Earth Observations and Remote Sensing*, **15**, 102-114. (with Chaubell, J.**, Simon, Y. R.**, Dunbar, S.**, Colliander A. D.**, Entekhabi, D.** and Steven, C. K.**)

Sugita, M. (2021): A small non-research vessel as a platform for lake surface flux measurements. Hydrological Research Letters, 15, 16-22. (with Wang, J.***, Zang, C.*** and Kondo, F.**)

(2021): Natural and anthropogenic coastal environmental hazards: an integrated remote sensing, GIS, and geophysical-based approach. *Surveys in Geophysics*, **42**, 1109-1141. (with Youssef, Y. M. ***, Gemail, K. S. ***, AlBarqawy, M. ***, Teama, M. A. ***, Koch, M. *** and Saada, A. ***)

Tsujimura, M. (2021): Radiocesium leaching from litter during rainstorms in the Fukushima broadleaf forest. *Science of the Total Environment*, **796**, 148929, 11p. (with Sakakibara, K.***, Iwagami, S.***, Konuma, Y.**, Sato, Y.** and Onda, Y.)

(2021): Evaluating the predictive power of different machine learning algorithms for ground-water salinity prediction of multi-layer coastal aquifers in the Mekong Delta, Vietnam. *Ecological Indicator*, **127**, 10.1016/j.ecolind.2021.107790, 14p. (with Tran, D. A.***)

(2021): Intensified salinity intrusion in coastal aquifers due to groundwater overextraction: a case study in the Mekong Delta. *Vietnam. Environmental*

- Science and Pollution Research, 10.1007/s11356-021-16282-3, 15p. (with Tran, D. A. ***)
- (2021): Groundwater quality evaluation and health risk assessment in coastal lowland areas of the Mekong Delta, Vietnam. *Groundwater For Sustainable Development*, 10.1016/j.gsd.2021.100679, 14p. (with Tran, D. A.***)
- Yamanaka, T. (2021): Origin and evolutionary processes of deep groundwater salinity in southwestern coastal region of the Ganges-Brahmaputra-Meghna Delta, Bangladesh. *Journal of Hydrology: Regional Studies*, **36**, 100854. (with Rahman, M.*** and Tokunaga, T.**)

[e] Atmospheric Science

- Tanaka, H. L. (2021): Analysis of vorticity budget for a developing extraordinary Arctic Cyclone in August 2016. *SOLA*, 2021. https://doi.org/10.2151/sola.2021-020 (with Ishiyama, R. ****)
- _____ (2021): On the importance of the natural components in climate change study: Temperature rise in the study of climate change. *Physics & Astronomy International Journal*, **5**(2), 2021. DOI: 10.15406/paij.2021.05.00236. (with Akasofu, S. I.***)
- (2022): Application of particle filter to volcanic ash tracking PUFF model for assimilating MP radar observation. *J. Disaster Research*, **17**(5), 2022, 791-804. (with Akami, S.***, Kondo, K.**, Nakamichi, H.** and Iguchi, M.**)
- Ueda, H. (2022): Genesis of upper-tropospheric anticyclones over the Asian-western Pacific sector from tropical-extratropical interaction perspective. *J. Climate*, **35**, 997-1008. (with Kuramochi, M.***, Takaya, K.**, Takaya, Y.**, Asano, S.*** and Maeda, S.**)
- _____ (2021): Enhanced subtropical anticyclone over the Indo-Pacific Ocean associated with stagnation of the Meiyu-Baiu rainband during summer, 2020. *SOLA*, **17B**, 14-18, doi:10.2151/sola.17B-002. (with Yokoi, M.*** and Kuramochi, M.***)
- _____ (2021): Anomalous warm winter 2019/2020 over East Asia associated with Trans-basin Indo-Pacific connections. *SOLA*, **17B**, 9-13, doi:10.2151/sola.17B-001. (with Kuramochi, M.****, Kobayashi, C.***, Kamae, Y.** and Takaya, K.***)
- Ueno, K. (2021): The genesis tendency for a sea of clouds to occur at night in the Japanese Alps region derived by surface observation and satellite data.

- *Tenki*, **68**, 371-389. (*JE*, with Kobayashi, Y. ****)
- (2021): Cloud-resolving-model simulations of nocturnal precipitation over the Himalayan slopes and foothills. *J. Hydromet.*, **22**, 3171-3188. (with Sugimoto, S. ***, Fujinami, H. ***, Sato, T. ** and Takahashi, H. G. **)
- Matsueda, M. (2021): Statistical characteristics of Arctic forecast busts and their relationship to Arctic weather patterns in summer. *Atmos. Sci. Lett.*, **22**, e1038. doi:10.1002/asl.1038. (with Yamagami, A.***)
- (2022): Ensemble forecast experiments of summertime sea ice in the Arctic Ocean using the TOPAZ4 ice-ocean data assimilation system. *Environmental Research*, **209**, 112769. doi: 10.1016/j.envres.2022.112769. (with Nakanowatari, N.***, Xie, J.**, Bertino, L.**, Yamagami, A.** and Inoue, J.**)
- Harada, M. (2021): Evolution of Superoxide Dismutases and Catalases in Cyanobacteria: Occurrence of the Antioxidant Enzyme Genes before the Rise of Atmospheric Oxygen. *J. Mol. Evol.*, **89**, 527-543. doi: 10.1007/s00239-021-10021-5. (with Akiyama, A.**, Furukawa, R.**, Yokobori, S. I.**, Tajika, E.** and Yamagishi, A.**)
- Karaki, T. (2022): Larval Transport Simulation of Japanese eel-glass eels swim towards the nursery freshwater. *Bull. Jpn. Soc. Fish. Oceanogr.*, **86**(2), 78-79. (*J*, with Sakamoto, K.**, Yamanaka, G.**, Kimura, S.** and Kasai, A.**)

[f] Geomorphology

- Hattanji, T. (2021): Migration of channel heads by storm events in two granitic mountain basins, western Japan: Implication for predicting location of landslides. *Geomorphology*, **393**, 107943. (with Kodama, R.***, Takahashi, D.***, Tanaka, Y.**, Doshida, S.** and Furuichi, T.**)
- (2021): Soil on mountain slope and landslide: A geomorphological perspective. *JSCE Magazine: Civil Engineering*, **106**(11), 16-19. (*J*)
- Ikeda, A. (2021): Temporal changes in the debris flow threshold under the effects of ground freezing and sediment storage on Mt. Fuji. *Earth Surface Dynamics*, **9**, 1381-1398. (with Imaizumi, F.***, Yamamoto, K.** and Ohsaka, O.**)
- Ogura, T. (2022): Application of web hazard maps to high school education for disaster risk reduction. *International Journal of Disaster Risk Reduction*, **72**(1), 102866 (with Song, J. ***, Yamauchi, H. *** and Oguchi T. **)

(2022): Policy Issue Study 2: Research on restoration of water system linkages for conservation of native fish. *Research Report of Lake Biwa Enbironmental Research Institute*, **17**, 6-10, (*J*, with Mizuno, T.***, Kojima, N.**, Azuma, Y.**, Sato, Y.**, Hori, J.**, Yamanaka, D.** and Asano, S.**)

[g] Environmental Dynamics

- Onda, Y. (2022) Understory biomass measurement in a dense plantation forest based on drone-SfM data by a manual low-flying drone under the canopy. *Journal of Environmental Management*, 114862, DOI: 10.1016/j.jenvman.2022.114862 (with Zhang, Y. *****, Kato, H., Feng, B. and Gomi, T. **)
 - (2022) Vertical distribution and transport of radiocesium via branchflow and stemflow through the canopy of cedar and oak stands in the aftermath of the Fukushima Dai-ichi Nuclear Power Plant accident. *Science of The Total Environment*, 16, 151698, 10.1016/j.scitotenv.2021.151698 (with Hilmi Saidin, Z.°***, Levia, F. D.**, Kato, H., Kurihara, M.**, Hudson, E. J.** and Nanko, K.**)
 - (2022) A storm-induced flood and associated nearshore dispersal of the river-derived suspended ¹³⁷Cs. *Science of The Total Environment*, 151573, 10.1016/j.scitotenv.2021.151573 (with Uchiyama, Y.***, Tokunaga, N.**, Aduma, K.**, Kamidaira, Y.**, Tsumune, D.**, Iwasaki, T.**, Yamada, M.**, Tadeda, Y.**, Ishimaru, T.**, Ito, Y.**, Watanabe, W. Y.**, Ikehara, K.** and Fukuda, M.**)
 - (2021) Radionuclide contamination in flood sediment deposits in the coastal rivers draining the main radioactive pollution plume of Fukushima Prefecture, Japan (2011–2020). *Earth Syst. Sci. Data*, **13**, 2555–2560. 10.5194/essd-13-2555-2021 (with Evrard, O.***, Chartin, C.**, Laceby, J. P.**, Wakiyama, Y.**, Nakao, A.**, Cerdan, O.**, Lepage, H.**, Jaegler, H.**, Vandromme, R.**, Lefèvre, I.** and Bonté, P.**)
 - (2022) Radiocesium leaching from litter during rainstorms in the Fukushima broadleaf forest. *Science of The Total Environment*, 96, 148929, 10.1016/j.scitotenv.2021.148929 (with Sakakibara, K.***, Iwagami, S.***, Tsujimura, M., Konuma, R.*** and Sato, Y.***)
- _____ (ed.) (2021) Forest Management as a Water Resources Policy: Recommendations from Large-Scale Monitoring Data. ISBN 978-4-13-071107-4, University of Tokyo Press, 260p. (*J*, with Gomi, T.**)
 - (2021) Migration of radioactive materials

- originating from the Fukushima nuclear power plant accident to be pursued further. *Iwanami-Science*, **91**(10), 962-964. (*J*)
- Kato, H. (2021) The Distribution and Migration of ¹³⁷Cs in Oak (Quercus serrata) and Cedar (Cryptomeria japonica) Forest Organic Fractions. *Forests*, **12**(8), 1045. DOI:https://doi.org/10.3390/f12081045 (with Mensah, A. D. ***, Toda, H. ***, Bellingrath-Kimura, D. *** and Dongsu, C. **)
 - using 3D data from unmanned aerial vehicle imagery in the Chernobyl Exclusion Zone. *Journal of Environmental Management*, **295**(1), 113319, 10.1016/j.jenvman.2021.113319 (with Holiaka, D.**, Yoschenko, V.**, Onda, Y., Igarashi, Y.**, Nanba, K.**, Diachuk, P.**, Holiaka, M.**, Zadorozhniuk, R.**, Kashparov, V.** and Chyzhevskyi, I.**)
- Takahashi, J. (2022) Evaluation of contribution rate of the infiltrated water collected using zero-tension lysimeter to the downward migration of ¹³⁷Cs derived from the FDNPP accident in a cedar forest soil. *Science of The Total Environment*, 26 November 2021, 151983, 10.1016/j.scitotenv.2021.151983 (with Hihara, D.****, Sasaki, T.**** and Onda, Y.)