

2021 年度研究実績



1. 友澤裕介、小野寺真一、齋藤光代、竹内徹、北岡豪一
都市化の影響を受けた沿岸沖積平野の地下水環境に及ぼす非定常な涵養機構の影響
日本水文科学会誌、51 巻、第 2 号、2021 年、p 25-41 DOI 10.4145/jahs.51.25
2. Wang, K., Onodera, S-I., Saito, M. (2021). Evaluation of nitrogen loading in the last 80 years in an urbanized Asian coastal catchment through the reconstruction of severe Contamination period. *Environmental Research Letters*
3. Wang, K., Onodera, S. I., Saito, M., Shimizu, Y., & Iwata, T (2022). Effects of Forest Growth in Different Vegetation Communities on Forest Catchment Water Balance. *Science of the Total Environment*, 151159.
<https://doi.org/10.1016/j.scitotenv.2021.151159>
4. Wang, K., Onodera, S. I., Saito, M., & Shimizu, Y. (2021). Long-term variations in water balance by increase in percent imperviousness of urban regions. *Journal of Hydrology*, 602, 126767. <https://doi.org/10.1016/j.jhydrol.2021.126767>
5. Wang, K., Onodera, S. I., Saito, M., Okuda, N., & Okubo, T. (2021). Estimation of Phosphorus Transport Influenced by Climate Change in a Rice Paddy Catchment Using SWAT. *International Journal of Environmental Research*, 759 – 772. <https://doi.org/10.1007/s41742-021-00350-0>
6. Kimbi, S. B., Onodera, S. I., Nozaki, S., Tomozawa, Y., Wang, K., Rusydi, A. F., & Saito, M. (2021). Impact of citrus agriculture on the quality of water resource in a small Steep Island, Seto Inland Sea, Japan. *International Journal of GEOMATE*, 20(82), 109-114.
7. Nozaki, S., Onodera, S., Tomozawa, Y. & Saito, M. (2021) Spatial distributions in groundwater discharge on various tidal flats in a small and steep island, western Japan. *International Journal of GEOMATE*, 20(81), 66-71. DOI.10.21660/2021.81.6131
8. Yamamoto Tamiji, Orimoto Kaori, Asaoka Satoshi, Yamamoto Hironobu, Onodera Shin-ichi (2021) A conflict between the legacy of eutrophication and cultural oligotrophication in Hiroshima Bay, *Oceans*, 2(3), 546-565.
9. Lubis R.F., Bakti, H., Afdal, Prayitno, H.B., Bayhaqi, A., Onodera, S., and Taniguchi, M. (2021) Assessment of submarine groundwater discharge (SGD) as a source of nutrient at Jakarta Bay, Indonesia, *IOP Conference Series: Earth and Environmental Science*, 789(1), DOI 10.1088/1755-1315/789/1/012044

10. Kawashima Shigekazu(2021).Sustainable Management of Sediment Retention Ponds to Mitigate Degradation of Coastal Fisheries and Ecosystem:The Case of Ishigaki Island,Okinawa,Japan 57 卷、2021 年、 p 38-45.DOI 10.7310/arfe.57.38 , Journal of Rural Problems

水文科学会 2021 2021/9/15-18 (Online)

1. 水文水質モデルを用いた都市化流域における水・栄養塩流出の評価
齋藤 光代、石原 秋太、王 崑陽、小野寺 真一 (口頭)
2. 物候差変化を考慮した蒸発散量推定と集水域の水収支に対する混合林成長の影響
王 崑陽、小野寺 真一、齋藤 光代、清水 裕太、岩田 徹 (ポスター)

地球惑星連合セッション

1. Reconstruction of long-term change in external nitrogen loading and its effect on coastal sediment of Osaka Bay, western Japan
齋藤 光代、小野寺 真一、王 崑陽
2. A comparative analysis in modeling surface runoff under climate and land use change in two catchments in Iran and Indonesia
シュッシュタリ シャリフ、小野寺 真一、清水 裕太
3. Estimation of groundwater and lake water interaction in the deeper zone of Lake Biwa, using ^{18}O and D in pore water and groundwater
小野寺 真一、齋藤 光代、友澤 裕介、石田 卓也、伴 修平、奥田 昇
4. Analysis for the characteristics of water and nutrient discharge in a sub-basin of Osaka Bay catchment
石原 秋太、王 崑陽、齋藤 光代、小野寺 真一
5. Estimation of groundwater flow and a river water contribution to it in an alluvial plain of western Japan, using tracer methods
友澤 裕介、竹内 徹、小野寺 真一、齋藤 光代、藤岡 正太郎
6. Water environment issues in Chinese megacity delta-Sewage impacts on Peral river coastal area
金 广哲、小野寺 真一、齋藤 光代、清水 裕太、陈 建耀
7. Estimation of phosphorus budget and surface water – groundwater interaction in a coastal freshwater lake, Hachiro-gata, using phosphorus profile in lake bottom sediments nutrient enrichment area
小野寺 真一、齋藤 光代、Jin Guangzhe、早川 敦

8. Analysis of coastal seagrass bed distribution using UAV and near-infrared camera data
岩田 徹、白石 朗光、齋藤 光代、小野寺 真一
9. Process of spatio-temporal variation in seagrass-seaweed meadows in intertidal areas of Seto Inland Sea, western Japan
齋藤 光代、小野寺 真一、曾我 夏史、出石 悠人、野崎 真吾、友澤 裕介
10. Identification of enriched phosphate in groundwater: insights from distribution of phosphate oxygen isotope ratio in aquifer sediments
石田 卓也、友澤 裕介、Xin Liu、齋藤 光代、小野寺 真一、奥田 昇、伴 修平
11. Water discharge at forested watersheds throughout Japan by using SWAT
今村 直広、Wang Kunyang、小野寺 真一、清水 裕太、小林 政広、清水 貴範、山下 尚之、篠宮 佳樹、玉井 幸治、澤野 真治、飯田 真一、壁谷 直記、清水 晃、坪山 良夫
12. Impact of brackish-water aquaculture on groundwater resources in a coastal alluvial aquifer
Anna Fadliah Rusydi、Shin-ichi Onodera、Mitsuyo Saito、Seiichiro Ioka、Rizka Maria
13. Hydrogeochemical evolution mechanisms of groundwater in the Semarang Coastal Zone, Java Island, Indonesia
Rizka Maria Maria、Anna Fadliah Rusydi、Shin-ichi Onodera、Mitsuyo Saito、Seiichiro Ioka、Robert Muhammad Delinom、Wahyu Purwoko、Dadi Sukmayadi、Hendarmawan Hendarmawan
14. Flood Impact on water quality in a Small Catchment Area: Preliminary Study
Sharon Bih Kimbi、Shin-ichi Onodera、Shingo Nozaki、Yusuke Tomozawa
15. Long-term Estimation on Phosphorus flux in a Coastal Catchment Influenced by the Anthropogenic Land Use Change
Kunyang Wang、Shin-ichi Onodera、Mitsuyo Saito、Yuta Shimizu
16. Integrating traditional and new water solutions to increase cities' resilience in tackling global climate change problems
Ricardo Hirata、Shin-ichi Onodera、Mitsuyo Saito、Yuta Shimizu、Reginaldo Bertolo、Edson Wendland、Luciana Rodrigues Ferreira
17. Estimation of Landuse Change Impact on Water Budget in Higashihiroshima Catchment using SWAT
Sharon Bih Kimbi、Kunyang Wang、Shin-ichi Onodera、Ichiro Kaihotsu、Shingo Nozaki、Yusuke Tomozawa
18. Effects of Forest Growth in Different Vegetation Communities to Forest Catchment Water Balance
Kunyang Wang、Shin-ichi Onodera、Mitsuyo Saito、Yuta Shimizu、Toru Iwata

IAH2021 Online, August 22-26, 2021

1. Groundwater issues and adaptations in agricultural lands in Japan: nitrate pollution issues in a small catchment scale not only groundwater but agriculture and environmental science, ROUND TABLE 8: Solving the challenges of groundwater agriculture
Shin-ichi Onodera (Invited speaker)
2. Evaluation of the effect of groundwater recycling system on nitrate loads from an agricultural island, western Japan
Shin-ichi Onodera, Jiahui Bai, Guangzhe Jin, Mitsuyo Saito, Yuta Shimizu, Kenji Matsumori
3. Groundwater hazard in Indonesia
Rachmat Fajar Lubis, Hendra Bakti, Rizka maria, Robert Delinom, Shin-ichi Onodera, Mitsuyo Saito, Anna Rusydi
4. Nitrate dynamics and contamination status in groundwater of agricultural area in São Paulo State, Brazil
Mitsuyo Saito, Norio Tase, Shin-ichi Onodera, Fernando Saraiva, Rafael Terada, Ricardo Hirata, Edson Cezar Wendland, Yusuke Tomozawa, Anna Rusydi, Masato Fukuoka

ECSA58&EMECS13 Online, September 6-10, 2021

1. Potential impacts of groundwater-borne nutrients on coastal areas in changing human activities and climate
Mitsuyo Saito (Invited keynote speaker)