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RESEARCH

Interests	Water Resources · Groundwater monitoring · Isotope Hydrology
Areas	Environmental Engineering · Global and Planetary Change · Geochemistry and Petrology · Water Science and Technology · Artificial Intelligence · Ocean Engineering

RESEARCH SUMMARY

108	2,856	26	59	2.31	26%
Publications	Citations	h-index	i10-index	Field-weighted impact	World top 10%

Counted from the 108 publications listed below, 2007–2026. Field-weighted impact is the mean over the 94 works scored for it; 1.00 is the world average for works of the same field, type and year. 24 of the 94 papers scored for it are among the world's most cited tenth for their field, type and year.

POSITIONS

Professor/Deputy Director
Regional Water and Environmental Sanitation Centre Kumasi, Department of Civil Engineering, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

EDUCATION AND QUALIFICATIONS

PhD 1993–1999
Civil Engineering, Belarus Polytechnic Academy, Minsk, Belarus., Minsk, Belarus

Master of Science 1986–1991
Civil Engineering, Byelorussian Agricultural Academy, Gorki, Belarus

PUBLICATIONS

Journal articles 106

1. **GK Anornu** (2026). Estimation of suspended sediment load to the Volta Lake under changing climate using empirical discharge-sediment equations. *International Journal of River Basin Management*.
2. Ebenezer Kwadwo Siabi, Amos Tiereyangn Kabobah, Komlavi Akpoti, **Geophery Kwame Anornu**, Peter Donkor, Samuel Agbavitor, Samuel Kofi Mensah, Sarah Elikplim Siabi (2026). Impacts of extreme climate events on megacities in West Africa: A case of the Greater Accra Region. *Urban Transitions*. https://doi.org/10.1016/j.ubtr.2026.100044
3. Boadou Adjéï Kouacou, Armel Kouadio Kouame, Yao Dakro Albert Gboko, Bernard Adiaffi, Abass Gibrilla, **Geophrey Anornu** (2026). Investigation of chemical evolution of groundwater through water stable isotopes and hydrochemical characteristics in Soubré and Gagnoa counties, Côte d'Ivoire. *Scientific African*. https://doi.org/10.1016/j.sciaf.2026.e03418
4. Mandy Edinam Dzomeku, Alfred Awotwi, Courage Davidson Egbi, Agnes Boscoe-Wallace, Cynthia Laar, Abass Gibrilla, **Geophrey Kwame Anornu** (2026). Monitoring wetland variations using Sentinel-2: Case study of Keta Lagoon complex ramsar site. *Journal of Atmospheric and Solar-Terrestrial Physics*. https://doi.org/10.1016/j.jastp.2026.106955

5. Alfred Awotwi, Samuel Gyadu, John Jackson Nsiah, Casmed Charles Amadu, Edward Kofi Ackom, Awo Manson Incoom, Agnes Boscoe-Wallace, Lilian Waaley, **Geophrey Anornu** (2026). Responses of potential groundwater recharge zones to land use and land cover changes in semi-arid region: Case study of Black Volta Basin. *Solid Earth Sciences*. https://doi.org/10.1016/j.sesci.2026.100313

6. Ebenezer K. Siabi, Amos T. Kabo-bah, Komlavi Akpoti, **Geophrey K. Anornu**, Eric M. Mortey, Edward A. Awafo, Nana S. A. Derkyi, Eric Antwi Ofosu, Mashael Yazdanie (2026). Rising urban flood risk and exposure under shared socioeconomic pathways in Greater Accra Ghana. *Scientific Reports*. https://doi.org/10.1038/s41598-026-47979-5

7. Christopher Vuu, Amos Tiereyangn Kabo-bah, **Geophrey Kwame Anornu**, Abass Gibrilla, Gabriel J. Bowen, David Saka, Emmanuel Kwabena Opoku, Cynthia Laar, Ruby Eshun, Peter Donkor, Samuel Kofi Mensah, Ebenezer Kwadwo Siabi (2026). Stable isotopes (δ18OH2O, δ^2HH2O) and hydrochemical fingerprints of groundwater interactions in the Afram Plains South aquifers, Voltaian Basin. *Journal of Hydrology Regional Studies*. https://doi.org/10.1016/j.ejrh.2026.103941

8. Osman ZAKARI, Charles GYAMFI, Samuel Anim OFOSU, Ebenezer BOAKYE, Solomon Tawiah APAFO, **Geophrey Kwame ANORNU**, Bernard Nuoleyeng BAATUUWIE (2025). Effects of land use and land cover changes on ecosystem services and functions in the Kulpawn River Basin of Ghana. *Regional Sustainability*. https://doi.org/10.1016/j.regsus.2025.100277

9. Lilian Waaley, Lawson Mensah, Sarah Conrad, Abass Gibrilla, Salifu Musah, Thomas Hans Aiglsperger, **Geophrey Kwame Anornu**, Lena Alakangas (2025). Environmental and health risk of artisanal and small-scale gold mining in Ghana: a review. *Environmental Science and Pollution Research*. https://doi.org/10.1007/s11356-025-37321-3

10. Ebenezer K. Siabi, Amos T. Kabo-bah, **Geophrey Anornu**, Komlavi Akpoti, Eric M. Mortey, Awo Boatemaa Manson Incoom, Kofi A. Yeboah (2025). Future land use simulation modeling for sustainable urban development under the shared socioeconomic pathways in West African megacities: Insights from Greater Accra Region. *Journal of Environmental Management*. https://doi.org/10.1016/j.jenvman.2025.124300

11. Thomas Acquah, Miriam Appiah-Brempong, **Geophrey Kwame Anornu** (2025). Groundwater quality and associated health risks in the Eastern Region of Ghana. *Heliyon*. https://doi.org/10.1016/j.heliyon.2025.e41910

12. Portia Annabelle Opoku, Raymond Webrah Kazapoe, Noah Kwaku Baah, Abass Gibrilla, **Geophrey K. Anornu**, Nana Kobea Bonso (2025). Harnessing Variational Autoencoders and self-organising maps for groundwater contamination assessment in peri-urban Ghana. *Journal of African Earth Sciences*. https://doi.org/10.1016/j.jafrearsci.2025.105866

13. **GK Anornu** (2025). Hydrogeological Evaluation of Groundwater Resources in the Ejisu-Juaben District, Ghana. *International Journal of Irrigation and Water Management*. http://kevinpage.org/index.php/IJIWM/article/download/1390/1014

14. Z. Kusi-Afrakoma, C. Gyamfi, C. Laar, A. Gibrilla, K. Kofi Annan, O.K. Asante, **G.K. Anornu** (2025). Origin, hydrogeochemical evolution and human health risk assessment of surface and groundwater in the Densu Delta Ramsar site, Ghana. *The Science of The Total Environment*. https://doi.org/10.1016/j.scitotenv.2025.179694

15. Linda Boamah Appiah, Charles Gyamfi, Clement Nyamekye, Jonathan Quaye Ballard, **Geophrey Kwame Anornu** (2025). Spatio-temporal distribution of aquatic macrophytes in the Lower Volta Basin, Ghana. *Discover Environment*. https://doi.org/10.1007/s44274-025-00222-w

16. Joseph Nzotiyine Apogba, **Geophrey Kwame Anornu**, Arthur B. Koon, Benjamin Wullobayi Dekongmen, Emmanuel Daanoba Sunkari, Obed Fiifi Fynn, Prosper Kpiebaya (2024). Application of machine learning techniques to predict groundwater quality in the Nabogo Basin, Northern Ghana. *Heliyon*. https://doi.org/10.1016/j.heliyon.2024.e28527

17. Cynthia Laar, Kevin Buah Kofi Annan, Abass Gibrilla, Zenobia Kusi-Afrakoma, Owusu Korkor-Asante, Michael Saah-Hayford, Courage Egbi, Dickson Abdul-Wahab, Julliet Attah, **Geophrey Anornu** (2024). Assessing the impact of land use and land cover change on the Densu Delta wetland using Markov chain

modeling and artificial neural networks. *Environmental Challenges*. https://doi.org/10.1016/j.envc.2024.101018

18. Benjamin Wullobayi Dekongmen, Amos Tiereyangn Kabo-bah, **Geophrey Kwame Anornu**, Komlavi Akpoti, Mark Amo-Boateng, Eric Ofosu Antwi, Edward Oppong Boamah, Emmanuel Daanoba Sunkari (2024). Delineation of flood risk terrains and rainfall visualisation in the North Western part of Ghana. *Modeling Earth Systems and Environment*. https://doi.org/10.1007/s40808-024-02041-z
19. Emmanuel Obuobie, Mark Osei-Owusu, **Geophrey Kwame Anornu**, Collins Asante-Sasu, Ruby Asmah (2024). Estimation of suspended sediment load to the Volta Lake under changing climate using empirical discharge-sediment equations. *International Journal of River Basin Management*. https://doi.org/10.1080/15715124.2024.2382175
20. J.J. Nsiah, A. Awotwi, C. Gyamfi, **G.K. Anornu**, E. Boakye, S. Darko, E.K. Ackom (2024). Evaluating water balance components in a tropical ecological zone under land use changes. *Ecohydrology & Hydrobiology*. https://doi.org/10.1016/j.ecohyd.2024.09.007
21. C Gyamfi, **G Anornu** (2024). Farmer's perception of pesticide use in the lower Bia basin (South-east of Côte d'Ivoire). *Journal of Applied Biosciences*. https://www.m.elewa.org/journals/wp-content/uploads/2024/11/8.Assouman-1.pdf
22. Ebenezer K. Siabi, Akwasi Adu-Poku, Nathaniel Oppong Otchere, Edward A. Awafo, Amos T. Kabo-bah, Nana S. A. Derkyi, Komlavi Akpoti, **Geophrey K. Anornu**, Eunice Akyereko Adjei, Francis Kemausuor, Mashael Yazdanie (2024). Flood risk assessment under the shared socioeconomic pathways: a case of electricity bulk supply points in Greater Accra, Ghana. *Discover Water*. https://doi.org/10.1007/s43832-024-00140-7
23. Boadou Adjéï Kouacou, **Geophrey Anornu**, Bernard Adiaffi, Abass Gibrilla (2024). Hydrochemical characteristics and sources of groundwater pollution in Soubré and Gagnoa counties, Côte d'Ivoire. *Groundwater for Sustainable Development*. https://doi.org/10.1016/j.gsd.2024.101199
24. Boadou Adjéï Kouacou, **Geophrey Anornu**, Abass Gibrilla, Bernard Adiaffi, Charles Gyamfi (2024). Hydrochemical evolution of groundwater in Soubré and Gagnoa counties, Côte d'Ivoire. *Groundwater for Sustainable Development*. https://doi.org/10.1016/j.gsd.2024.101079
25. Linda Appiah Boamah, Clement Nyamekye, Charles Gyamfi, Jonathan Quaye Ballard, **Geophrey Kwame Anornu** (2024). Mapping and estimating water quality parameters in the Volta Lake's Kpong Headpond of Ghana using regression model and Landsat 8. *Cogent Engineering*. https://doi.org/10.1080/23311916.2024.2307165
26. **G Anornu** (2024). Multiple Approach for Delineating the Impact of Climate Change and Land Use Changes on Groundwater Quantity and Quality in Granitic Aquifers of Northern Ghana. *Thirty-fourth Annual Goldschmidt Conference*. https://ui.adsabs.harvard.edu/abs/2024gold.conf21881G/abstract
27. Ebenezer Kwadwo Siabi, Edward Abingya Awafo, Amos Tiereyangn Kabobah, Nana Sarfo Agyeman Derkyi, Komlavi Akpoti, **Geophrey Kwame Anornu**, Mashael Yazdanie (2024). Quantifying future climate extreme indices: implications for sustainable urban development in West Africa, with a focus on the greater Accra region. *Discover Sustainability*. https://doi.org/10.1007/s43621-024-00352-w
28. Albert Acheampong, **Geophrey K. Anornu**, Frederick Owusu-Nimo, Charles Gyamfi, Gibrilla Abass (2024). Site-specific condition evaluation for managed aquifer recharge (MAR) site selection in granitic aquifers, Ghana. *Water Science & Technology Water Supply*. https://doi.org/10.2166/ws.2024.087
29. Erion Bwambale, Felix K. Abagale, **Geophrey K. Anornu** (2024). Towards a modelling, optimization and predictive control framework for smart irrigation. *Heliyon*. https://doi.org/10.1016/j.heliyon.2024.e38095
30. Nathaniel Kabral Wezenamo Fellalaga, Lawson Mensah, Bright Kwaku Agbekey, Ethel Bentil, Lilian Waaley, **Geophery Kwame Anornu** (2024). Trihalomethane Formation Potential at the Barekese Water Treatment Plant and the Related Cancer Risk to Consumers in the Kumasi Metropolis of Ghana. *Water*. https://doi.org/10.3390/w16213089
31. Prince Asilevi Junior, Felicia Dogbey, Patrick Boakye, Jeffrey Nii Armah Aryee, Edmund Ilimoan Yamba, Stephen Yaw Owusu, David Kofi Peprah, Emmanuel Quansah, Nana Ama Browne Klutse, John Kwesi Bentum, Kwaku Amaning Adjei, **Geophrey Kwame Anornu**, Sampson Oduro-Kwarteng, Leonard Kofitse

Amekudzi (2023). Bias-corrected NASA data for aridity index estimation over tropical climates in Ghana, West Africa. *Journal of Hydrology Regional Studies*. https://doi.org/10.1016/j.ejrh.2023.101610

32. Erion Bwambale, Felix K. Abagale, **Geophrey K. Anornu** (2023). Data-Driven Modelling of Soil Moisture Dynamics for Smart Irrigation Scheduling. *Smart Agricultural Technology*. https://doi.org/10.1016/j.atech.2023.100251
33. Arthur B. Koon, **Geophrey Kwame Anornu**, Benjamin Wullobayi Dekongmen, Emmanuel Daanoba Sunkari, Asante Agyare, Charles Gyamfi (2023). Evaluation of groundwater vulnerability using GIS-based DRASTIC model in Greater Monrovia, Montserrado County, Liberia. *Urban Climate*. https://doi.org/10.1016/j.uclim.2023.101427
34. Erion Bwambale, Felix K. Abagale, **Geophrey K. Anornu** (2023). Model-based smart irrigation control strategy and its effect on water use efficiency in tomato production. *Cogent Engineering*. https://doi.org/10.1080/23311916.2023.2259217
35. Ebenezer K. Siabi, Dang Nguyen Dong Phuong, Amos T. Kabobah, Komlavi Akpoti, **Geophery Anornu**, Awo Boatemaa Manson Incoom, Emmanuel Kwesi Nyantakyi, Kofi Antwi Yeboah, Sarah Elikplim Siabi, Christopher Vuu and 13 others (2023). Projections and impact assessment of the local climate change conditions of the Black Volta Basin of Ghana based on the Statistical DownScaling Model. *Journal of Water and Climate Change*. https://doi.org/10.2166/wcc.2023.352
36. Charles Gyamfi, Kwaku A. Adjei, Ebenezer Boakye, **Geophrey K. Anornu**, Julius M. Ndambuki (2023). Projections of precipitation extremes over the Volta Basin: insight from CanESM2 regional climate model under RCP 4.5 and 8.5 forcing scenarios. *Environment Development and Sustainability*. https://doi.org/10.1007/s10668-023-03666-3
37. Nafisatu Zakaria, Abass Gibrilla, Frederick Owusu-Nimo, Dickson Adomako, **Geophrey K. Anornu**, Joseph R. Fianko, Charles Gyamfi (2023). Quantification of nitrate contamination sources in groundwater from the Anayari catchment using major ions, stable isotopes, and Bayesian mixing model, Ghana. *Environmental Earth Sciences*. https://doi.org/10.1007/s12665-023-11068-x
38. **Geophrey Anornu** (2023). Student entrepreneurship is more popular than ever–but how can biochemistry students get involved? *The Biochemist*. https://portlandpress.com/biochemist/article/45/6/36/233803
39. Julia Atayi, **Geophrey K. Anornu**, Alfred Awotwi, Samuel A. Andam-Akorful, Amos T. Kabo-bah, Yaw A. Twumasi, Emmanuel Adu-Afari, Maxwell Anim-Gyampo (2023). Terrestrial water storage and climate variability study of the Volta River Basin, West Africa. *Theoretical and Applied Climatology*. https://doi.org/10.1007/s00704-023-04636-5
40. Dickson Abdul-Wahab, Abass Gibrilla, Dickson Adomako, Dennis K. Adotey, Samuel Ganyaglo, Cynthia Laar, Nafisatu Zakaria, **Geophrey Anornu** (2022). Application of geostatistical techniques to assess groundwater quality in the Lower Anayari catchment in Ghana. *HydroResearch*. https://doi.org/10.1016/j.hydres.2022.04.001
41. S. Abebrese, **G. K. Anornu**, A. T. Kabo-Bah, B. W. Dekongmen, E. D. Sunkari (2022). Assessment of groundwater potential zones using GIS and remote sensing techniques in the Bole District, Savannah Region, Ghana. *International Journal of Energy and Water Resources*. https://doi.org/10.1007/s42108-022-00207-y
42. Erion Bwambale, Felix K. Abagale, **Geophrey K. Anornu** (2022). Data-driven model predictive control for precision irrigation management. *Smart Agricultural Technology*. https://doi.org/10.1016/j.atech.2022.100074
43. Gustav Merrit Osiakwan, Abass Gibrilla, Amos T. Kabo-Bah, Emmanuel K. Appiah-Adjei, **Geophrey Anornu** (2022). Delineation of groundwater potential zones in the Central Region of Ghana using GIS and fuzzy analytic hierarchy process. *Modeling Earth Systems and Environment*. https://doi.org/10.1007/s40808-022-01380-z
44. Benjamin Wullobayi Dekongmen, **Geophrey Kwame Anornu**, Amos Tiereyangn Kabo-Bah, Isaac Larbi, Emmanuel Daanoba Sunkari, Yihun Taddele Dile, Asante Agyare, Charles Gyamfi (2022). Groundwater recharge estimation and potential recharge mapping in the Afram Plains of Ghana using SWAT and remote sensing techniques. *Groundwater for Sustainable Development*. https://doi.org/10.1016/j.gsd.

2022.100741

45. Ebenezer K. Siabi, Yihun Taddele Dile, Amos T. Kabo-Bah, Mark Amo-Boateng, **Geophery K. Anornu**, Komlavi Akpoti, Christopher Vuu, Peter Donkor, Samuel K. Mensah, Awo B. M. Incoom, Emmanuel K. Opoku, Thomas Atta-Darkwa (2022). Machine learning based groundwater prediction in a data-scarce basin of Ghana. *Applied Artificial Intelligence*. https://doi.org/10.1080/08839514.2022.2138130

46. Nafisatu Zakaria, Abass Gibrilla, Frederick Owusu-Nimo, Dickson Adomako, **Geophrey Anornu** (2022). Occurrence, spatial distribution, and health risk assessment of heavy metals in groundwater from parts of the Kassena Nankana area, Ghana. *Sustainable Water Resources Management*. https://doi.org/10.1007/s40899-022-00658-5

47. Francis Ifie-emi Oseke, **Geophery Kwame Anornu**, Kwaku Amaning Adjei, Martin Obada Eduvie (2022). Predicting the impact of climate change and the hydrological response within the Gurara reservoir catchment, Nigeria. *Journal of Water and Land Development*. https://doi.org/10.24425/jwld.2021.139023

48. Abass Gibrilla, Joseph R. Fianko, Samuel Ganyaglo, Dickson Adomako, Tibor Y. Stigter, Musah Salifu, **Geophrey Anornu**, Musah Saeed Zango, Nafisatu Zakaria (2022). Understanding recharge mechanisms and surface water contribution to groundwater in granitic aquifers, Ghana: Insights from stable isotopes of δ2H and δ18O. *Journal of African Earth Sciences*. https://doi.org/10.1016/j.jafrearsci.2022.104567

49. Gustav Merrit Osiakwan, Emmanuel K. Appiah-Adjei, Amos T. Kabo-Bah, Abass Gibrilla, **Geophrey Anornu** (2021). Assessment of groundwater quality and the controlling factors in coastal aquifers of Ghana: An integrated statistical, geostatistical and hydrogeochemical approach. *Journal of African Earth Sciences*. https://doi.org/10.1016/j.jafrearsci.2021.104371

50. Alfred Awotwi, Thompson Annor, **Geophrey K. Anornu**, Jonathan Arthur Quaye-Ballard, Jacob Agyekum, Boateng Ampadu, Isaac K. Nti, Maxwell Anim Gyampo, Ebenezer Boakye (2021). Climate change impact on streamflow in a tropical basin of Ghana, West Africa. *Journal of Hydrology Regional Studies*. https://doi.org/10.1016/j.ejrh.2021.100805

51. J.J. Nsiah, C. Gyamfi, **G.K. Anornu**, S.N. Odai (2021). Estimating the spatial distribution of evapotranspiration within the Pra River Basin of Ghana. *Heliyon*. https://doi.org/10.1016/j.heliyon.2021.e06828

52. Alfred Awotwi, **Geophrey K. Anornu**, Jonathan Arthur Quaye-Ballard, Thompson Annor, Isaac Kwadwo Nti, Samuel N. Odai, Emmanuel Arhin, Charles Gyamfi (2021). Impact of post- reclamation of soil by large-scale, small-scale and illegal mining on water balance components and sediment yield: Pra River Basin case study. *Soil and Tillage Research*. https://doi.org/10.1016/j.still.2021.105026

53. Ifie-emi Francis Oseke, **Geophery Kwame Anornu**, Kwaku Amaning Adjei, Martin Obada Eduvie (2021). Integrated water resources management approach in mitigating the potential impacts of climate change on hydrology in Gurara reservoir catchment, Northwest Nigeria. *Proceedings of the International Association of Hydrological Sciences*. https://doi.org/10.5194/piahs-384-355-2021

54. Erion Bwambale, Felix K. Abagale, **Geophrey K. Anornu** (2021). Smart irrigation monitoring and control strategies for improving water use efficiency in precision agriculture: A review. *Agricultural Water Management*. https://doi.org/10.1016/j.agwat.2021.107324

55. Ebenezer K. Siabi, Amos T. Kabobah, Komlavi Akpoti, **Geophery K. Anornu**, Mark Amo-Boateng, Emmanuel K. Nyantakyi (2021). Statistical downscaling of global circulation models to assess future climate changes in the Black Volta basin of Ghana. *Environmental Challenges*. https://doi.org/10.1016/j.envc.2021.100299

56. Courage D. Egbi, **Geophrey K. Anornu**, Emmanuel. K. Appiah-Adjei, Samuel Y. Ganyaglo, Samuel B. Dampare (2021). Trace Metals Migration and Contamination Assessment of Groundwater in the Lower Volta River Basin, Ghana. *Exposure and Health*. https://doi.org/10.1007/s12403-021-00398-5

57. Francis I. Oseke, **Geophery K. Anornu**, Kwaku A. Adjei, Martin O. Eduvie (2020). Assessment of water quality using GIS techniques and water quality index in reservoirs affected by water diversion. *Water-Energy Nexus*. https://doi.org/10.1016/j.wen.2020.12.002

58. E. A. Kwarteng, C. Gyamfi, F. O. K. Anyemedu, K. A. Adjei, **G. K. Anornu** (2020). Coupling SWAT and bathymetric data in modelling reservoir catchment hydrology. *Spatial Information Research*. https://

doi.org/10.1007/s41324-020-00337-7

59. Oseke I. Francis, **Geophery K. Anornu**, Kwaku A. Adjei, Eduvie O. Martin (2020). Development of water surface area–storage capacity relationship using empirical model for Gurara reservoir, Nigeria. *Modeling Earth Systems and Environment*. https://doi.org/10.1007/s40808-020-00949-w

60. Robert Kofi Yankey, **Geophrey Kwame Anornu**, Shiloh Kwabena Osae, Samuel Yao Ganyaglo (2020). Drastic model application to groundwater vulnerability elucidation for decision making: the case of south western coastal basin, Ghana. *Modeling Earth Systems and Environment*. https://doi.org/10.1007/s40808-020-01031-1

61. Nafisatu Zakaria, **Geophrey Anornu**, Dickson Adomako, Frederick Owusu-Nimo, Abass Gibrilla (2020). Evolution of groundwater hydrogeochemistry and assessment of groundwater quality in the Anayari catchment. *Groundwater for Sustainable Development*. https://doi.org/10.1016/j.gsd.2020.100489

62. Dickson Abdul-Wahab, Dickson Adomako, Gibrilla Abass, Dennis K. Adotey, **Geophrey Anornu**, Samuel Ganyaglo (2020). Hydrogeochemical and isotopic assessment for characterizing groundwater quality and recharge processes in the Lower Anayari catchment of the Upper East Region, Ghana. *Environment Development and Sustainability*. https://doi.org/10.1007/s10668-020-00815-w

63. Rita Akosua Anima Gyimah, Charles Gyamfi, **Geophrey Kwame Anornu**, Anthony Yaw Karikari, Francis Worlanyo Tsyawo (2020). Multivariate statistical analysis of water quality of the Densu River, Ghana. *International Journal of River Basin Management*. https://doi.org/10.1080/15715124.2020.1803337

64. Abass Gibrilla, Joseph R. Fianko, Samuel Ganyaglo, Dickson Adomako, **Geophrey Anornu**, Nafisatu Zakaria (2020). Nitrate contamination and source apportionment in surface and groundwater in Ghana using dual isotopes (15N and 18O-NO3) and a Bayesian isotope mixing model. *Journal of Contaminant Hydrology*. https://doi.org/10.1016/j.jconhyd.2020.103658

65. Courage D. Egbi, **Geophrey K. Anornu**, Samuel Y. Ganyaglo, Emmanuel K. Appiah-Adjei, Si-Liang Li, Samuel B. Dampare (2020). Nitrate contamination of groundwater in the Lower Volta River Basin of Ghana: Sources and related human health risks. *Ecotoxicology and Environmental Safety*. https://doi.org/10.1016/j.ecoenv.2020.110227

66. James Ashaley, **Geophrey K. Anornu**, Alfred Awotwi, Charles Gyamfi, Maxwell Anim-Gyampo (2020). Performance evaluation of Africa CORDEX regional climate models: case of Kpong irrigation scheme, Ghana. *Spatial Information Research*. https://doi.org/10.1007/s41324-020-00331-z

67. Emmanuel Arthur, Fred Oppong Kyekyeku Anyemedu, Charles Gyamfi, Patricia Asantewaa - Tannor, Kwaku Amaning Adjei, **Geophrey Kwame Anornu**, Samuel Nii Odai (2020). Potential for small hydropower development in the Lower Pra River Basin, Ghana. *Journal of Hydrology Regional Studies*. https://doi.org/10.1016/j.ejrh.2020.100757

68. Portia Annabelle Opoku, **Geophrey K. Anornu**, Abass Gibrilla, Emmanuel de-Graft Johnson Owusu-Ansah, Samuel Y. Ganyaglo, Courage D. Egbi (2020). Spatial distributions and probabilistic risk assessment of exposure to heavy metals in groundwater in a peri-urban settlement: case study of Atonsu-Kumasi, Ghana. *Groundwater for Sustainable Development*. https://doi.org/10.1016/j.gsd.2019.100327

69. Rita Akosua Anima Gyimah, Anthony Yaw Karikari, Charles Gyamfi, Patricia Asantewaa-Tannor, **Geophrey Kwame Anornu** (2020). Spatial evaluation of land use variability on water quality of the Densu Basin, Ghana. *Water Science & Technology Water Supply*. https://doi.org/10.2166/ws.2020.187

70. Robert Kofi Yankey, **Geophrey Kwame Anornu**, Emmanuel Kwame Appiah-Adjei, Shiloh Kwabena Osae, Samuel Yao Ganyaglo (2020). Structural equation modeling and GIS application into non-carcinogenic health risk assessment of the phreatic aquifers of the south-western coastal basin-Ghana. *Modeling Earth Systems and Environment*. https://doi.org/10.1007/s40808-020-00851-5

71. Samuel Bansah, Samuel Ato Andam-Akorful, Jonathan Quaye-Ballard, Matthew Coffie Wilson, Solomon Senyo Gidigasu, **Geophrey K. Anornu** (2019). An Evaluation of Catchment Transit Time Model Parameters: A Comparative Study between Two Stable Isotopes of Water. *Geosciences*. https://doi.org/10.3390/geosciences9070318

72. Samuel Bansah, Jonathan Quaye-Ballard, Samuel Andam-Akorful, Edward Bam, **Geophrey K. Anornu** (2019). End-Member Selection in Two-Component Isotope-Based Hydrograph Separation. *Open Journal of*

Modern Hydrology. https://doi.org/10.4236/ojmh.2019.92003

73. Charles Gyamfi, K. Amaning-Adjei, **G. K. Anornu**, J. M. Ndambuki, S. N. Odai (2019). Evolutional characteristics of hydro-meteorological drought studied using standardized indices and wavelet analysis. *Modeling Earth Systems and Environment*. https://doi.org/10.1007/s40808-019-00569-z

74. Joseph Stephen Sarpong, Sampson Kwaku Agodzo, **Geophrey Kwame Anornu**, Shinji Hirouchi (2019). Flow Measurement for Ungauged Kakayini and Kodadwen Streams in Support of Local Rice Production in the Ashanti Region of Ghana. *International Journal of Innovative Science and Research Technology (IJISRT)*. https://doi.org/10.38124/ijisrt/19feb88

75. M. Anim-Gyampo, **G.K. Anornu**, E.K. Appiah-Adjei, S.K. Agodzo (2019). Quality and health risk assessment of shallow groundwater aquifers within the Atankwidi basin of Ghana. *Groundwater for Sustainable Development*. https://doi.org/10.1016/j.gsd.2019.100217

76. Alfred Awotwi, **Geophrey Kwame Anornu**, Jonathan Arthur Quaye-Ballard, Thompson Annor, Eric Kwabena Forkuo, Emmanuel Harris, Jacob Agyekum, John Lawer Terlabie (2019). Water balance responses to land-use/land-cover changes in the Pra River Basin of Ghana, 1986–2025. *CATENA*. https://doi.org/10.1016/j.catena.2019.104129

77. Courage D. Egbi, **Geophrey Anornu**, Emmanuel K. Appiah-Adjei, Samuel Y. Ganyaglo, Samuel B. Dampare (2018). Evaluation of water quality using hydrochemistry, stable isotopes, and water quality indices in the Lower Volta River Basin of Ghana. *Environment Development and Sustainability*. https://doi.org/10.1007/s10668-018-0180-5

78. **G Anornu** (2018). Groundwater Recharge Estimation and Associated Mechanism Using Hybrid Chloride Mass Balance, Water Level Fluctuation and Isotopic Methods in the White Volta River Basin of Ghana. *Twenty-eighth Annual Goldschmidt Conference*. https://ui.adsabs.harvard.edu/abs/2018gold.conf..821G/abstract

79. M. Anim-Gyampo, **G. K. Anornu**, S. K. Agodzo, E. K. Appiah-Adjei (2018). Groundwater Risk Assessment of Shallow Aquifers within the Atankwidi Basin of Northeastern Ghana. *Earth Systems and Environment*. https://doi.org/10.1007/s41748-018-0077-3

80. M. Anim-Gyampo, **G. K. Anornu**, E. K. Appiah-Adjei, S. K. Agodzo (2018). Hydrogeochemical evolution and quality assessment of groundwater within the Atankwidi basin: the case of northeastern Ghana. *Arabian Journal of Geosciences*. https://doi.org/10.1007/s12517-018-3753-6

81. Alfred Awotwi, **Geophrey Kwame Anornu**, Jonathan Arthur Quaye-Ballard, Thompson Annor (2018). Monitoring land use and land cover changes due to extensive gold mining, urban expansion, and agriculture in the Pra River Basin of Ghana, 1986–2025. *Land Degradation and Development*. https://doi.org/10.1002/ldr.3093

82. **GK Anornu** (2018). Small scale irrigation development in Upper West region, Ghana; challenges, potentials and solutions. *Civil and Environmental Research*. https://scholar.google.com/scholar?cluster=4908452101567008385&hl=en&oi=scholarr

83. Alfred Awotwi, **Geophrey Kwame Anornu**, Jonathan Quaye-Ballard, Thompson Annor, Eric Kwabena Forkuo (2017). Analysis of climate and anthropogenic impacts on runoff in the Lower Pra River Basin of Ghana. *Heliyon*. https://doi.org/10.1016/j.heliyon.2017.e00477

84. Asante Agyare, **Geophrey Kwame Anornu**, Amos Tiereyangn Kabo-bah (2017). Assessing the vulnerability of aquifer systems in the Volta river basin: a case-study on Afram Plains, Ghana. *Modeling Earth Systems and Environment*. https://doi.org/10.1007/s40808-017-0363-3

85. Charles Gyamfi, Julius Musyoka Ndambuki, **Geophrey Kwame Anornu**, Gislar Edgar Kifanyi (2017). Groundwater recharge modelling in a large scale basin: an example using the SWAT hydrologic model. *Modeling Earth Systems and Environment*. https://doi.org/10.1007/s40808-017-0383-z

86. **Geophrey Anornu**, Abass Gibrilla, Dickson Adomako (2017). Tracking nitrate sources in groundwater and associated health risk for rural communities in the White Volta River basin of Ghana using isotopic approach (δ15N, δ18O NO3 and 3H). *The Science of The Total Environment*. https://doi.org/10.1016/j.scitotenv.2017.01.219

87. Abass Gibrilla, **Geophrey Anornu**, Dickson Adomako (2017). Trend analysis and ARIMA modelling of recent groundwater levels in the White Volta River basin of Ghana. *Groundwater for Sustainable Development*. https://doi.org/10.1016/j.gsd.2017.12.006

88. Abass Gibrilla, Dickson Adomako, **Geophrey Anornu**, Samuel Ganyaglo, Tibor Stigter, Joseph R. Fianko, ShivePrakash Rai, Andrews Ako Ako (2017). δ18O and δ2H characteristics of rainwater, groundwater and springs in a mountainous region of Ghana: implication with respect to groundwater recharge and circulation. *Sustainable Water Resources Management*. https://doi.org/10.1007/s40899-017-0107-6

89. M. K. Domfeh, F. O. K. Anyemedu, **G. K. Anornu**, K. A. Adjei, S. N. Odai (2016). Assessment of the water balance of the Barekese reservoir in Kumasi, Ghana. *Journal of Science and Technology (Ghana)*. https://doi.org/10.4314/just.v35i3.4

90. **GK Anornu** (2016). The contribution of water tanker operations to the health of water consumers in Cape Coast Metropolis, Ghana. *International Journal of Environmental Sciences*. https://indianjournals.com/article/ijes-7-1-010

91. **G.K. Anornu**, E.K. Ahialey, B.K. Kortatsi, E.A. Kaka, G. Dartey (2015). Hydrogeochemical Processes Influencing Groundwater Quality in the Black Volta Basin of Ghana. *Research Journal of Applied Sciences Engineering and Technology*. https://doi.org/10.19026/rjaset.11.2137

92. Samuel Barnie, **Geophrey K. Anornu**, Benony K. Kortatsi (2014). Assessment of the Quality of Shallow Groundwater for Irrigation in the Atankwidi Sub-Basin of the White Volta Basin, Ghana. *Journals & Books Hosting (International Knowledge Sharing Platform).*

93. Samuel Barnie, **GK Anornu** (2014). Determination of Shallow Groundwater Aquifer Geometry using Geo-Electrical Techniques in the Atankwidi Sub-Basin of the White Volta Basin. *Ghana. Journal of Environment and Earth Science*. https://www.academia.edu/download/107029267/14499-16808-1-PB.pdf

94. Samuel Barnie, **Geophrey K. Anornu**, Benony K. Kortatsi (2014). Determination of Shallow Groundwater Aquifer Geometry using Geo-Electrical Techniques in the Atankwidi Sub-Basin of the White Volta Basin, Ghana. *Journals & Books Hosting (International Knowledge Sharing Platform).*

95. Amos T. Kabo-bah, Gloria Appiah-Sefah, **G. K. Anornu**, Kyereh Boateng (2014). F-Hydra Index for Evaluating Groundwater Vulnerability in Data Scarce Regions. *Journal of Environment and Ecology*. https://doi.org/10.5296/jee.v5i1.5361

96. D. F. Dramani, **G. K. Anornu**, A. T. Kabo-bah, S. Oduro-Kwarteng (2014). Groundwater Resources Assessment in Tain River Basin of the Black Volta of West Africa. *Energy and Environment Research*. https://doi.org/10.5539/eer.v4n3p96

97. C Gyamfi, SN Odai, **GK Anornu** (2013). Conflict prevention and resolution mechanisms in water resources management: A perspective from the Black Volta Basin—Ghana. *Int. J. Dev. Sustain*. https://www.researchgate.net/profile/Charles-Gyamfi-5/publication/279512382_Conflict_prevention_and_resolution_mechanisms_in_water_resources_management_A_perspective_from_the_Black_Volta_Basin_-Ghana/links/5593e8b008ae16f493efb5b1/Conflict-prevention-and-resolution-mechanisms-in-water-resources-management-A-perspective-from-the-Black-Volta-Basin-Ghana.pdf

98. **G. K. Anornu**, Amos T. Kabo-bah (2013). Evaluation of AVI and DRASTIC Methods for Groundwater Vulnerability Mapping. *Journal of Environment and Ecology*. https://doi.org/10.5296/jee.v4i2.4961

99. **Geophrey K. Anornu**, Amos T. Kabo–bah, Benony K. Kortatsi (2012). Comparability Studies of High and Low Resolution Digital Elevation Models for Watershed Delineation in the Tropics: Case of Densu River Basin of Ghana. *American Journal of Business and Management*. https://doi.org/10.11634/216826311706109

100. **Geophrey K. Anornu**, Amos T. Kabo–bah, Maxwell Anim-Gyampo (2012). Evaluation of Groundwater Vulnerability in the Densu River Basin of Ghana. *American Journal of Business and Management*. https://doi.org/10.11634/216796221504191

101. **A Geophrey** (2012). Prediction of Potential Groundwater Over-abstraction: A Safe-yield Approach-A Case Study of Kasena-Nankana District of UE Region of Ghana. *Research Journal of Applied Sciences, Engineering and Technology*. https://www.airitilibrary.com/Article/Detail/20407467-201210-201512070007-201512070007-3775-3782

102. **Geophrey Anornu** (2009). Evaluation of groundwater resources potential in the Ejisu-Juaben district of Ghana. *African Journal of Environmental Science and Technology*. https://www.academia.edu/download/107029263/44706.pdf

103. Benony Komla Kortatsi, Y. S. A. Anku, **G. K. Anornu** (2008). Characterization and appraisal of facets influencing geochemistry of groundwater in the Kulpawn sub-basin of the White Volta Basin, Ghana. *Environmental Geology*. https://doi.org/10.1007/s00254-008-1638-9

104. BK Kortatsi, J Asigbe, GA Dartey, C Tay, **GK Anornu**, E Hayford (2008). Reconnaissance Survey of Arsenic Concentration in Ground-water in South-eastern Ghana. *West African Journal of Applied Ecology*. https://doi.org/10.4314/wajae.v13i1.40586

105. **GK Anornu** (2008). Viability of marginal yield boreholes in selected geological formations in Ghana. *Access to sanitation and safe water-Global partnerships and local actions: Proceedings of the 33rd WEDC International Conference, Accra, Ghana*. https://www.researchgate.net/profile/Geophrey-Anornu/publication/338778035_Viability_of_marginal_yield_boreholes_in_selected_geological_formations_in_Ghana/links/5e29dae34585150ee77de631/Viability-of-marginal-yield-boreholes-in-selected-geological-formations-in-Ghana.pdf

106. Benony K. Kortatsi, Collins K. Tay, **Geophrey Anornu**, Ebenezer Hayford, Grace A. Dartey (2007). Hydrogeochemical evaluation of groundwater in the lower Offin basin, Ghana. *Environmental Geology*. https://doi.org/10.1007/s00254-007-0772-0

Book chapters 1

1. Erion Bwambale, Felix K. Abagale, **Geophrey K. Anornu** (2022). Smart Irrigation for Climate Change Adaptation and Improved Food Security. *IntechOpen eBooks*. https://doi.org/10.5772/intechopen.106628

Other publications 1

1. C Gyamfi, **GK Anornu** (2014). Effects of Land Cover Changes on Ecosystem Services in the Kulpawn Catchment of the White Volta River Basin of Ghana.